



X/C® 5606H and 5606A Aviation Hydraulic Fluid

Phillips 66 X/C® 5606H and 5606A Aviation Hydraulic Fluids are mineral oil-based, high-viscosity index, antiwear hydraulic fluids, designed to meet the severe demands of aerospace and industrial applications. They have excellent oxidation resistance and outstanding low-temperature properties for use over a wide temperature range. They have excellent shear stability and antiwear properties to protect hydraulic pumps and motors, and also protect against rust and corrosion. Metal deactivators and foam inhibitors provide enhanced performance in general-purpose hydraulic applications.

X/C® 5606H Aviation Hydraulic Fluid meets the cleanliness requirements for “super clean” hydraulic fluid for use in modern aircraft hydraulic systems. X/C® 5606A Aviation Hydraulic Fluid is recommended for use in hydraulic systems that do not require a “super clean” fluid. Both fluids are dyed red for identification and leak detection purposes.

Applications

X/C® Aviation Hydraulic Fluids are recommended for use in non-pressurized systems operating between -54°C and 90°C (-65°F to 194°F), and in pressurized systems operating between -54°C and 135°C (-65°F to 275°F) at pressures up to 3,000 psi.⁽¹⁾ Typical applications include:

- Aircraft and missile control systems, autopilots and shock absorbers
- Auto wreckers, boom trucks and electrical service equipment (cherry pickers) where all-weather performance is required
- Industrial robotics
- Hydraulic systems requiring “super clean” fluids for extended service life and reliability

X/C® 5606H Aviation Hydraulic Fluid meets the requirements of:

- U.S. Military Specification MIL-PRF-5606H (supercedes MIL-O-5606, AN-O-336, AN-VV-O-336 and AAF-3580)

X/C® 5606A Aviation Hydraulic Fluid meets the requirements of:

- U.S. Military Specification MIL-H-5606A (obsolete)

⁽¹⁾ **Note:** Do not use in hydraulic systems with natural rubber elastomers.



Features/Benefits

- Very high-viscosity index for use over a wide temperature range
- Outstanding low-temperature properties
- Excellent wear protection
- Resists deposit formation and viscosity increase due to oxidation
- Protects against rust and corrosion
- Good foam resistance

X/C® 5606H Aviation Hydraulic Fluid

Typical Properties

ISO Grade	15
Gravity °API	29.3
Density, g/cm ³ @ 15.6°C (60°F)	0.880
Flash Point (COC), °C (°F)	95 (203)
Pour Point, °C (°F)	-70 (-94)
Viscosity,	
cSt @ -40°C	451
cSt @ -54°C	1,850
cSt @ 40°C	13.9
cSt @ 100°C	5.1
Viscosity Index	365
Acid Number, ASTM D664, mg KOH/g	0.0
Copper Corrosion, ASTM D130, 71°C (160°F), 72 hrs	1b
Dielectric Strength, ASTM D877, kv ⁽²⁾	49.6
Evaporation Loss, ASTM D972, 71°C (160°F), 6 hrs, wt %	13.6
Foam Resistance, ASTM D892, 75°F	25-0
Four-Ball Wear, ASTM D4172, Scar Diameter, mm	0.65
Gravimetric Filtration, FTM 313 mg/100 ml, 0.45 microns @ 25°C	
Filter time, minutes	6
Particle Contamination, ASTM D4177, Automatic Counter	
Particle Size, microns	
5-15	1,200
16-25	175
26-50	60
51-100	5
100+	0
Water Content, ASTM D6304, ppm	50

⁽²⁾ At the point of manufacture

Due to continual product research and development, the information contained herein is subject to change without notification.

X/C® 5606A Aviation Hydraulic Fluid

Typical Properties

ISO Grade	15
Density, g/cm ³ @ 15.6°C (60°F)	0.880
Flash Point (COC), °C (°F)	95 (203)
Pour Point, °C (°F)	-70 (-94)
Viscosity,	
cSt @ -40°C (-40°F)	451
cSt @ 54°C (130°F)	10.7
Viscosity Index	365
Acid Number, ASTM D664, mg KOH/g	0.0
Precipitation Number, ASTM D91	0