

FRICION MASTER ENGINE TREATMENT

Friction Master Engine treatment is an oil additive that enhances the engine performance in many ways. Friction Master has PTFE particles that change the properties of the metal surfaces. The PTFE particles penetrate the metal surfaces leaving a surface with a lower coefficient of friction. In essence the metal-to-metal contact is changed to a PTFE to PTFE contact which is more efficient, meaning less energy is used to overcome friction. Friction Master came on the market in 1980 as an oil additive for internal combustions engines for a variety of engines but primarily for cars and trucks. Friction Master has also been used on moving parts of machinery and equipment that were driven by electrical motors. When one considers all the companies that have marketed oil additives that have PTFE treatments for engines well over 200 million vehicles have had the PTFE treatment. Friction Master Kit number 270-1A contains 1 vile of 4 oz. Friction master and is for engines up to 300 cubic inches, (approximately 125 HP max.). Kit number 270-1B contains 2 vials of 4 oz. Friction Master and is for engines up to 600 cubic inches, (approximately 400 HP max.).



Below in figure 1, shows the torque increase in FT. LBS. for an a typical engine run at full throttle before and after treatment of Friction Master as tested on a Superflow 800 engine dynamometer. Figure 2 shows the torque increase in FT. LBS. for the same engine run at 2/3 throttle before and after treatment of Friction Master. Please note the difference in torque before and after the Friction Master treatment. The torque is actually higher at 2/3 throttle than it was at full throttle. This indicates a higher rate of climb as the propeller requires a higher torque when the aircraft is climbing as opposed as to when it is in cruise flight.

FRICION MASTER

Owner: CLARK MACHINE CO.
Engine: Ford 6 Cyl 300 CID
Type Test: Full Throttle
Test Equipment: Superflow 800-Engine Dyno

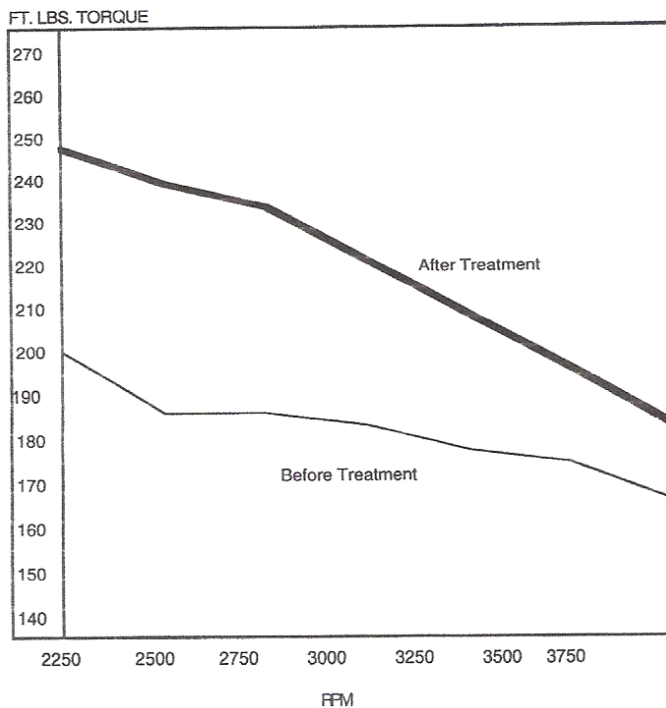


FIG. 1

FRICION MASTER

Owner: CLARK MACHINE CO.
Engine: Ford 6 Cyl 300 CID
Type Test: 2/3 Throttle
Test Equipment: Superflow 800-Engine Dyno

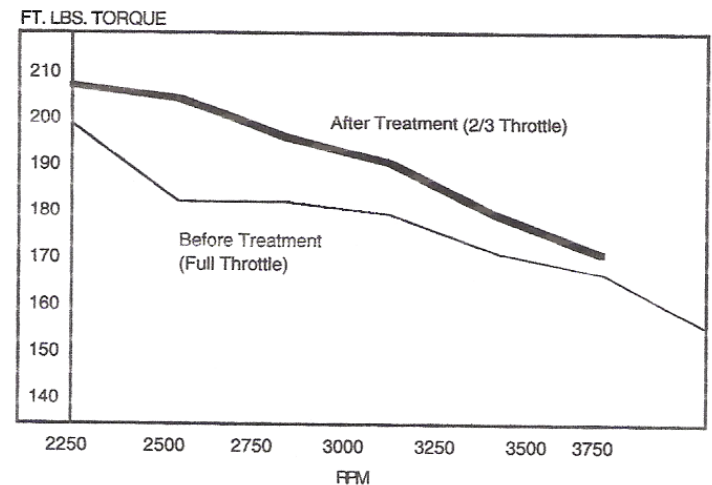


FIG. 2

Below in figure 3, shows the increase in horsepower for a typical engine run at full throttle before and after treatment of Friction Master as tested on a Superflow 800 engine dynamometer. Figure four shows the increase in mileage on a controlled study of fourteen trucks untreated versus four trucks treated with Friction Master over a ten month period. As can be seen there was a gain in mileage from 4.394 to 4.998 or an increase of .6 miles per galleon. Though this was a test for trucks it is apparent that their will also be an increase in mileage for aircraft as well, which means a dollar savings in fuel costs which will easily pay for the cost of the friction master.

FRICTION MASTER

Owner: CLARK MACHINE CO.
Engine: Ford 6 Cyl 300 CID
Type Test: Full Throttle
Test Equipment: Superflow 800-Engine Dyno

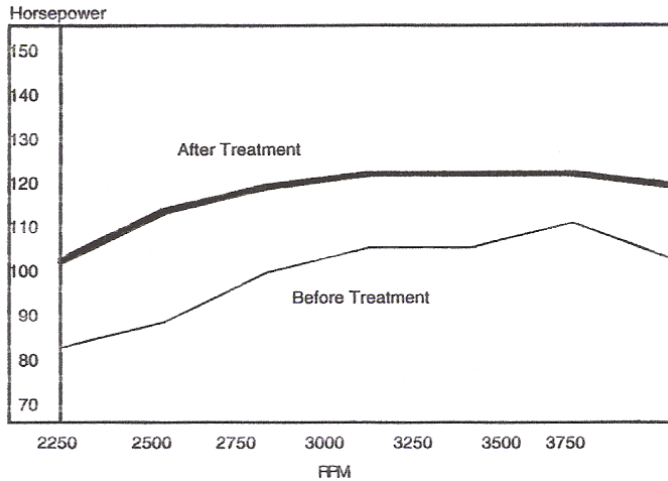
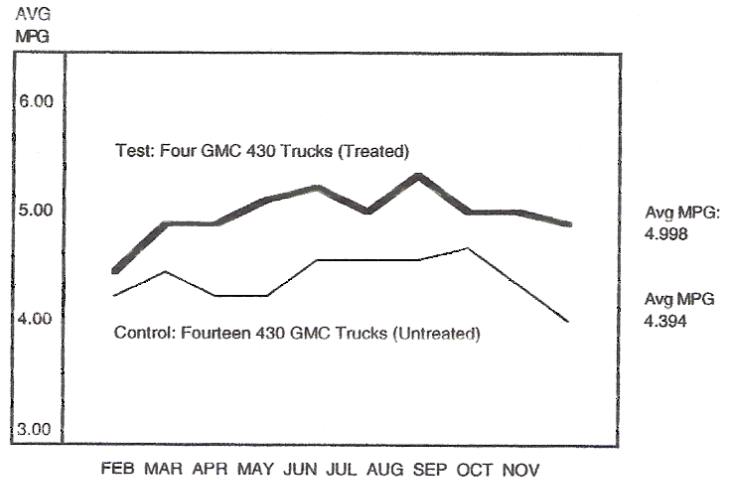


FIG. 3

FRICTION MASTER

Witte Bros Trucking
Troy, MO
Test: Four 430 GMC Trucks (Treated)
Control: Fourteen 430 GMC Trucks (Untreated)
Fuel Mileage Analysis



Yearly Mileage per Truck: 15,000 miles/month x 12 months = 180,000 miles/year

Annual Fuel Usage - Control: 180,000 miles / 4.394 Avg MPG = 40,965 gals/year

Annual Fuel Usage - Test: 180,000 miles / 4.998 Avg MPG = 36,014 gals/year

Annual Fuel Savings Per Truck - 4,951 gals/year

FIG 4

What else will Friction Master do for your aircraft engine? The engine will run quieter, smoother, have less strain on the engine at start up (especially in the winter time), and to repeat increase mileage, and increase horsepower. In many cases Friction Master will increase the pressure readings when a compression check is made on the engine. Currently Friction Master can be used on E-AB, E-LSA, ultralight aircraft, powered parachutes, trikes and experimental gyroplanes. Aircraft Development will be making application to the FAA for approval to use Friction Master on type certified aircraft engines.