PREMIUM SELECT

TECHNICAL DATA SHEET

400 Protect-O-Lube

Description:

Protect-O-Lube was developed for the U.S. Defense (War) Department in the early 1940's. Protect-O-Lube is a multifunction product with a multitude of applications. Protect-O-Lube cleans as well as lubricates. It is compatible with crankcase oil, hydraulic, compressor and turbine/circulating oils. It is recommended for use in diesel fuel* and gasoline. Organic acids are neutralized and oxidation is stabilized.

Composition:

Protect-O-Lube is blended from carefully selected prime "heart-cut" neutrals, conditioners, acid neutralizers, moisture absorbing agents, friction release compounds and pure mineral base top oils.

It also contains a unique blend of:

Rust Inhibitors
Oxidation Inhibitors
Oiliness Additives
Corrosion Inhibitors
Foam Inhibitors
Dispersant Additives
Cleaning Additives
Oxygenated Solvents

Performance Characteristics:

Neutralizes Acidic Combustion By Products
Increases RPMs
Improves Combustion and Economy
Reduces Friction Drag
Neutralizes All Harmful Engine Acids
Eliminates Piston Ring Sticking and Scoring
Eliminates Sticking Valves
Cleans and Lubricates Fuel Injectors and Carburetors
Eliminates Carbon, Varnish and Sludge

Uses:

Protect-O-Lube is recommended for use in concentrations of 1% by volume in diesel*, gasoline of all grades including ethanol blended gasoline and kerosene fuels, to neutralize the corrosive effects of engine acids created during combustion from sulfur contained in the fuel. It also absorbs moisture, prevents icing, removes carbon, gum, sludge and varnish deposits, improves combustion, cleans injectors and carburetors, lubricates top rings, frees sluggish valves and improves ring flexing.

Protect-O-Lube is a superior flushing agent for use in crankcases, compressors, hydraulic and turbine/circulating systems and automatic transmissions.

Protect-O-Lube can also be used to free frozen bolts and nuts, or applied as a superior rust preventative on boats, ships, off-road machinery, farm implements, fertilizer storage and application equipment and many other similar uses. Protect-O-Lube is an extraordinary firearm lubricant, ideal for all styles and mechanisms.

* This diesel fuel additive does not comply with federal ultra-low sulfur content requirements for use in model year 2007 and newer diesel motor vehicles or model year 2011 and newer diesel nonroad equipment engines.

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Typical Applications And Mixtures:

As a Fuel Additive:

Gasoline Engines	1% by Vol. Of Fuel
Diesel Engines (Except 2007 and newer motor vehicles)	1% by Vol. Of Fuel
Marine Engines (Except Outboards)	1% by Vol. Of Fuel
Marine Engines (Outboards and other 2 cycle engines)	1 oz. To each gallon of gas; then mix oil at recommended ratios

As a Flushing Agent:

Internal combustion engines: Drain oil and replace oil filter. Fill with 50% Protect-O-Lube and 50% engine oil. Idle engine for one hour. Do not exceed 1000 RPM. Drain oil and replace oil filter. Fill with recommended amount of crankcase oil of proper viscosity and service grade.

Compressors, hydraulic and turbine/circulating systems: **Quick Flush**: Replace 25% of oil supply (mineral oils only) with Protect-O-Lube. Run compressor for four hours with no load. Drain oil and replace filter if applicable. Fill reservoir with new oil of specified viscosity and performance rating. **Extended Flush:** Replace 10% of oil supply (mineral oils only) with Protect-O-Lube. Allow normal duty cycle for 40 hours. Drain oil and change filter if applicable. Fill reservoir with new oil of specified viscosity and performance rating.

Automatic transmissions: Drain fluid and clean screen. Fill with 20% Protect-O-Lube and 80% ATF of specified performance grade, Dexron II, Dexron III, Mercon, Ford Type F or Mopar ATF+3. Manually shift through all gears so that the valve body will actuate. Drive under low to moderate load for 50 miles. Drain fluid and clean screen. Replace filter if applicable. Fill with specified ATF.

NOTE: The use of system flushes has great diagnostic value. However, if mechanical deficiencies exist, the use of system flushes may have the effect of exaggerating the deficiency.

Typical Specifications:

Flash Point, (COC), Open Flame	102°F
Copper Strip Corrosion	Pass – Class 1
Carbon Residue	.008%
Pour Point	-80°F
Color	Amber
Density (#/gal)	7.3 – 7.5
Viscosity @ 100°F	30 SUS
Moisture Test	Excellent
Humidity Cabinet Test	Pass
Acid Test	Excellent
Varnish & Gum Test	Excellent