

ROYCO® 500

SYNTHETIC TURBINE ENGINE OIL

ROYCO® 500 is a 5 centistoke synthetic lubricating oil for gas turbine engines. The product is a careful blend of “hindered” esters and modern additive technology. These carefully selected components result in a product that has demonstrated excellent performance in today’s modern gas turbines. ROYCO® 500 provides superior high temperature corrosion protection and exhibits excellent anti-wear capabilities. The product is blended to provide superior thermal and oxidative performance in critical turbine applications.

APPLICATIONS

ROYCO® 500 was specifically developed for use in high performance turboprop and turbojet engines, as well as industrial gas turbine engines, where longer engine life is required, along with increased lubricant life. ROYCO® 500 is well suited for use in engines that require minimum sludge and coke deposition. ROYCO® 500 is also recommended for helicopter transmissions. This oil should only be used in applications where synthetic oils have been specified and this oil has been approved for use by the OEM.

FEATURES AND BENEFITS

Features

- **Excellent Thermal and Oxidative Stability**
- **Low pour point**
- **Excellent corrosion and wear protection**
- **Chemically stable**

Benefits

- **Maintains engine efficiency;**
- **Extends engine life;**
- **Reduces carbon deposits and sludge formation**
- **Eases start-up in low ambient temperatures**
- **Extends component life**
- **Reduces engine maintenance costs**
- **Lowers oil consumption and losses due to evaporation**

APPROVALS AND SPECIFICATIONS

ROYCO® 500 meets all the requirements and is qualified under U.S. Military specification MIL-PRF-23699G Class STD. It is also qualified under the Performance Review Institute specification AS-5780, Class Standard Performance Capacity (SPC).

ROYCO® 500 is approved commercially for use in aircraft engines manufactured by Pratt & Whitney, General Electric, Honeywell, Lycoming, Rolls Royce, Snecma, and Turbomeca gas turbine engines, as well as AiResearch, Garrett, and Sundstrand accessories. Approval should be confirmed with the OEM.

PACKAGING

ROYCO® 500 is available in 55 gallon drums, 5 gallon pails, and twenty-four by 1-quart cans per carton.



TYPICAL PROPERTIES

PROPERTIES	TEST METHOD	ROYCO® 500
Kinematic Viscosity, cSt		
@ 100°C		5.12
@ 40°C	ASTM D445	25.4
@ -40°C		8,875
Flash Point, °C (°F)	ASTM D92	264 (507)
Fire Point, °C (°F)	ASTM D92	301 (575)
Pour Point, °C (°F)	ASTM D92	-59 (-74)
Neutralization No.	SAE-APR-5088	0.06
Evaporation, 400°F, 6.5 hours, % wt loss	ASTM D972B	3
Synthetic Rubber Swell "H" (72 hrs, 158°F), %		16.9
Synthetic Rubber Swell "F" (72 hrs, 400°F), %	FTM 3604	13.8
Thermal Stability and Corrosivity (96 hrs, 525 °F)		
Viscosity; @ 40°C, % Change		1.90
Acid Number Change, mg KOH/g	FTM 3411	0.77
Metal Weight Change, mg/cm²		0.22
Oxidation and Corrosion Stability (72 hrs, 400 °F)		
Iron, wt. change, mg/cm²		0.03
Silver, wt. change, mg/cm²		0.03
Aluminium, wt. change, mg/cm²		0.02
Magnesium, wt. change, mg/cm²	FTM 5308	0.01
Copper, wt. change, mg/cm²		0.00
Viscosity Change @ 40°C, %		14.0
Acid Number Change		0.8
Contamination, mg/100 ml		0.9
Sediment, 1.2 micron filter, mg/L		0.8
Foaming, ml initial/ml final		
Sequence I, Sequence II, Sequence III	ASTM D892	2/0, 3/0, 2/0
Density, pounds per gallon		8.35



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