ExxonMobil

Mobil Jet™ Oil II

ExxonMobil Aviation , Malawi

Aircraft Type Gas Turbine Lubricant

Product Description

Mobil Jet Oil II is a high performance aircraft-type gas turbine lubricant formulated with a combination of a highly stable synthetic base fluid and a unique chemical additive package. The combination provides outstanding thermal and oxidative stability to resist deterioration and deposit formation in both the liquid and vapour phases, as well as excellent resistance to foaming. The effective operating range of Mobil Jet Oil II is between -40°C (-40 °F) and 204 °C (400°F).

Mobil Jet Oil II is engineered for aircraft gas turbine engines used in commercial and military service requiring MIL-PRF-23699-STD level performance. It also is recommended for aircraft-type gas turbine engines in industrial or marine service applications

Features and Benefits

Mobil Jet Oil II is formulated to meet the demanding requirements of aircraft-type gas turbines operating over a wide range of severe operating conditions. The product has a high specific heat in order to ensure good heat transfer from oil-cooled engine parts. In extensive laboratory testing and in-flight performance, Mobil Jet Oil II exhibits excellent bulk oil stability at temperatures up to 204°C (400 °F). The evaporation rate at these temperatures is low enough to prevent excessive loss of volume. Key features and benefits include:

Features	Advantages and Potential Benefits
Excellent thermal and oxidation stability	Reduces the formation of carbon and sludge deposits Maintains engine efficiency and extends engine life
Excellent wear and corrosion protection	Extends gear and bearing life Reduces engine maintenance
Retains viscosity and film strength across wide temperature range	Provides effective lubrication at high operating temperatures
Chemically stable	Reduces evaporation losses and lowers oil consumption
Low pour point	Eases start-up in low ambient temperature conditions

Applications

Mobil Jet Oil II is recommended for aircraft gas turbine engines of the turbo-jet, turbo-fan, turbo-prop, and turbo-shaft (helicopter) types in commercial and military service. It is also recommended for aircraft-type gas turbine engines used in industrial or marine applications. Mobil Jet Oil II is approved against the Standard Performance (STD) classification of U.S. Military Specification MIL-PRF-23699. It is also compatible with other synthetic gas turbine lubricants meeting MIL-PRF-23699. However, mixing with other products is not recommended because the blend would result in some loss of the performance characteristics of Mobil Jet Oil II. Mobil Jet Oil II is compatible with all metals used in gas turbine construction, as well as with F Rubber (Viton A), H Rubber (Buna N), and silicone seal materials.

Mobil Jet Oil II has the following builder approvals *

Engines

- Honeywell/Lycoming-Turbines
- Rolls-Royce/Allison Engine Company
- CFM International
- General Electric Company
- International Aero Engines

- Pratt and Whitney Group
- Pratt and Whitney, Canada
- Rolls-Royce Limited
- SNECMA
- Honeywell/Garrett Turbine Engine Company
- Turbomeca

Accessories

- Honeywell-Auxiliary power units and air cycle machines
- Hamilton Standard-Starters
- Hamilton Sundstrand Corp.-APUs, constant-speed drives and integrated-drive generators

* Specific engine or equipment approval must be verified with the builder

Specifications and Approvals

This product has the following approvals:
PRI-QPL-AS5780/SPC

Properties and Specifications

Property	
Autogenous-ignition temperature test, deg.C, 30 CFR 35.20	404
Change in Kinematic Viscosity, 72 h @ -40 C, %, ASTM D2532	0.15
Density @ 15 C, kg/l, ASTM D4052	1.0035
Elastomer Compatibility, AMS-3217/4 (72hrs @204C), % swell, FTMS 791-3604	15.6
Elastomer Compatibility,AMS-3217/1(72hr @70C), % swell, FTMS 791-3604	16.4
Evaporation Loss, 6.5 h, 204 C, mass%, ASTM D972(mod)	3.0
Evaporation Loss, 6.5 hr @ 232 C, 29.5" Hg, mass %, ASTM D972(mod)	10.9
Evaporation Loss, 6.5 hr @ 232 C, 5.5" Hg, mass %, ASTM D972(mod)	33.7
Fire Point, °C, ASTM D92	285
Flash Point, Cleveland Open Cup, °C, ASTM D92	270
Foam, Sequence I, Tendency, ml, ASTM D892	8
Foam, Sequence II, Tendency, ml, ASTM D892	10
Foam, Sequence III, Tendency, ml, ASTM D892	8
Kinematic Viscosity @ 100 C, mm2/s, ASTM D445	5.1

Property	
Kinematic Viscosity @ 40 C, mm2/s, ASTM D445	27.6
Kinematic Viscosity @ -40 C, mm2/s, ASTM D445	11000
Pour Point, °C, ASTM D5950	-59
Shear Stability, %KV loss, ASTM D2603	0.9
Total Acid Number, mgKOH/g, ARP 5088	0.03
Ryder Gear Load Carrying, % vs ref., FTMS 791-6508	115

Health and safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ http://www.msds.exxonmobil.com/psims/psims.aspx

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02-2024
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Due to continual product research and development, the information contained herein is subject to change without notification. Typical Properties may vary slightly.

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