ExxonMobil

# Mobil Jet™ Oil II

ExxonMobil Aviation , Nigeria

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<br>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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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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