ExxonMobil

Mobil Jet Oil 387

ExxonMobil Aviation , Italy

Aircraft Type Gas Turbine Lubricant

Description

Mobil Jet Oil 387 has been developed to meet the performance requirements of both current and future, advanced gas turbine engines used in commercial and military service. Made from a specially prepared, ester base stock, Mobil Jet Oil 387 is fortified with a unique chemical additive package. The resulting lubricant has superior thermal and oxidation stability that resists deterioration and deposit formation. The physical properties of Mobil Jet Oil 387conform to required builder and military specifications.

Advantages

Mobil Jet Oil 387 shows excellent performance controlling deposits typically experienced in both the liquid and vapor phases in bearing compartments, oil supply lines, and breather/scavenger lines. These properties have been confirmed in various laboratory tests, including the Corrosion-Oxidation Stability Test, Alcor Deposition Test, Vapor Phase Coker, Erdco High-Temperature Bearing Test, Ryder Gear, and the Mobil Thin Film Oxidation Test.

The closely controlled viscosity of Mobil Jet Oil 387 at -40°C (-40°F), and a pour point below -54°C (-65°F), ensure the good low-temperature fluidity which permits starting and lubrication at temperatures as low as -40°C. In extensive laboratory testing, Mobil Jet Oil 387 exhibits excellent bulk oil stability at temperatures greater than 225°C (437°F).

Key features and benefits include:

Features	Advantages and Potential Benefits
Long-duration fluorocarbon compatibility	Helps avoid premature or unscheduled engine repairs. Helps prevent leaks that can lead to air craft delays and cancellations.
Outstanding oil life characteristics, such as bulk oil stability, viscosity and TAN control	Helps minimize formation of sludge and carbon deposits which allows better engine efficiency and reduced engine repair costs as well potentially achieving longer oil drain intervals (in certain applications such as marine and land based turbines), effective lubrication at high operating temperatures
Very low vapor/mist and thin film deposition resistance	Helps control deposits in air vent tubes, bearingcompartments, and scavenge oil lines which will all result in reduced engine maintenance costs
Good low temperature fluidity	Permits start-up and ensures effective lubrication of critical components (such as APUs in ETOPS applications) at temperatures as low as -40 °F

Applications

Mobil Jet Oil 387 is approved against the new SAE AS5780 High Performance Capability (HPC) standard. This civil specification was developed to meet the growing performance and quality needs that commercial airlines seek, especially with the entrance of new, higher-output and lower consumption engines.

OEM in-house evaluation/approval programs are also underway. Once complete, Mobil Jet Oil 387 will be commercialized for use in aircraft gas turbine engines, including turbo-jet, turbo-fan, turbo-prop, and turbo-shaft (helicopter), in commercial and military service. In addition, it will be suitable for aircraft-type gas turbine engines in industrial and marine applications.

Mobil Jet Oil 387 is compatible with other synthetic gas turbine lubricants meeting U.S. Military Specification MIL-PRF-23699. Mixing with other products, however, could result in some loss of its superior performance features. The lubricant is completely compatible with all metals used in gas turbine construction, as well as with F Rubber (Viton A), H Rubber (Buna N), and other commonly used seal materials. Engine/OEM Evaluations

Mobil Jet Oil 387 has the following builder approvals: *

General Electric Aviation

Rolls Royce

Pratt & Whitney

Honeywell APUs

UTC Aerospace Systems APUs, Generators and Starters

Mobil Jet Oil 387 has the following builder approvals in progress : *

CFM International

Engine Alliance

International Aero Engines

Honeywell turbine engines

Mobil Jet Oil 387 has the following approvals:

PRI-QPL-AS5780/HPC

MIL-PRF-23699-HTS

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

Typical Properties*

Mobil Jet Oil 387	Typical	Limit
Viscosity		
cSt at 100°C (212°F)	5.2	4.9 to 5.4
cSt at 40°C (102°F)	25.9	23.0 min
cSt at -40°C (-40°F)	10140	13,000 max
0.1 % change at -40°C after 72 hr.	0.1	6%max
Flash Point, ° C (° F), min	278(532)	246 min.
Fire Point, ° C (° F)	292(558)	No limit
Autogenous Ignition Temp, ° C (° F)	405(761)	No limit
Pour Point, ° C(°F)	-57 (-71)	-54 max
Specific Gravity, 15/15°C (60/60°F)	0.999	No limit
TAN (mg KOH/g sample)	0.03	1.0 max
Evaporation Loss, %		
6.5 hr at 204°C (400°F), 29.5" Hg	4	10 max
Foam, ml		

Mobil Jet Oil 387	Typical	Limit
Sequence 1, 24°C (75°F)	10	25 max
Sequence 2, 93.5°C (200°F)	10	25 max
Sequence 3, 75°C (after 200°F test)	10	25 max
Foam Stability, after 1 min settling, ml	0	0 max
Rubber Swell		
F Rubber, 72 hr at 204°C (400°F), %	15	5 -25
H Rubber, 72 hr at 70°C (158°F), %	15	5 -25
Ryder Gear	2806	No limit
% Hercolube A	104	102 min.

*Typical properties are typical of those obtained with normal production tolerance and may vary slightly, while remaining within specified limits.

Health and Safety

Based on available toxicological information, it has been determined that this product poses no significant health risk when used and handled properly. Information on use and handling, as well as health and safety information, can be found in the Material Safety Data Sheet which can be obtained from your local distributor; via the Internet on http://www.exxonmobil.com; or by calling 1-800-662-4525 and selecting prompt 2. For additional technical information or to identify the nearest U.S. ExxonMobil supply source, call 1-800-662-4525.

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