ExxonMobil

Mobil AGL- Synthetic Aviation Gear Lubricant

ExxonMobil Aviation , Netherlands

Supreme Performance Gear and Bearing Oil

Product Description

Mobil AGL is a supreme performance gear and bearing oil designed to provide outstanding service in terms of equipment protection, oil life and problem-free operation helping to enable increased customer productivity in civilian and military helicopter transmissions. This scientifically engineered oil is formulated from base fluids with an inherently high viscosity index and a unique, proprietary, additive system which enables this product to provide outstanding performance in extreme service applications at high and low temperatures, well beyond the capabilities of mineral oils. This product is resistant to mechanical shear, even in heavily loaded gear and high shear bearing applications.

Mobil AGL has a low traction coefficient, which derives from the molecular structure of the base stock used. This results in low fluid friction in the load zone of non-conforming surfaces such as gears and rolling contact bearings. Low fluid friction produces lower operating temperatures and improved gear efficiency, which translates into reduced power consumption. It also results in extended parts life and allows for more economical equipment design.

The base oil used in Mobil AGL has outstanding response to antioxidant additives resulting in superior resistance to oxidation and sludging, especially at high temperatures. The additive combination used in this oil also provides exceptional resistance to rusting and corrosion, very good antiwear, demulsibility, foam control and air release properties, as well as multimetal compatibility.

Features and Benefits

Mobil AGL offers measurably better performance in lubrication of a helicopter transmission than Type I (MIL-L-7808) and Type II (MIL-L-23699) turbine oils at high and low temperatures as well as wear resistance that is especially beneficial to military and other helicopters operating under unusual stresses.

Mobil AGL is formulated with synthesized hydrocarbon-based fluids. The combination of a naturally high viscosity index and a unique proprietary additive system helps enable Mobil AGL to provide outstanding performance in extreme service applications at high and low temperatures, well beyond the capabilities of mineral oils.

These scientifically engineered synthetic oils are specifically formulated to provide outstanding equipment protection, helping to extend oil life and enable problem-free operation. Our work with equipment builders has helped confirm the results from our own laboratory tests showing the exceptional performance of Mobil AGL. Not least among the benefits, shown in work with OEMs, is the potential for significant reliability improvements in changing from mineral oil. These benefits are particularly evident in equipment which, by design, cannot avoid low overall efficiency, such as high ratio worm gears. Mobil AGL oils offer the following features and potential benefits:

Features	Benefits
Superb high temperature thermal/oxidation resistance	Helps extend equipment high temperature operating capability
	Long oil life, helps reduce need and costs for oil change outs
	Helps minimize sludge and deposits for trouble-free operation and long filter life
High Viscosity Index and absence of wax	Maintains viscosity and film thickness at high temperatures
	Exceptional low temperature performance, including start-up
Low traction coefficient	Reduces overall friction and can increase efficiency in sliding mechanisms such as gearing, with potential for reduced power consumption and lower steady-state operating temperatures.
	Helps minimize effects of micro slip in rolling contact bearings for longer rolling-element life potential
High load carrying capability	Helps protect equipment and extend life; helps minimize unexpected downtime and extend service periods
Balanced additive combination	Provides excellent performance in terms of rust and corrosion prevention, water separability, foam control, air release performance ensuring problem-free operation in a wide range of industrial applications and reduced operating costs

Applications

While Mobil AGL is compatible with mineral oil based products, admixture may detract from it's performance. Consequently it is recommended that before changing a system to Mobil AGL, it should be thoroughly cleaned out and flushed to achieve the maximum performance benefits. Mobil AGL is compatible with the following seal materials: fluorocarbon, polyacrylate, polyurethane ether, some silicone, ethylene/acrylic, chlorinated polyethylene, polysulfide, and some nitrile rubbers. There is the potential for substantial variations in the elastomers being used today. For best results, consult your equipment supplier, seal manufacturer, or your local ExxonMobil representative to verify compatibility. Mobil AGL is compatible with mineral oils but co-mingling with other types oils may lead to fluid incompatibility or detract from the total performance capability.

Specifications and Approvals

Mobil AGL is recommended by some helicopter OEM's for use in transmissions. Please consult with your equipment OEM or your ExxonMobil representative to determine if Mobil AGL can be used in your application.

Typical Properties

Mobil AGL	
ISO Viscosity Grade	68
Viscosity, ASTM D 445	
cSt @ 40° C	66.0
cSt @ 100° C	10.3
Viscosity Index, ASTM D 2270	144
Pour Point, °C, ASTM D 97	-48
Flash Point, °C, ASTM D 92	231
Specific Gravity, ASTM D 4052, 15° C/15° C	0.86
Appearance, visual	Orange
TOST, ASTM D 943, Hours to 2 NN	10,000+
RBOT, ASTM D 2272, min.	1750
Rust protection, ASTM D665, Sea Water	Pass
Water Separability, ASTM D 1401,Min. to 37 ml water @ 54° C	20
Water Seperability, ASTM D 1401,Min. to 37 ml water @ 82° C	-
Copper Corrosion, ASTM D130, 24 hrs @ 121° C	1B
Foam Test, ASTM D 892, Seq I,II,IIITendency / Stability, ml/ml	0/0, 0/0, 0/0
FZG scuffing test, DIN 51534 (mod), A/16.6/90, Failure Stage	11

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

All products may not be available locally.

Note for Canadian users: Mobil AGL is not controlled under Canadian WHMIS legislation.

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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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