ExxonMobil

Mobil™ Aviation Grease SHC™ 100

ExxonMobil Aviation , New Guinea

Synthetic Aviation Grease

Product Description

Mobil Aviation Grease SHC 100 is a supreme performance synthetic grease which combines the unique features of a polyalphaolefin (PAO) synthetic base fluid with those of a high quality lithium complex soap thickener. The thickener system provides a high dropping point, excellent resistance to water wash, and a tenacious structural stability. The unique physical properties of the synthetic base oil, combined with selected additives, provide outstanding protection against wear, rust, corrosion, and high temperature degradation. The wax-free feature of the synthetic base oil allows for low-temperature mobility/pumpability and low starting and running torque values. Mobil Aviation Grease SHC 100 is the product of choice for aircraft wheel bearing applications.

Features and Benefits

A key factor in the development of Mobil Aviation Grease SHC 100 was the close contact between ExxonMobil product engineers and key OEMs to ensure that the lubricant would provide exceptional performance in aircraft wheel bearings. This work has helped to confirm the results from ExxonMobil laboratory tests showing the exceptional performance of Mobil Aviation Grease SHC 100 including long grease life, enhanced bearing protection and bearing life in aircraft wheels, and wide temperature range of application.

To combat high thermal exposure of the oil, ExxonMobil product formulators chose synthetic hydrocarbon base oils for Mobil Aviation Grease SHC 100 because of their exceptional thermal/oxidative resistance potential. A state-of-the-art lithium complex thickener technology was developed and used specific additives to enhance performance.

Mobil Aviation Grease SHC 100 offers the following features and benefits:

Features	Advantages and Potential Benefits
High viscosity index (VI) base stock with no wax content	Wide application temperature ranges, with excellent protection at high temperatures and low torque, easy start-up at low temperatures.
Outstanding high temperature and low temperature performance	Thicker fluid films protecting against wear of equipment parts operating at high temperature
Excellent protection against wear, rust, and corrosion	Reduced downtime and maintenance costs because of reduced replacement of equipment parts
Excellent structural stability and oxidation resistance	Long intervals between re-lubrication and improved bearing life
Outstanding structural stability in the presence of water	Excellent grease retention on parts in hostile wet environments
Low volatility	Little loss of lubricating oil

Applications

Mobil Aviation Grease SHC 100 is recommended for aviation applications which need a lubricant that can perform normal functions, yet go far beyond in terms of high and low temperatures and long-life performance. It is a NLGI Grade 2/ISO VG 100 grease having the cold-temperature pumping resistance of most mineral-oil NLGI Grade 0 greases. It provides outstanding protection at operating temperatures from –54 °C (-65 °F) to 177 °C (350 °F).

Mobil Aviation grease SHC 100 is recommended for high speed, heavy load applications such as wheel bearings, as well as for slower speed, high load

applications such as landing gear bearings, slides, and joints.

Mobil Aviation Grease SHC 100 is approved as a wheel bearing grease by all major aircraft wheel manufacturers.

Specifications and Approvals

This product has the following approvals:
ABSC
DUNLOP
GOODRICH
HONEYWELL
SAFRAN LANDING SYSTEMS (MESSIER - BUGATTI)
PARKER - CLEVELAND

Properties and Specifications

Property	
Grade	NLGI 2
Bomb Oxidation, Pressure Drop, 100 h, kPa, ASTM D942	3
Bomb Oxidation, Pressure Drop, 500 h, kPa, ASTM D942	5
Color, Visual	Red
Copper Strip Corrosion, 24 h, 100 C, Rating, ASTM D4048	PASS
Dirt, # particles 125u or larger, FTM 3005	PASS
Dirt, # Particles 25 - 124u, FTM 3005	PASS
Dropping Point, °C, ASTM D2265	278 (532)
Four-Ball Extreme Pressure Test, Weld Load, kgf, ASTM D2596	250
Four-Ball Wear Test, Scar Diameter, mm, ASTM D2266	0.5
Four-Ball Wear Test, Scar Diameter, 40 kg, 1200 rpm, 1 h, 75 C, mm, ASTM D2266	40
Low Temperature Torque, Starting @ -54 C, Nm, ASTM D1478	0.1 (1020)
Oil Separation, 30 h @ 177 C, mass%, ASTM D6184	5
Pen Worked X 100,000, 1/16" holes, 0.1 mm, FTM 313	313
Penetration, 60X, 0.1 mm, ASTM D217	280
Rust Protection, 48 h @ 125 F, Rating, ASTM D1743	PASS

Property	
Soap Free Alkali, as Lithium Hydroxide, wt%, M 219	Lithium complex
Texture, VISUAL	Smooth; Slight Tack
Water Washout, 1 h @ 79 C, wt%, ASTM D1264	7
Water Washout, Loss @ 41 C, wt%, ASTM D1264(mod)	3
Viscosity @ 40°C, Base Oil, cSt, CALCULATED	100
Four-Ball Extreme Pressure Test, Load Wear Index, kgf, ASTM D2596	40

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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