

Mobil Aviation Grease SHC 100

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. Also, the traction property of the synthetic base fluid is considerably lower than mineral, allowing for temperature reductions in the load zone of rolling element bearings. 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 is the close contact between ExxonMobil product engineers and key OEMs to ensure that the lubricant would provide exceptional performance in the continually evolving equipment designs. This work has helped to confirm the results from ExxonMobil laboratory tests showing the exceptional performance of Mobil Aviation Grease SHC 100 including longer grease life, enhanced bearing protection and bearing life, wide temperature range of application, and the potential for improved mechanical efficiency and energy savings. To combat high thermal exposure of the oil, ExxonMobil product formulators chose proprietary synthetic 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 Outstanding high temperature and low temperature performance | Wide application temperature ranges, with excellent protection at high temperatures and low torque, easy start-up at low temperatures. 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 |
| Low traction coefficient | Potential improved mechanical efficiency and reduced energy consumption |
| 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

| Mobil Aviation Grease SHC 100 | Approved as a wheel bearing grease |
|--------------------------------------|---|
| ABSC (Meggitt) | X |
| Dunlop (Meggitt) | X |
| Goodrich | X |
| Honeywell (formerly AlliedSignal) | X |
| Messier-Bugatti | X |
| Parker-Cleveland | X |

Typical Properties

| | Test Method | Mobil Aviation Grease SHC 100 (1) | Spec Limit |
|---|--------------------|--|-------------------|
| NLGI Grade | | 2 | |
| Soap Type | | Lithium Complex | |
| Structure | Visual | Smooth; Slight Tack | |
| Color | Visual | Red | |
| Base Oil Viscosity, cSt | ASTM D 445 | | |
| at 40 °C | | 100 | |
| at 100 °C | | 14.5 | |
| Penetration at 25°C (77°F), 60 Stroke Worked, mm/10 | ASTM D 217 | 278 | 255 - 300 |
| Extended Worked Stability, 100,000 strokes | FTM 313 | 315 | 350 max |
| Dropping Point, °C (°F) | ASTM D 2265 | 280 (536) | 246 (475) min |
| Copper Strip Corrosion, 24 Hrs at 100°C | ASTM D 4048 | Pass | 1b max |
| Four-Ball Wear, Scar dia, mm | ASTM D 2266 | 0.5 | 0.8 max |
| Four-Ball EP, Weld Load, kgf | ASTM D 2596 | 250 | |
| Four-ball EP, Load Wear Index, kgf | ASTM D 2596 | 40 | |
| Water Washout, wt % | ASTM D 1264 | | |
| 1 Hr at 79°C (175°F) | | 7 | |
| 1 Hr at 41°C (105°F) | | 3 | 20 max |

| | Test Method | Mobil Aviation Grease SHC 100 (1) | Spec Limit |
|---|-------------|-----------------------------------|--------------------------|
| Rust Protection, 48 Hrs at 125°F, 1mm dia Corrosion Spots | ASTM D 1743 | Pass | 0 in 2 out of 3 bearings |
| Bomb Oxidation, pressure drop in psi | ASTM D 942 | | |
| 100 hr at 99°C (210°F) | | 3 | |
| 500 hr at 99°C (210°F) | | 5 | |
| Oil Separation, 30 Hrs at 177°C, wt % | ASTM D 6184 | 7 | 12 max |
| Evaporation, 30 Hrs at 177°C, wt % | ASTM D 972 | 5 | |
| Dirt Count, Particles/mL | FTM 3005 | | |
| 25-125 Micron | | Pass | 1000 Max |
| Larger than 125 Micron | | Pass | 0 |
| Low Temp. Torque @ -54°C (-65°F), Nm (g-cm) | ASTM D 1478 | | |
| Starting | | 0.5 (5100) | 2.0 (20400) |
| Running | | 0.1 (1020) | 0.5 (5100) |

(1) Values may vary within modest ranges

Health and Safety

Based on available toxicological information, this product is not expected to produce adverse effects on health 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 (MSDS) which can be obtained from your local distributor or via the Internet on <http://www.exxonmobil.com/lubes>

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ExxonMobil Lubricants & Specialties

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