



HAVOLINE[®] LS GEAR LUBRICANT

SAE 80W-90

PRODUCT DESCRIPTION

Havoline[®] LS Gear Lubricant is a high quality gear lubricant designed to provide protection in extreme operating conditions for applications requiring API GL-5 or MT-1 performance levels.

CUSTOMER BENEFITS

Havoline LS Gear Lubricant delivers value through:

- **Controlled inventory costs** — One gear lubricant for both conventional and limited slip differentials. Simplified inventory can help save money, space, and handling time.
- **Optimal gear life** — Extreme pressure properties protect hypoid and other types of gears from scuffing and wear.
- **Long lubricant life** — Outstanding thermal and oxidation stability allow high temperature operation with long lubricant life.

FEATURES

Havoline LS Gear Lubricant is a high quality gear lubricant.

It is formulated with a thermally stable friction modifier and can be used for complete replacement or top-off in limited slip differentials.

Havoline LS Gear Lubricant contains a high performance sulfur-phosphorous extreme pressure additive, thermally stable base stocks, and friction modifiers for limited slip performance. In addition, this lubricant is fortified with rust and corrosion inhibitors, a foam inhibitor, and a pour point depressant.

The extreme pressure additives in Havoline LS Gear Lubricant minimize the spalling and wear of gears by creating a micro-thin sacrificial film on the surface of the gear teeth which is actually softer than the gears themselves. Frictional heat and pressures between tooth surfaces cause the sulfur-phosphorous to react with the surface of the gear teeth at the point of contact, thus creating the sacrificial film.

The limited slip additive was carefully selected to provide the desired frictional properties in limited slip differentials with no degradation of performance in conventional applications.

Havoline LS Gear Lubricant has outstanding thermal and oxidative stability. It minimizes oxidative sludge and varnish formation for maximum gear, bearing and seal life. In particular, the high thermal stability of the friction modifier results in stable friction levels and longer life for anti-stick-slip performance.

APPLICATIONS

Havoline LS Gear Lubricant is recommended for service fill and top-off of all limited slip differentials. It is recommended for differentials where manufacturers' specify API GL-5 gear lubricants plus supplemental limited slip additive.

Havoline LS Gear Lubricant provides excellent performance in conventional automotive gear oil applications requiring API GL-5 or MT-1 performance levels, including:

- Differentials calling for this viscosity grade
- Axles in buses and heavy duty trucks where gear lubricants are recommended
- Four-wheel drive transfer cases
- Applications where a "multipurpose" gear lubricant or an API Service Classification GL-5 is required

Product(s) manufactured in the USA.

Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.

A **Chevron** company product

8 June 2015
GL-34

© 2013-2015 Chevron U.S.A. Inc. All rights reserved.

Chevron, the Chevron Hallmark and Havoline are trademarks owned by Chevron Intellectual Property LLC. All other trademarks are property of their respective owners.

Havoline® LS Gear Lubricant can also be used in off-highway wheel loader axles equipped with wet brakes. It is recommended for small and medium size loaders made by **Hitachi** and **Kawasaki**. This fluid can be a good choice for applications requiring friction modification (anti-chatter) with a level of gear protection much higher than that provided by typical API GL-4 tractor fluids.

Havoline LS Gear Lubricant meets or exceeds the performance requirements of **API Service Categories** MT-1 and GL-5.

Note: Havoline LS Gear Lubricant is designed for full refill of all limited slip differentials. However, there may be instances when axle chatter occurs. If so, it is acceptable to add at least 3% by volume of aftermarket limited slip top treat additive (4 ounces of top treat per gallon of lubricant).

TYPICAL TEST DATA

SAE Grade	80W-90
<i>Product Number</i>	250513
<i>SDS Number</i>	34405
Density at 15°C, kg/L	0.889
Viscosity, Kinematic mm ² /s at 40°C mm ² /s at 100°C	135 14.3
Viscosity, Brookfield mPa.s at -26°C	70,300
Viscosity Index	104
Flash Point, °C(°F)	221(430)
Pour Point, °C(°F)	-34(-29)

Minor variations in product typical test data are to be expected in normal manufacturing.

Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.