



HAVOLINE[®] HIGH MILEAGE MOTOR OIL

SAE 0W-20, 5W-20, 5W-30, 10W-30

PRODUCT DESCRIPTION

Havoline[®] High Mileage Motor Oils with Deposit Shield[®] Technology are designed to help extend the life of engines. These are synthetic blend motor oils designed with special anti-wear, cleaning and seal conditioning agents, and contain added friction modifiers to help minimize oil leaks in higher mileage vehicles. They are outstanding at controlling deposits, sludge and varnish that can hinder performance and fuel economy in an engine of any age. Havoline High Mileage Motor Oils with Deposit Shield Technology are also recommended for use in lower-mileage vehicles, including new cars under warranty.

They can be added to or mixed with other conventional, part synthetic and full synthetic motor oils. Formulated with a combination of premium synthetic and conventional base oils, they provide very good cold temperature performance. Havoline High Mileage Motor Oils with Deposit Shield Technology also work well in turbocharged gasoline and flex-fuel passenger car engines, light duty trucks, vans and SUVs where ILSAC GF-5 or API SN Plus motor oil is specified.

CUSTOMER BENEFITS

Havoline High Mileage Motor Oils with Deposit Shield Technology deliver the following value:

- Helps prevent oil consumption through the use of special conditioners for seals and gaskets
- Additional cleansing agents that help maintain engine performance over time
- Helps control evaporative oil losses at high temperatures relative to conventional motor oils
- Meets "Resource Conserving" requirements for fuel economy improvement, emission system and turbocharger protection

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

1 October 2018
PCMO-60

© 2007-2018 Chevron U.S.A. Inc. All rights reserved.

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

- Excellent protection against thermal breakdown and oxidation
- Outstanding anti-wear protection against engine deposits, sludge and varnish formation that can result from heavy load and stop-and-go driving conditions
- Very good low-temperature pumpability for protection during cold starts
- Satisfies warranty requirements of cars, light trucks, vans and sport utility vehicles that specify an API SN Plus Resource Conserving or ILSAC GF-5 motor oil

FEATURES

Havoline High Mileage Motor Oils with Deposit Shield Technology are premium, synthetic blend



automotive engine oils formulated to provide outstanding protection against harmful engine deposits, while providing excellent oxidation protection and volatility control. They are especially suited for the unique needs of higher mileage engines, older and newer cars, pickup trucks and SUVs that have accumulated 75,000 miles or more. They can be added to and mixed with other full synthetic, part synthetic and conventional motor oils.

As vehicles accumulate more miles, oil consumption can increase due to gradual degradation of engine seals and gaskets. Regular use of Havoline High Mileage Motor Oil with Deposit Shield Technology can help to maintain the condition of seals and gaskets so as to minimize oil leaks and control oil consumption by managing evaporative losses at high temperatures.

SAE 0W-20 exceeds the requirements of API SN Plus Resource Conserving and ILSAC GF-5. It provides the best fuel economy compared to other ILSAC viscosity grades, while maintaining great protection in all driving conditions, varying operating temperatures and climates. It is specifically formulated to meet the needs of newer Japanese, Korean and U.S. OEMs, such as:

Acura, FCA (formerly Chrysler), Ford, Honda, Lexus, Nissan, Toyota and others with models that call for this modern viscosity grade.

SAE 5W-20 exceeds the requirements of API SN Plus Resource Conserving and ILSAC GF-5. It provides excellent protection in extreme cold temperatures.

SAE 5W-30 exceeds the requirements of API SN Plus Resource Conserving and ILSAC GF-5. It provides excellent protection in extended driving conditions.

SAE 10W-30 exceeds the requirements of API SN Plus Resource Conserving and ILSAC GF-5. It provides excellent year-round performance.

APPLICATIONS

Havoline High Mileage Motor Oils with Deposit Shield Technology are recommended for four-stroke gasoline engines used in passenger cars, light trucks, sport utility vehicles, powerboats, motorcycles, and other mobile and stationary equipment where an API SN Plus or previous API "S" category oil, and the appropriate viscosity grade, is recommended. They are excellent for high-revving engines in small cars and light trucks, and work well in turbocharged gasoline engines.

APPLICATIONS, SPECIFICATIONS, MANUFACTURER APPROVALS

Specifications	0W-20	5W-20	5W-30	10W-30
API SN Plus	X	X	X	X
API Resource Conserving	X	X	X	X
ILSAC GF-5	X	X	X	X
FCA US LLC MS-6395	X	X	X	X
Ford WSS-M2C930-A		X		
Ford WSS-M2C945-A		X		
Ford WSS-M2C946-A			X	
Ford WSS-M2C947-A	X			
GM6094M ^a		X	X	X

a Obsolete specification.

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.

TYPICAL TEST DATA

SAE Grade	0W-20	5W-20	5W-30	10W-30
<i>Product Number</i>	224113	224110	224111	224112
<i>SDS Number</i>	43982	31331	31331	31331
Density at 15°C	0.8486	0.8640	0.8635	0.8734
API Gravity	35.25	32.7	32.37	30.51
Viscosity, Kinematic cSt at 40°C cSt at 100°C	45.75 8.5	49.95 8.3	63.15 10.3	70.6 10.3
Viscosity, Cold Crank, °C/Poise	-35/59	-30/57	-30/60	-25/64
Viscosity Index	166	141	152	132
Flash Point, °C(°F)	>200(>392)	>200(>392)	>200(>392)	>200(>392)
Pour Point, °C(°F)	-41(-44)	-41(-38)	-40(-27)	-39(-27)
Sulfated Ash, wt %	0.9	0.9	0.9	0.9
Base Number, mgKOH/g, ASTM D2896	8.7	8.7	8.7	8.7
Phosphorus, wt %	0.077	0.078	0.077	0.077
Zinc, wt %	0.089	0.089	0.089	0.089

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.