



# Havoline Manual Transmission Fluid SAE 75W-90

## Manual Transmission Fluid

Product Data Sheet

### Customer benefits

- **Maximizes transmission life**

Extremely shear stable viscosity index improver does not break down under the high shear stresses of modern transmissions, ensuring that oil viscosity and fluid film thickness are sufficient for effective protection of gears against wear and scuffing. Mild extreme pressure additives provide the load carrying capacity necessary to minimize wear of transmission components under all service conditions.

- **Easy gear selection**

Special combination of friction modifiers, additives and viscosity produce correct frictional characteristics, allowing synchronizer rings and cones to engage properly and enabling light and easy gear shifting and unsurpassed noise control.

- **Saves on maintenance**

Highly refined base oils and effective oxidation inhibitors impart excellent thermal and oxidation stability, providing superior resistance to the formation of lacquer, deposits and corrosive acid by-products.

- **Long fluid service life**

High oxidation stability resists oil degradation and protects against oil thickening and acidity increase.

### Applications

- Japanese and Korean passenger car and light commercial vehicle manual transmissions and transaxles

*Not recommended for use in heavy-duty truck and bus manual transmissions, or in spiral bevel or hypoid drive axles where API GL-4 or GL-5 type gear lubricants are specified.*

### Product features:

High performance, highly shear stable, multigrade manual transmission fluid specifically designed for Asian passenger car manual transmissions and transaxles. It may also be used in other manual transmissions fitted to modern passenger car and light commercial vehicles.

A Chevron company product



## Performance standards

Suitable for use in the following makes of manual transmission and transaxles:

- Hyundai
- Kia
- Mazda
- Mitsubishi
- Nissan
- Suzuki
- Toyota

- API GL-4 (self-certified)

## Key properties

HAVOLINE MANUAL TRANSMISSION FLUID	RESULTS
<b>SAE Grade</b>	<b>75W-90</b>
<b>Product Code</b>	<b>510408</b>
<b>Pour Point, °C</b>	-40
<b>Shear Stability (KRL)</b>	
Visc @ 100°C after shear	14.4
<b>Viscosity, Brookfield</b>	
cP @ -40°C	91,100
<b>Viscosity,</b>	
mm <sup>2</sup> /s @ 40°C	95.9
mm <sup>2</sup> /s @ 100°C	16.4
<b>Viscosity Index</b>	186



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*continued*

### Service considerations

Most original vehicle manufacturers integrate fluid and hardware design, thereby developing tailor-made lubricants for their transmissions. These fluids are used for factory fill and are often specified for in-warranty protection service throughout the manufacturer dealer networks. Unlike commercial vehicle manufacturers, many passenger vehicle manual transmission fluid (MTF) specifications are not publicly available. This means that the only 'approved' lubricant for that transmission is the factory fill fluid. In this environment, a multi-vehicle MTF such as Havoline Manual Transmission Fluid SAE 75W-90, that is suitable for use in a wide range of vehicles, has significant utility in service facilities that encounter a wide range of vehicle makes and models.

Havoline Manual Transmission Fluid SAE 75W-90 has not been formally evaluated by vehicle or transmission manufacturers. However through comprehensive in-house bench test validation and vehicle fleet testing, Havoline Manual Transmission Fluid SAE 75W-90 has been shown to provide shift quality performance and durability that is comparable to the manufacturer genuine oils. Primarily intended for use in transmissions where SAE 75W-90 viscosity is specified or allowed, it may also be suitable for use in transmissions where SAE 75W-80 or SAE 75W-85 viscosity grades are specified, particularly in tropical ambient conditions.

Although Havoline Manual Transmission Fluid SAE 75W-90 does meet API GL-4, this is a secondary target and it is nevertheless not designed for nor intended for use in any spiral bevel or hypoid drive axles. It is based upon detergent-zinc type additive technology, and so should not be mixed in service with conventional sulfur-phosphorus type EP gear oils, nor should it be used in any manual transmissions or transaxles for which sulfur-phosphorus based fluids are specified, although such are now in the minority where passenger cars and light commercial vehicles are concerned.

This bulletin was prepared in good faith from the best information available at the time of issue. While the values and characteristics are considered representative, some variation, not affecting performance, can be expected. It is the responsibility of the user to ensure that the products are used in the applications for which they are intended.

Produced by Chevron Lubricants; Africa, Middle East and Pakistan.

Environment, Health and Safety Information is available on this product in the Material Safety Data Sheet (MSDS) and Customer Safety Guide. Customers are encouraged to review this information, follow precautions and comply with laws and regulations concerning product use and disposal. To obtain a MSDS for this product, visit [www.caltexoils.com](http://www.caltexoils.com)

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