



## SAE 50 Long-Life Synthetic Transmission Oil Specifically Engineered for 500,000-Mile Service Life in Over-The-Road Trucks.

AMSOIL SAE 50 Long-Life Synthetic Transmission Oil is specially formulated to meet the demanding requirements of manual transmissions found in high-torque, heavy-duty line-haul trucks and other commercial applications. Its synthetic base stocks and premium additives help reduce gear and bearing wear (see photos), improve shifting and extend transmission life throughout drain intervals of up to 500,000 miles/five years. Compared to conventional fluids, Long-Life Synthetic Transmission Oil can help operators reduce maintenance costs and increase productivity.



### Year-Round Performance

AMSOIL Long-Life Synthetic Transmission Oil's high viscosity index translates into better high- and low-temperature performance compared to conventional fluids. In cold weather, it provides easier shifts and reduced fluid drag for increased fuel economy. Its exceptional thermal stability inhibits chemical breakdown and sludge formation at high operating temperatures to help transmissions run cleaner.

### Resists Wear

AMSOIL Long-Life Synthetic Transmission Oil's synthetic base oils withstand the pressures of high-load, high-torque applications. As a result, it resists viscosity loss due to mechanical shear to provide a durable lubricating fluid film for increased wear resistance and longer transmission life.

To prove its effectiveness, AMSOIL installed SAE 50 Long-Life Synthetic Transmission Oil in line-haul trucks and placed them into real-world service.

After 500,000 miles, a transmission was disassembled and inspected by a calibrated ASTM rater. Results reveal Long-Life Synthetic Transmission Oil provided outstanding wear protection in all critical components. Examples include the mainshaft input drive gear and output shaft bearing, which both earned high merit scores of 8 out of a possible 10 for wear. In addition, both components showed no scoring, spalling or corrosion, scoring perfect 10s in all areas.

### Inhibits Foam

Churning gears introduce air into the fluid, causing foam. When bubbles between gear surfaces collapse, metal-to-metal contact and increased wear result. Long-Life Synthetic Transmission Oil contains foam inhibitors to ensure formation of a strong lubricating film and excellent wear protection.

### Seal Friendly

Long-Life Synthetic Transmission Oil is compatible with seals to help prevent leaks and extend seal life.



After 500,000 miles of real-world service, the transmission mainshaft input drive gear lubricated with AMSOIL Long-Life Synthetic Transmission Oil showed minimal wear and is suitable for continued use.



The transmission output shaft bearing showed no scoring, spalling or corrosion following 500,000 miles with AMSOIL Long-Life Synthetic Transmission Oil.

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## TYPICAL TECHNICAL PROPERTIES

### SAE 50 Long-Life Synthetic Transmission Oil (FTF)

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Viscosity 100°C, cSt (ASTM D-445).....	17.6
Viscosity 40°C, cSt (ASTM D-445).....	126.1
Viscosity Index (ASTM D-2270).....	154
Specific Gravity (g/ml).....	0.8540
Density, (lb/gal).....	7.111
Color.....	L4.0 (Red)
Flash Point, °C (°F) (ASTM D-92).....	254 (489)
Fire Point, °C (°F) (ASTM D-92).....	270 (518)
Pour Point, °C (°F) (ASTM D-97).....	-46 (-51)
Four-Ball Wear Test (ASTM D-4172)	
Para 1 (75°C, 1200 rpm, 40 kg, 1 hr).....	0.35
Brookfield Viscosity -40°C (cP) (ASTM D-2983).....	108,000
Foam Tendency (ASTM D-892).....	0/0, 0/0, 0/0
Copper Corrosion, 121°C, 3 hr (ASTM D-130).....	1B
60-Hour KRL (% V <sub>k</sub> 100 loss) (CEC L-45-A-99).....	-2.28

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## APPLICATIONS

AMSOIL SAE 50 Long-Life Synthetic Transmission Oil is excellent for use in manual transmissions requiring an SAE 50 lubricant found in heavy-duty equipment. It is recommended for applications specifying any of the following:

- Eaton PS-164 Rev. 7
- API GL-1 and MT-1
- Navistar/International TMS 6816
- Mack TO-A Plus
- Volvo I-Shift
- ZF Freedomline
- Meritor 0-81
- Rockwell/Eaton/Fuller CD-50 (PS-081)

## SERVICE LIFE

Follow the OEM drain interval for synthetic oil up to 500,000 miles or five years, whichever comes first.

## HEALTH & SAFETY

This product is not expected to cause health concerns when used for the intended application and according to the recommendations in the Material Safety Data Sheet (MSDS). An MSDS is available via the Internet at [www.amsoil.com](http://www.amsoil.com) or upon request at (715) 392-7101. **Keep Out of Reach of Children.** Don't pollute. Return used oil to collection centers.

For AMSOIL warranty information, visit [www.amsoil.com/warranty.aspx](http://www.amsoil.com/warranty.aspx).



AMSOIL products and Dealership information are available from your local AMSOIL Dealer.