



"The First in Synthetics"®

**Custom-Blended for Superior
Performance in Today's Engines**

PRODUCT DESCRIPTION

AMSOIL High Performance Synthetic 20W-50 Motor Oil is specially formulated to provide superior protection and performance in the most demanding applications. It provides a wide range of protection in all four-cycle gasoline and diesel engines, including pickups, RVs, cars and off-highway vehicles and is ideal for use in high-stress vehicles subject to stop-and-go driving, short trips, high temperatures, frequent trailer pulling and off-road use.

Resists High Temperature Vaporization

Conventional motor oils tend to "boil off" in high temperatures, losing up to 25 percent of their original weight. These vaporized oils circulate poorly, reduce fuel efficiency and contribute to excessive emissions and engine wear. AMSOIL High Performance Synthetic 20W-50 Motor Oil resists vaporization. In fact, according to the NOACK Volatility Test, which measures the weight loss of an oil due to evaporation, AMSOIL Synthetic 20W-50 only loses 6.3 percent of its weight in high temperature service, surpassing rigorous European standards set at 13 percent weight loss in high temperature testing. The superior vaporization resistance of AMSOIL Synthetic 20W-50 keeps engine wear, oil consumption and emissions to a minimum, while keeping oil circulation efficient and fuel economy high.

Resists Oxidation and Thermal Breakdown

Conventional oils oxidize in high operating temperatures, producing sludge and deposit build-up that contribute to corrosion, increased engine wear and decreased fuel economy. AMSOIL High Performance Synthetic 20W-50 Motor Oil resists oil breakdown, maintaining its cooling and lubricating properties and providing extended drain intervals. It continues to provide maximum protection at temperatures that oxidize conventional oils. The advanced heat transfer capabilities and high lubricity of AMSOIL 20W-50 Motor Oil keep engines running in their optimum temperature range for top performance and long life.

High Performance Synthetic 20W-50 Motor Oil

- API SJ, SH, SG, SF, CH-4, CG-4, CF-2, CF, CD
 - ACEA A2, A3, B2, B3, E2, E3
 - CHRYSLER MS 8809A
- CUMMINS CES 20071, 20072, 20076
 - FORD ESR M2C 179A
- MERCEDES-BENZ 226.1, 227.1, 228.1, 228.3
 - MACK EO-L, EO-M, EO-M+
 - VOLVO VDS, VDS-2
- VOLKSWAGEN 501.01, 505
 - ALLISON C-3, C-4
- CATERPILLAR TO-2, TO-3
 - JASO-MA

Provides High Shear Stability

AMSOIL Synthetic 20W-50 Motor Oil surpasses the North American SAE and European ACEA oil specifications for high temperature/high shear (HTHS) viscosity. It retains its viscosity at temperatures and loads that cause conventional oils to shear back to a lower viscosity. AMSOIL 20W-50 Motor Oil maintains an extremely protective viscosity of 4.95 cP at 302°F (150°C) in the ASTM D 4683 High Temperature/High Shear Test, significantly exceeding test limits.

Provides Low Temperature Protection

AMSOIL Synthetic 20W-50 Motor Oil maintains outstanding low temperature fluidity, ensuring easy engine cranking for quick starts. During sub-zero temperatures, it flows to all parts of the engine much quicker than conventional petroleum 20W-50 oils, greatly reducing the rate of wear and increasing engine life.

Resists Deposit Formation

AMSOIL Synthetic 20W-50 Motor Oil is highly resistant to oxidation, running significantly cleaner than conventional motor oils. AMSOIL 20W-50 has a superior detergent/dispersant additive package that, when tested after tens of thousands of miles of use in the crankcase, still exhibits outstanding deposit control.

Inhibits Rust and Corrosion

AMSOIL Synthetic 20W-50 Motor Oil contains special rust and corrosion inhibitors to protect iron parts, as well as copper, lead and aluminum bearing materials.

Provides Extended Drain Intervals

AMSOIL Synthetic 20W-50 Motor Oil features a superior synthetic composition and advanced performance additives, performing much longer than competing conventional and synthetic oils.

TYPICAL TECHNICAL PROPERTIES

AMSOIL HIGH PERFORMANCE SYNTHETIC 20W-50 MOTOR OIL

Kinematic Viscosity @ 100° C, cST (ASTM D 445)	18.4
Kinematic Viscosity @ 40°C, cST (ASTM D 445)	121.4
Viscosity Index (ASTM D 2270)	169
CCS Viscosity @ -20°C, cP (ASTM D 2602)	2160
Pour Point °C (°F) (ASTM D 97).....	-36 (-33)
Flash Point °C (°F) (ASTM D 92)	236 (457)
High-Temperature/High Shear Viscosity @ 150°C, 1.0 X 10 ⁶ s-1 (ASTM D 4683), cP	4.95
Four-Ball Wear Test (ASTM D 4172 @ 40 kgf, 150°C, 1800 rpm, 1 hour, Scar in mm	0.39
Noack Volatility, % weight loss (g/100g) (DIN 51581)	6.3
Total Base Number	>12.0

APPLICATIONS

AMSOIL High Performance Synthetic 20W-50 Motor Oil may be used in gasoline or diesel engines requiring oils meeting the following specifications.

- API SJ, SH, SG, SF, CH-4, CF-2, CF, CD
- ACEA A2, A3, B2, B3, E2, E3
- Chrysler MS 8809A
- Cummins CES 20071, 20072, 20076
- Ford ESR M2C 179A
- Mercedes-Benz 226.1, 227.1, 228.1, 228.3
- Mack EO-L, EO-M, EO-M+
- Volvo VDS, VDS-2
- Allison C-3, C-4
- Caterpillar TO-2, TO-3
- JASO-MA

MIXING AMSOIL

AMSOIL High Performance Synthetic 20W-50 Motor Oil is compatible with conventional petroleum oils; however, mixing AMSOIL 20W-50 with a conventional oil will shorten the drain period of AMSOIL 20W-50. Engine oil additives or after-market products are not recommended for use with AMSOIL 20W-50.

SERVICE LIFE

In personal cars and light-duty trucks with non-turbocharged gasoline engines, change oil at three times the engine manufacturer's recommended drain interval or one year, whichever comes first.

In turbocharged gasoline engines, change oil at two times the engine manufacturer's recommended drain interval or six months, whichever comes first.

In high performance and racing engines, change oil at intervals specified by used oil analysis.

In light-duty and non-turbocharged diesel engines, change oil at two or more times the engine manufacturer's recommended drain intervals if the findings of used oil analysis support those drain intervals or six months, whichever comes first.

In heavy duty and turbocharged diesel engines, change oil at two or more times the engine manufacturer's recommended drain intervals if the findings of used oil analysis support those drain intervals or six months, whichever comes first.

In marine craft and occasionally used gasoline engines, change oil at three times the engine manufacturer's recommended drain interval or one year, whichever comes first.

In fleet vehicles and industrial gasoline engines, change oil at three times the engine manufacturer's recommended drain interval or six months, whichever comes first.

If the vehicle is equipped with an AMSOIL Oil Filter, the filter should be changed at 12,500-mile or six-month intervals (whichever comes first) in gasoline engines and 7000-mile or six-month intervals (whichever comes first) in diesel engines. Non-AMSOIL oil filters should be changed at the engine manufacturer's recommended filter change interval.

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

