



DATA BULLETIN

Premium Protection Synthetic Motor Oil

AMSOIL Premium Protection Synthetic Motor Oil is formulated to provide superior protection and performance in a wide variety of demanding applications. Its unique combination of synthetic base oils and a superior additive package results in a formulation that exceeds the requirements of most gasoline or diesel applications that call for 10W-40 or 20W-50 motor oil. Premium Protection Synthetic Motor Oil is ideal for high-mileage vehicles and high-stress vehicles subject to hot temperatures, heavy hauling, trailer pulling or off-road use. It provides the extra anti-wear protection required by engines with flat-tappet cams and high-tension valve springs. AMSOIL Premium Protection Synthetic Motor Oil offers flexibility and performance beyond conventional oils.

AMSOIL, the leader in automotive synthetic lubrication, produced the world's first API-qualified synthetic motor oil in 1972. Trust the extensive experience of AMSOIL, The First in Synthetics®, to do the best job protecting your engine.



- **High-zinc** formula guards against wear
- **Ideal** for flat-tappet cams
- **Resists** deposits to help keep engines clean
- **Convenience** of use for gas and diesel engines

Superior Wear Protection

Premium Protection Synthetic Motor Oil is high-viscosity oil engineered to protect against metal-to-metal contact. It resists viscosity loss due to shear and is formulated with a heavy treatment of zinc and other anti-wear additives for excellent protection of gears, bearings, cam lobes and other high-pressure components in engines and transmissions. Premium Protection Synthetic Motor Oil helps extend equipment life.

Wet-Clutch Compatible

Premium Protection Synthetic Motor Oil contains no friction modifiers, making it ideal for motorcycles, maintenance equipment and other wet-clutch transmission applications. Formulated to prevent clutch glazing and slippage, it helps ensure smooth clutch engagement and long-term, dependable transmission operation. Premium Protection Synthetic Motor Oil reduces clutch wear for extended transmission life.

Resists Oxidation and High-Temperature Breakdown

Premium Protection Synthetic Motor Oil is formulated to overcome the thermal deficiencies common to conventional petroleum oils. Volatilization (burn-off), oxidation and excessive deposit formation from high heat are greatly reduced. Viscosity thickening is controlled and engines run cleaner, promoting cooler operation and long engine life in air- or liquid-cooled engines. In addition, the higher viscosity of AMSOIL 20W-50 Synthetic Motor Oil may help reduce motor oil consumption in equipment that experiences higher-than-normal usage rates when lower-viscosity lubricants are installed.

Extends Drain Intervals in Gasoline and Diesel Engines

Superior synthetic base oil and additive technology exceeds the requirements of both gasoline and diesel engines. Premium Protection Motor Oil is designed to neutralize acids, disperse soot and last longer in service than conventional oils.

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TYPICAL TECHNICAL PROPERTIES
AMSOIL Premium Protection Synthetic Motor Oil

	10W-40 (AMO)	20W-50 (ARO)
Kinematic Viscosity @ 100°C, cSt (ASTM D445)	14.6	19.5
Kinematic Viscosity @ 40°C, cSt (ASTM D445)	95.9	160.3
Viscosity Index (ASTM D2270)	158	139
CCS Viscosity, cP (°C) (ASTM D5293)	.4920 (-25)	4636 (-15)
Pour Point °C (°F) (ASTM D97)	-42 (-44)	-35 (-31)
Flash Point °C (°F) (ASTM D92)	226 (439)	230 (446)
Fire Point °C (°F) (ASTM D92)	240 (264)	248 (478)
High-Temperature/High-Shear Viscosity (ASTM D5481), cP	4.3	5.5
Four-Ball Wear Test (ASTM D4172), Scar, mm	0.48	0.48
NOACK Volatility, % weight loss (ASTM D5800)	6.5	4.8
Total Base Number	12.1	12.1

APPLICATIONS

Use in air- and liquid-cooled, large or small gasoline and diesel engines, transmissions and chaincase applications where 10W-40 or 20W-50 oils are required with any of the following specifications:

- API SL, SJ, SH, SG
- API CI-4+, CI-4, CH-4, CF, CF-2
- ISO-L-EMA
- Caterpillar* ECF-1
- JASO MA (Motorcycle)
- MAN* 271/3275
- MTU Type 2
- Cummins* 20071/20072/20076/20077
- Volvo*, VDS-2, VDS
- Mack* EO-M+, EO-M
- ACEA A3/B3, E3, E5
- MB 228.1, 228.3, 229.1
- Detroit Diesel* 93K214

COMPATIBILITY

Premium Protection Synthetic Motor Oil is compatible with synthetic and conventional motor oils. Mixing AMSOIL motor oil with other oils, however, will shorten the oil's life expectancy and reduce its performance benefits. AMSOIL does not support extended drain intervals where oils have been mixed.

Aftermarket oil additives are not recommended for use with AMSOIL synthetic motor oils.

SERVICE LIFE

Premium Protection Synthetic Motor Oil is recommended for extended intervals in unmodified, mechanically sound vehicles or equipment as follows:

Diesel Engine Service

Normal Service - Up to 25,000 miles or one year, whichever comes first, or longer based on oil analysis.
Severe Service - Up to 15,000 miles or one year, whichever comes first, or longer based on oil analysis.

Gasoline Engine Service

Normal & Severe Service - Up to 15,000 miles or one year, whichever comes first, or longer based on oil analysis.

Motorcycles, Small Engines, Stationary Engines, Heavy Equipment and Other Applications

Extend drain intervals based on oil analysis or follow the manufacturer-recommended drain interval.

For more information on product applications and service life, refer to the AMSOIL Product Recommendation and Drain Interval Guide (G1490).

AMSOIL PRODUCT WARRANTY

AMSOIL products are backed by a Limited Liability Warranty. For complete information visit www.amsoil.com/warranty.aspx.

HEALTH & SAFETY

This product is not expected to cause health concerns when used for the intended applications and according to the recommendations in the Safety Data Sheet (SDS). An SDS is available online at www.amsoil.com or upon request at (715) 392-7101. Keep Out of Reach of Children. Recycle used oil and bottle.

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