



*The First in Synthetics*®

# Premium Protection Synthetic Motor Oils

10W-40 (AMO) • 20W-50 (ARO)

Automobiles • Motorcycles • Motor Homes • Heavy Equipment

## PRODUCT DESCRIPTION

AMSOIL Synthetic 10W-40 and 20W-50 Premium Protection Motor Oils are specially formulated to provide superior protection and performance in a wide variety of demanding applications. By incorporating high-quality synthetic base stocks and a superior high-zinc additive package, AMSOIL Premium Protection Oils exceed the needs of large and small gasoline or diesel engines in cars, motorcycles, trucks, motor homes, maintenance equipment, heavy equipment, street rods and marine applications. They are ideal for high-mileage vehicles, vehicles with flat-tappet cams and high-stress vehicles subject to hot temperatures, heavy hauling, trailer pulling or off-road use. AMSOIL Premium Protection Oils resist oxidation, neutralize acids, inhibit corrosion, reduce wear and protect against deposits. They provide the extra anti-wear protection required by engines with flat-tappet cams and high-tension valve springs. AMSOIL Synthetic 10W-40 and 20W-50 Premium Protection Motor Oils offer flexibility and performance beyond conventional oils for convenience and trouble-free operation.

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.

## Provide Superior Wear Protection

AMSOIL Synthetic 10W-40 and 20W-50 Premium Protection Motor Oils are high-viscosity oils engineered to protect against metal-to-metal contact. They resist viscosity shear and are 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. AMSOIL Premium Protection Synthetic Motor Oils help extend engine life.



## Exceed the Requirements of Wet-Clutch Transmissions

AMSOIL Premium Protection Synthetic Motor Oils contain no friction modifiers, making them ideal for motorcycles, maintenance equipment and other wet-clutch transmission applications. Formulated to prevent clutch glazing and slippage, they insure smooth clutch engagement and long-term, dependable transmission operation. AMSOIL Synthetic 10W-40 and 20W-50 Motor Oils reduce clutch wear for extended transmission life.

## Resist Oxidation and High-Temperature Breakdown

AMSOIL Premium Protection Synthetic Motor Oils are specifically 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 nature of AMSOIL Synthetic 20W-50 Motor Oil may help reduce motor oil consumption in equipment that experiences higher-than-normal usage rates when lower-viscosity lubricants are installed.

## Extend Drain Intervals in Gasoline and Diesel Engines

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



## TYPICAL TECHNICAL PROPERTIES

### AMSOIL Synthetic 10W-40 and 20W-50 Premium Protection Motor Oils

	AMO (10W-40)	ARO (20W-50)
Kinematic Viscosity @ 100°C, cSt (ASTM D-445)	14.6	18.9
Kinematic Viscosity @ 40°C, cSt (ASTM D-445)	90.5	123.8
Viscosity Index (ASTM D-2270)	169	172
CCS Viscosity, cP (°C) (ASTM D-5293)	5501 (-25)	3525 (-15)
Pour Point °C (°F) (ASTM D-97)	-44 (-47)	-36 (-33)
Flash Point °C (°F) (ASTM D-92)	228 (442)	233 (451)
Fire Point °C (°F) (ASTM D-92)	250 (482)	249 (480)
High Temperature/High Shear Viscosity (ASTM D-5481 @ 150°C, 1.0 X 10 <sup>6</sup> s-1), cP	4.3	5.0
Four-Ball Wear Test (ASTM D-4172 @ 40 kg, 150°C, 1800 rpm, 1 hr), Scar, mm	0.40	0.40
Noack Volatility, % weight loss (g/100g) (ASTM D-5800)	6.7	6.5
Total Base Number	12.1	12.1

### APPLICATIONS

AMSOIL Synthetic 10W-40 and 20W-50 Premium Protection Motor Oils are multi-use, premium synthetic lubricants for applications that require or benefit from a higher-viscosity oil. They are recommended for 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 Plus, 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 • VDS-2, VDS
- Mack EO-M+ • ACEA A3/B3, E3, E5 • MB 228.3, 229.1

### MIXING AMSOIL

AMSOIL Synthetic 10W-40 and 20W-50 Premium Protection Motor Oils are compatible with conventional and synthetic motor oils. Mixing AMSOIL motor oils with other oils, however, will shorten the oil life expectancy and reduce the 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 Oils.

### SERVICE LIFE

AMSOIL Synthetic 10W-40 and 20W-50 Premium Protection Motor Oils are 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.

AMSOIL Ea™ Full-Flow Oil Filters are designed for extended drain intervals. They stop smaller particles, flow more oil and last longer than regular filters. For best performance, use AMSOIL Ea™ Full-Flow Oil Filters and replace at the time of oil change. Other oil filters should be changed at standard OEM\* intervals.

\*OEM - Original Equipment Manufacturer

OIL ANALYZERS INC., 715-395-0222, is a division of AMSOIL that provides cost-effective, quality oil analysis services.

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

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

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

