



*The First in Synthetics®*

**Specially Formulated to Lubricate and Protect High-Revving, Air- or Liquid-Cooled Four-Cycle Motorcycle and ATV Engines**

# HIGH PERFORMANCE SYNTHETIC 10W-40 & 20W-50 MOTORCYCLE ENGINE OILS

API SJ, SH, SG, SF, CH-4, CG-4, CF-2, CF, CD, JASO MA

## PRODUCT DESCRIPTION

AMSOIL High Performance Synthetic Motorcycle Oils are specially formulated to provide tough lubricating protection in the most demanding operations. They are recommended for use in all four-cycle motorcycle and ATV engines, including those with wet clutch systems.

## WEAR PROTECTION

AMSOIL Synthetic Motorcycle Oils are specially formulated with high levels of zinc and phosphorus for superior protection of cam lobes and other high-pressure components. In fact, AMSOIL Synthetic Motorcycle Oils contain more zinc and phosphorus than other popular motorcycle oils (see graph). AMSOIL Synthetic Motorcycle Oils leave a wear scar up to 40 percent smaller than the scars left by other popular brands in the ASTM D4172 Four-Ball Wear Test.

Some motorcycle and ATV transmissions and engines share an oil sump, so the engine oil also provides wear protection to the transmission gears. AMSOIL offers superior wear protection to transmission gears, which are often subject to high surface pressure and rotation speed. It also promotes proper wet clutch performance.

## FRICTION MODIFIER FREE

AMSOIL Synthetic Motorcycle Oils contain no friction modifiers, making them ideal for motorcycle and ATV engines. The friction modifier free formulation of AMSOIL ensures dependable starting, smooth running, good fuel efficiency, desirable stall speeds and clutch compatibility.

## PERFORMANCE FORMULATED

AMSOIL Synthetic Motorcycle Oils contain a robust dispersant/detergent additive package, making them ideal for use in high-stress motorcycle engines. The dispersant/detergent additive packages allow them to stay serviceable longer than other oils.

## TEMPERATURE AND PERFORMANCE

AMSOIL High Performance Synthetic Motorcycle Oils provide superior performance. Their outstanding low-temperature fluidity ensures easy cranking, dependable starting and fast post-startup protection. The superior high-temperature protection ensures the formation of a clean, protective film of oil between working parts during high-temperature, high-stress operations.

High-temperature operations often lead to the thermal degradation and oxidation of conventional oils, which leads to the formation of deposits, sludge and varnish. AMSOIL withstands thermal degradation and oxidation at higher temperatures than conventional oils do, ensuring clean, dependable performance in high-stress, high-temperature operations, especially in air-cooled engines.

## APPLICATIONS

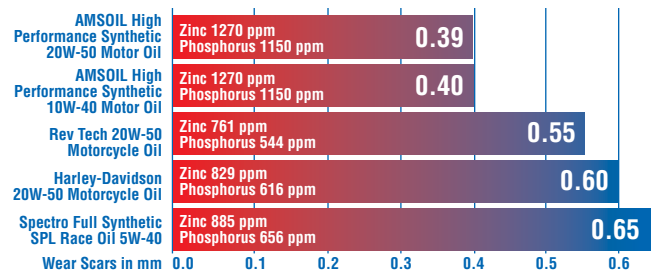
AMSOIL High Performance Synthetic Motorcycle Oils may be used in all four-cycle air- and liquid-cooled gasoline motorcycle engines requiring any of the following specifications:

- API SJ, SH, SG, SF, CH-4, CG-4, CF-2, CF, CD JASO MA

In general, Japanese motorcycles use 10W-40 (AMF) while US and European motorcycles use 20W-50 (AMV). Check your owner's manual.

## WEAR PROTECTION

Four-Ball Wear Test ASTM D 4172: 40 kgf, 150°C, 1800 rpm, 1 hr  
**The smaller the wear scar, the better the protection.**



AMSOIL High Performance Synthetic 10W-40 Motor Oil leaves a wear scar up to 38 percent smaller than the scars left by other popular motor oils.

AMSOIL High Performance Synthetic 20W-50 Motor Oil leaves a wear scar up to 40 percent smaller than the scars left by other popular motor oils.

## TYPICAL TECHNICAL PROPERTIES

### AMSOIL HIGH PERFORMANCE SYNTHETIC 10W-40 AND 20W-50 MOTORCYCLE OILS

	AMF (10W-40)	AMV (20W-50)
Kinematic Viscosity @ 100°C, cSt (ASTM D 445)	14.7	18.4
Kinematic Viscosity @ 40°C, cSt (ASTM D 445)	88.6	121.4
Viscosity Index (ASTM D 2270)	173	169
CCS Viscosity (ASTM D 2602)	4500@-25°C	3990@-15°C
Pour Point °C (°F) (ASTM D 97)	-48 (-54)	-36 (-33)
Flash Point °C (°F) (ASTM D 92)	232 (450)	232 (450)
High-Temperature/High-Shear Viscosity @ 150°C, 1.0 X 10 <sup>6</sup> s <sup>-1</sup> (ASTM D 4683), cP	4.2	4.9
Four-Ball Wear Test (ASTM D 4172 @ 40 kgf, 150°C, 1800 rpm, 1 hour, Scar in mm)	0.40	0.39
Noack Volatility, % weight loss (g/100g) (DIN 51581)	6.6	6.4
Total Base Number	>12.0	>12.0

#### NEW VEHICLES UNDER WARRANTY

AMSOIL High Performance Synthetic Motorcycle Oils will not void new motorcycle warranties. New motorcycle warranties are based on the use of oils meeting specific API service classifications and SAE viscosity grades. AMSOIL meets the current API and SAE requirements (as labeled) and is perfectly suited for use in any new motorcycle stipulating those requirements.

#### SERVICE LIFE

Change AMSOIL High Performance Synthetic Motorcycle Oil according to manufacturer's recommendations without oil filtration. With oil filtration, change oil up to two times longer than manufacturer's recommendations or six months, whichever comes first. When using an AMSOIL SDF or SMF filter, change filter at two times the manufacturer's recommendations. Hastings and other filter brands should be changed at manufacturer's recommendations.

#### MIXING AMSOIL

AMSOIL High Performance Synthetic Motorcycle Oils are compatible with conventional petroleum oils; however, mixing AMSOIL Motorcycle Oils with conventional motorcycle oils may shorten the drain periods and compromise the superior quality of AMSOIL Motorcycle Oils. Because AMSOIL Motorcycle Oils are formulated to provide superior lubrication performance, engine oil additives or aftermarket products are not recommended for use with AMSOIL Motorcycle Oils.

#### RACING ENGINES

Change AMF and AMV at intervals specified by used oil analysis.

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

