Daryl Zebrasky

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AMSOIL Regulatory Compliance

DATA BULLETIN

Formula 4-Stroke® 10W-40 Synthetic Scooter Oil

Outstanding Protection for Scooter Engines, Transmissions and Gearboxes



AMSOIL Formula 4-Stroke 10W-40 Synthetic Scooter Oil is formulated specifically to meet the special needs of today's high-tech air- and water-cooled four-stroke motorized scooters, offering outstanding wear protection and friction reduction for longer equipment life and cooler operating temperatures. Its exceptional shear stability provides consistent viscosity protection and additional protection for transmissions and gearboxes, while its friction-modifier-free formulation ensures wet-clutch compatibility and smooth clutch operation. A special anti-corrosion additive package provides long-term protection during periods of inactivity and storage.

- **Protects** against wear
- **Resists** shear for excellent gear protection
- **Delivers** smooth clutch operation

Shear Stability

High engine rpm common to scooter applications increases shear, causing conventional lubricants to lose viscosity and reduce their ability to control wear, resulting in shorter engine life. The synthetic formulation of Formula 4-Stroke Synthetic Scooter Oil effectively resists shear, delivering consistent viscosity protection for outstanding wear protection and extended equipment life.

Thermal Stability

Scooter engine operating temperatures fluctuate greatly, especially in air-cooled engines. Formula 4-Stroke Synthetic Scooter Oil resists breakdown at elevated temperatures, maintaining its protective viscosity for maximum wear control.

Transmission and Gear Box Compatibility

In many scooter applications, the engine and transmission and gearbox share the same oil reservoir. Formula 4-Stroke Synthetic Scooter Oil is shear stable and resists thinning from mechanical activity, providing superior protection for transmissions and gearboxes.

Wet-Clutch Compatibility

Some scooters employ a frictional clutch to engage and disengage the engine from the drivetrain. In many cases, this clutch is immersed in the same oil used in the engine and transmission. Formula 4-Stroke Synthetic Scooter Oil is wet-clutch compatible. It contains no friction modifiers, offering smooth clutch operation and increased clutch life.

Rust and Corrosion Protection

Scooters are often subjected to extended periods of inactivity and storage, exposing the equipment to internal rust and corrosion. Formula 4-Stroke Synthetic Scooter Oil is formulated with a special anti-corrosion additive package designed to provide long-term protection during periods of inactivity and storage.

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TYPICAL TECHNICAL PROPERTIES

Formula 4-Stroke® 10W-40 Synthetic Scooter Oil (ASO)

Kinematic Viscosity @ 100˚C, cSt (ASTM D445)	14.6
Kinematic Viscosity @ 40˚C, cSt (ASTM D445)	96.7
Viscosity Index (ASTM D2270)	157
Pour Point ˚C (˚F) (ASTM D97)	-40 (-40)
Flash Point ˚C (˚F) (ASTM D92)	238 (460)
Fire Point ˚C (˚F) (ASTM D92)	250 (482)
High-Temperature/High-Shear Viscosity, cP (ASTM D5481)	4.2
NOACK Volatility, % weight loss (g/100g) (ASTM D5800)	5.4
Total Base Number (ASTM D2896)	8.5

APPLICATIONS AND RECOMMENDATIONS

Use wherever SAE 10W-40 motor oil is specified in air- and water-cooled four-stroke motorized scooter engines, transmissions and gearboxes recommended for any of the specifications below, including those made by Honda*, Kawasaki*, Suzuki,* Yamaha*, Vespa*, Aprilia*, Piaggio*, Benelli*, Vento*, Kymco*, Tank* and TGB*.

- API SG, SL/CF
- JASO MA/MA2 (motorcycle wet-clutch)
- ISO-L-EMA2

SERVICE LIFE

Follow the equipment manufacturer's recommended drain intervals.

COMPATIBILITY

AMSOIL Formula 4-Stroke Synthetic Scooter Oil is compatible with other 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.

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 application 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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AMSOIL The First in Synthetics®

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