



Synthetic 20W-50 Motorcycle Oil

High-Performance Lubricant for Engines, Transmissions and Primary Chaincases

AMSOIL Synthetic 20W-50 Motorcycle Oil (MCV) is a premium oil designed for those who demand the absolute best lubrication for their motorcycles. AMSOIL 20W-50 Motorcycle Oil is the result of extensive research and is specially formulated to excel in all areas unique to motorcycles, including high temperatures of air-cooled engines such as Harley-Davidson® V-Twin, wet-clutch lubrication, extreme-pressure regions of gears and chains and rust common to short trips and storage.

AMSOIL Synthetic 20W-50 Motorcycle Oil is multi-functional and fulfills the requirements of both domestic and foreign motorcycles. It outperforms other conventional and synthetic motorcycle oils. AMSOIL, the leader in 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 motorcycle.

Reduces Friction, Heat and Wear

In high heat conditions, engine protection is not sacrificed with AMSOIL Synthetic Motorcycle Oil. It has exceptional high-temperature film strength and contains a heavy treatment of anti-wear additives to reduce wear regardless of the operating conditions. AMSOIL 20W-50 Motorcycle Oil is thermally (heat) stable and contains maximum levels of oxidation inhibitor additives. It is extremely resistant to breakdown and engineered to prevent damaging sludge and carbon deposits for superior engine cleanliness.

Provides Extreme-Pressure Quality Protection for Gears and Chains

With AMSOIL Synthetic Motorcycle Oil, there is no need for separate transmission or primary chaincase lubricants. It is absolutely shear stable and will not thin out from mechanical activity. AMSOIL 20W-50 Motorcycle Oil performs like a gear lube without the negative effects of extreme-pressure additives. In the FZG gear test, AMSOIL achieved a perfect score with a "zero" wear rating (see test photo).

Delivers Superior Rust Protection

Motorcycles are prone to rust from storage, humidity and short drives. Rust can cause major damage such as roller bearing failure, uncontrolled wear, compression loss and blow-by. Good rust protection, however, comes by design and is not natural to engine oils. Unlike many motorcycle oils, AMSOIL Synthetic Motorcycle Oil contains special anti-rust agents. It passes the ASTM D-1748 humidity cabinet rust test and clearly demonstrates superior rust protection (see photo on reverse).

Provides Excellent Wet-Clutch Performance

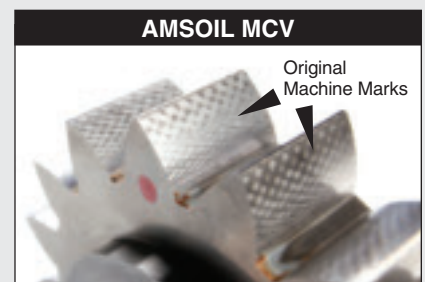
AMSOIL Synthetic 20W-50 Motorcycle Oil contains no friction modifiers and promotes smooth shifting and positive clutch engagement. It controls heat and helps prevent slippage and glazing, while its high TBN helps to improve clutch life by resisting the acids that can degrade clutch material.



API SG, SL/CF, CG-4
JASO MA/MA2
ISO-L-EMA2
API GL-1

FZG Gear Test (ASTM D-5182)

June 2009 Test Results



Pass Example: Passed Stage 13,
Total Wear, **0mm**



Failure Example: Passed Stage 11, Failed
Stage 12, Total Wear in Stage 12, **160mm**

TYPICAL TECHNICAL PROPERTIES

AMSOIL High Performance Synthetic 20W-50 Motorcycle Oil (MCV)

Kinematic Viscosity @ 100°C, cSt (ASTM D-445)	20.56
Kinematic Viscosity @ 40°C, cSt (ASTM D-445)	152.0
Viscosity Index (ASTM D-2270)	161
Pour Point °C (°F) (ASTM D-97)	-39 (-38)
Flash Point °C (°F) (ASTM D-92)	240 (464)
High-Temperature/High-Shear Viscosity (ASTM D-5481 @ 150°C, 1.0 X 10 ⁶ s ⁻¹), cP	6.02
Four-Ball Wear Test (ASTM D-4172 @ 40 kgf, 150°C, 1800 rpm, 1 hr), Scar, mm	0.37
FZG (ASTM D-5182), Load Stage Pass (Wear in mm)	13 (0 mm)
NOACK Volatility, % weight loss (g/100g) (ASTM D-5800)	3.89
Foam (ASTM D-892, Sequence I, II & III)	0/0/0
Shear Stability Kurt Orbahn (ASTM D-6278), % viscosity change 120 cycles	0.25
Rust Test - Humidity Cabinet (ASTM D-1748)	No Rust, PASS
Total Base Number	11.1

Applications

AMSOIL Synthetic 20W-50 Motorcycle Oil is recommended for air- or liquid-cooled four-stroke engines. It meets SAE 90, API GL-1 gear oil requirements and is recommended for transmissions and primary chaincases. AMSOIL 20W-50 Motorcycle Oil is recommended for Harley-Davidson®, Buell®, KTM, Ducati®, Aprilia®, BMW®, Triumph® and other motorcycles where 15W-50 or 20W-50 engine oils or SAE 90, GL-1 gear oils are used. Not recommended where an API GL-4 or GL-5 gear oil is required.

Mixing AMSOIL

AMSOIL Synthetic 20W-50 Motorcycle Oil is compatible with other 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 Motorcycle Oils.

Service Life

Recommended for use up to twice the motorcycle manufacturer change interval (miles/hours) or one year, whichever comes first, in engines, transmissions and primary chaincases. For Big Twin Harley-Davidson transmissions only, follow the Harley-Davidson recommended drain interval for synthetic oil of up to 20,000 miles or one year, whichever comes first. When using an engine filter other than AMSOIL E_a, change the filter at standard intervals.

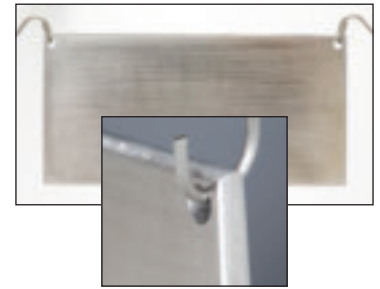
For off-road use, change AMSOIL Synthetic 20W-50 Motorcycle Oil at motorcycle manufacturer-recommended intervals.

Racing or modified engines are excluded from extended drain interval recommendations. Oil changes are at the owner's discretion.

Rust Test (ASTM D-1748)

December 2008 Test Results

Pass Example: AMSOIL MCV



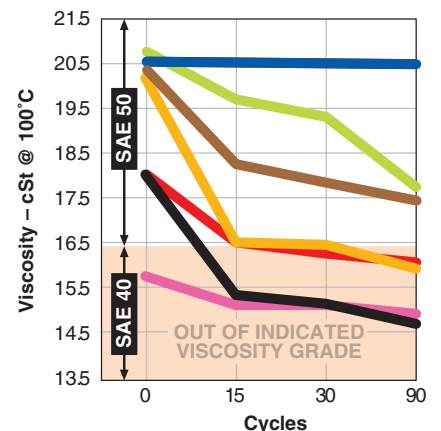
Fail Example: Castrol V-Twin



Viscosity Shear Stability

(ASTM D-5182)

June 2009 Test Results



- AMSOIL 20W-50 Motorcycle Oil
- Pennzoil Motorcycle
- Royal Purple Max Cycle
- BMW Motor Oil
- Lucas High Performance
- Maxima 4 Ultra
- Harley-Davidson Syn3



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