Gasoline Motor Oil

AMSOIL SAE 30 BREAK-IN OIL

Product Code: BRKQT-EA

Ensure fast ring seating and superior protection for new or rebuilt engines with this friction-modifier-free, high-ZDDP break-in oil.

Product Description

AMSOIL SAE 30 Break-In Oil delivers competition-quality engine preparation for new and rebuilt high-performance and racing engines, seating piston rings quickly while protecting cam lobes, lifters, and bearings during the most punishing phase of an engine's life.

The first minutes and miles on a fresh build are when wear rates are at their highest. Cylinder walls still have sharp honing peaks, flat-tappet camshafts and lifters haven't seasoned, and rod and main bearings are under full stress without the benefit of mated surfaces. The oil you choose for this window has a direct impact on compression numbers, oil consumption, and whether your cam survives the first heat cycle. A standard off-the-shelf motor oil, loaded with friction modifiers, can actually prevent rings from seating properly and leave you chasing compression problems for the life of the engine.

FRICTION-MODIFIER-FREE FORMULA FOR FAST RING SEATING

Most synthetic and conventional motor oils contain friction modifiers designed to reduce drag and improve fuel economy. During break-in, that's exactly what you don't want at the cylinder wall. AMSOIL Break-In Oil is formulated without friction modifiers, allowing the sharp peaks on newly honed cylinder walls to partially flatten through controlled wear. This creates more surface area for the rings to seat against, forming a dynamic seal that increases compression, horsepower, and torque. Rings that don't seat properly allow combustion gases to blow past into the crankcase and let excess oil collect in the deep valleys of the honing pattern, driving up oil consumption.

HIGH ZDDP CONTENT PROTECTS CAMS, LIFTERS, AND ROCKERS

Flat-tappet camshafts and lifters are splash-lubricated, not pressure-fed, which makes them especially vulnerable during break-in before surfaces have hardened and mated. AMSOIL Break-In Oil contains high levels of zinc and phosphorus (ZDDP) anti-wear additives specifically calibrated for this critical period. This is particularly important for SBC, BBC, and other classic V8 rebuilds running flat-tappet cams, where inadequate ZDDP levels during initial startup and heat cycling are a common cause of cam lobe and lifter failure.

INCREASED FILM STRENGTH FOR BEARING PROTECTION

High-performance and racing engines frequently use aftermarket components that push torque and horsepower well beyond stock levels. Stroker kits, ported heads, and aggressive cam profiles all increase the loads placed on rod and main bearings. The added stress can rupture the oil film responsible for preventing metal-to-metal contact. AMSOIL Break-In Oil uses base oils selected for increased film strength, protecting bearings from damage even in high-output builds like 383 strokers, LS swaps, and dedicated drag or circle track engines. Four-ball wear testing (ASTM D4172) returned a scar diameter of just 0.43 mm, confirming the oil's ability to resist wear under load.

ROBUST THERMAL PROPERTIES FOR HEAT-CYCLE BREAK-IN

Proper break-in requires repeated heat cycles, bringing the engine up to operating temperature and letting it cool. AMSOIL Break-In Oil maintains its viscosity and protective properties across this temperature range, with a flash point of 230 degC (446 degF) and a fire point of 250 degC (482 degF). The viscosity index of 111 (ASTM D2270) indicates stable viscosity behavior from cold startup through full operating temperature, and the pour point of -36 degC (-33 degF) means the oil flows readily even during initial priming in cooler shop conditions.

SPECIFICATIONS AND COMPATIBILITY

AMSOIL SAE 30 Break-In Oil is designed for new and rebuilt high-performance and racing engines requiring SAE 30 viscosity during break-in. It is suitable for flat-tappet and roller cam engines, including small block and big block Chevys, Ford Windsor and FE engines, Mopar wedge and Hemi builds, LS-series engines, and other domestic and import performance platforms. It is also appropriate for new generators, powersports engines, and other small equipment where a proper break-in period is recommended before switching to a full synthetic oil.

SERVICE LIFE

Break-in duration varies between engines, but AMSOIL Break-In Oil should not be used for more than 1,000 miles (1,600 km). Follow the engine builder's or manufacturer's break-in recommendations when available. After completing break-in, drain the oil and fill with a high-performance AMSOIL synthetic motor oil that meets the builder's or manufacturer's specifications. Common indicators that rings have seated include reduced oil residue at the exhaust ports, stable leak-down test results, and consistent horsepower measurements over successive runs.

Technical Specifications

Property	Value	Test Method
Kinematic Viscosity @ 100 degC, cSt	11.5	ASTM D445
Kinematic Viscosity @ 40 degC, cSt	93	ASTM D445
Viscosity Index	111	ASTM D2270
Flash Point, degC (degF)	230 (446)	ASTM D92
Fire Point, degC (degF)	250 (482)	ASTM D92
Pour Point, degC (degF)	-36 (-33)	ASTM D97
Four-Ball Wear (ASTM D4172), Para 1 (40 kg, 75 degC, 1200 rpm, 1 hr), Scar, mm	0.43	ASTM D4172
High-Temperature/High-Shear Viscosity @ 150 degC, 1.0 x 106 s-1, cP	3.6	ASTM D-5481

Frequently Asked Questions

Q1: What engines and vehicles is AMSOIL SAE 30 Break-In Oil designed for?

AMSOIL SAE 30 Break-In Oil (BRKQT-EA) is designed for newly built or freshly rebuilt engines across a wide range of applications, including auto/light truck, motorcycle, ATV, UTV, snowmobile, marine outboard, PWC, heavy-duty on-road, heavy-duty off-road, agriculture, small engine, and powersports equipment. It delivers competition-quality engine preparation and is used by builders of custom street engines, racing engines, and even 900+ horsepower sprint car engines, as well as junior dragster motors.

Q2: How does AMSOIL SAE 30 Break-In Oil help seat piston rings and increase compression?

AMSOIL SAE 30 Break-In Oil uses a friction-modifier-free formula that allows the sharp peaks on newly honed cylinder walls to partially flatten during break-in, creating more surface area for the piston rings to seat against. This process forms a dynamic seal between the rings and cylinder walls that increases compression, horsepower, and torque while reducing blow-by. Verified users report being able to watch EGT (exhaust gas temperature) changes in real time as the rings seat during break-in.

Q3: What is the zinc and phosphorus (ZDDP) content in AMSOIL SAE 30 Break-In Oil and why does it matter?

AMSOIL SAE 30 Break-In Oil contains high levels of zinc and phosphorus (ZDDP) anti-wear additives as part of its proprietary additive package. These ZDDP additives are critical during the break-in period because they deliver excellent protection for splash-lubricated parts like camshafts and lifters, while the increased film strength protects rod and main bearings from wear. This is especially important for flat tappet camshaft break-in, where adequate ZDDP levels are essential to prevent premature cam lobe and lifter failure.

Q4: How does AMSOIL SAE 30 Break-In Oil compare to regular motor oil for engine break-in?

Unlike regular motor oils that contain friction modifiers to reduce engine friction during normal operation, AMSOIL SAE 30 Break-In Oil is specifically formulated without friction modifiers. This is critical because friction modifiers would prevent piston rings from properly seating against the cylinder walls. Additionally, AMSOIL Break-In Oil contains significantly higher levels of zinc and phosphorus (ZDDP) anti-wear additives than most modern motor oils, providing the enhanced protection that camshafts, lifters, and bearings need during the critical break-in period.

Q5: How long should I run AMSOIL SAE 30 Break-In Oil before switching to regular oil?

AMSOIL SAE 30 Break-In Oil is intended for use only during the engine break-in period and is not designed as a long-term motor oil. Verified users and engine builders recommend transitioning to a full-service motor oil after the break-in process is complete. One verified engine builder recommends transitioning to AMSOIL's regular service oils, such as the T4 line, after break-in. Consult the product data sheet for full details on recommended break-in procedures for your specific application.

Q6: Is AMSOIL SAE 30 Break-In Oil safe for flat tappet camshafts and new engine bearings?

Yes, AMSOIL SAE 30 Break-In Oil is specifically formulated to be safe and protective for flat tappet camshafts, lifters, and new engine bearings during break-in. Its high levels of zinc and phosphorus (ZDDP) additives deliver excellent protection for splash-lubricated components like camshafts and lifters, while its increased film strength shields rod and main bearings from wear. Verified engine builders who work with both custom street engines and high-horsepower racing engines confirm successful flat tappet cam break-in with this product.

Available Product Codes

Product Code	Package Size	Unit of Measure
BRKQT-EA	Quart Bottle	Each
BRKQT-CA	Quart Bottle	Case of 12

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