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DATA SHEET

Break-In Oil (SAE 30)

For High-Performance and Racing Engines

AMSOIL Break-In Oil is designed to deliver maximum compression, horsepower and torque by providing quick and efficient piston ring seating in new and rebuilt high-performance and racing engines. It is formulated with zinc and phosphorus anti-wear additives to protect cam lobes, lifters and rockers during the critical break-in period when wear rates are highest. Its increased film strength also protects rods and main bearings from damage.



Quickly Seats Rings

The primary goal during engine break-in is to seat the rings against the cylinder wall. Properly seated rings increase compression, resulting in maximum horsepower; they reduce oil consumption and prevent hot combustion gases from entering the crankcase. To achieve this, the oil must allow the correct level of “controlled wear” to occur between the cylinder wall/ring interface while maintaining wear protection on other critical engine parts. Insufficient break-in leaves behind peaks on the cylinder wall that prevent the rings from seating. The deeper valleys, meanwhile, allow excess oil to collect and burn during combustion, increasing oil consumption. Too much wear results in cylinder glazing due to peaks “rolling over” into the valleys and preventing oil from collecting and adequately lubricating the cylinder wall.

AMSOIL Break-In Oil’s friction-modifier-free formula allows the sharp peaks on newly honed cylinder walls (fig. 1) to partially flatten. The result produces more surface area for rings to seat against, allowing formation of a dynamic seal that increases compression, horsepower and torque (fig. 2).

- **Quickly** seats piston rings
- **Protects** against wear
- **Maximizes** compression and power
- **Contains** no friction modifiers

Fig. 1: New Cylinder

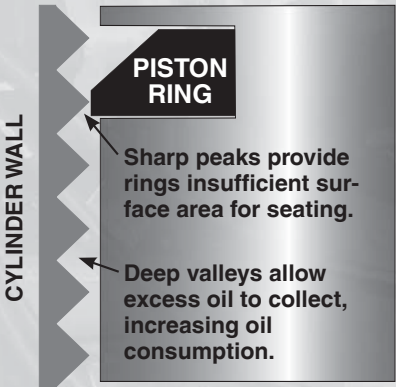
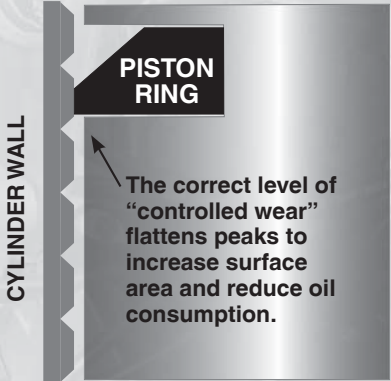


Fig. 2: Broken-In Cylinder



TYPICAL TECHNICAL PROPERTIES
Break-In Oil (BRK)

Table with 2 columns: Property and Value. Rows include Kinematic Viscosity @ 100°C, Kinematic Viscosity @ 40°C, Viscosity Index, Flash Point, Fire Point, Pour Point, Four-Ball Wear, and High-Temperature/High-Shear Viscosity.

Protects Critical Parts from Wear

New flat-tappet camshafts and lifters are not seasoned or broken in and must be heat-cycled to achieve proper hardness. During the break-in period, these components are susceptible to accelerated wear because they are splash-lubricated, unlike other areas of the engine that are pressure lubricated.

Increased Film Strength

High-performance and racing engines often use aftermarket parts designed to increase torque and horsepower. The added stress can rupture the oil film responsible for preventing harmful metal-to-metal contact on rod and main bearings.

APPLICATIONS

AMSOIL Break-In Oil is designed to effectively break in new high-performance and racing engines requiring SAE 30 oil, helping maximize compression, horsepower and torque.

RECOMMENDATIONS

Break-in duration will vary between engines, but should not exceed 1,000 miles (1,600 km). If available, the engine builder's or manufacturer's break-in recommendations should be followed.

When the engine is new, the exhaust ports will have a large area of oil residue (Fig. 3). As the rings begin to seat, less oil is passed and the oil residue area begins to shrink (Fig. 4). When the rings are fully seated and have formed a tight seal against the cylinder walls, no oil residue will be evident.

Fig. 3



Fig. 4



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) available at AMSOIL.com or upon request at (715) 392-7101. Keep Out of Reach of Children. Recycle used oil and bottles.

For warranty information, visit AMSOIL.com/warranty.aspx.

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