

Olson Marketing Monthly

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Your Amsoil Information News Source

Z-ROD

10W-30 and 20W-50 Synthetic Motor Oil

AMSOIL Z-ROD Synthetic Motor Oil is specifically engineered for classic and high-performance vehicles. It features a high-zinc formulation to prevent wear on flat-tappet camshafts and other critical engine components, along with a proprietary blend of rust and corrosion inhibitors for added protection during long-term storage. A-ROD Synthetic Motor Oil is designed to perform on the street and protect during storage.



Applications

Recommended for older or modified engines requiring either 10W-30 or 20W-50 motor oil. Z-ROD meets API SL and earlier specifications, allowing for increased levels of anti-wear additives. ZDDP levels in Z-ROD exceed the limits of API SM and newer specifications.

Compatibility

AMSOIL Z-ROD Synthetic Motor Oils are compatible with conventional and other synthetic motor oils. Mixing AMSOIL Z-ROD with other oils will shorten the oil's life expectancy and reduce the performance benefits. Aftermarket oil additives are not recommended for use with AMSOIL Z-ROD Synthetic Motor Oils.



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Ask the Dealer

What are “Normal” and “Severe” Driving Conditions?

Vehicle manufacturers each define “normal” and “severe” driving conditions for their equipment. AMSOIL recommends owners check these definitions in their owner’s manuals to determine the service conditions in which they typically drive.

AMSOIL defines normal service as personal vehicles frequently traveling greater than 10 miles at a time and not operating under severe service.

AMSOIL defines severe service for gasoline engines as turbo/supercharged engines, commercial or fleet vehicles, excessive engine idling, use of AMSOIL engine oil in vehicles with more than 100,000 miles without prior regular use of AMSOIL engine oil, daily short-trip driving less than 10 miles, frequent towing, plowing, hauling or dusty-condition driving.

AMSOIL defines severe service for diesel engines as extensive engine idling, daily short trip driving less than 10 miles or frequent dusty-condition driving.

What does “wet clutch” mean when discussing power sports equipment?

Wet clutches are immersed in motor oil to cool the clutch plates. Wet clutches are often found in motorcycle applications and they require fluids with certain frictional requirements to promote smooth shifting and clutch engagement. Dry clutches require no lubrication.

Break-In Oil (SAE 30)

Designed for High-Performance and Racing Engines

AMSOIL [Break-In Oil](#) is an SAE 30 viscosity grade oil formulated without friction modifiers to allow for quick and efficient piston ring seating in new and rebuilt high-performance and racing engines. It contains zinc and phosphorus anti-wear additives to protect cam lobes, lifters and rockers during the critical break-in period when wear rates are highest, while its increased film strength protects rod and main bearings from damage. AMSOIL Break-In Oil is designed to increase compression, horsepower and torque for maximum engine performance.

- Quickly Seats Rings
- Protects Critical Parts from Wear
- Increased Film Strength

Recommendations

The engine builder’s or manufacturer’s break-in recommendations should be followed if available. Break-in period should not exceed 1,000 miles.



Reasons for Motor Oil Consumption

Information for Backyard Mechanics

Worn or Damaged Connecting Rod Bearings

Clearances on connecting rod bearings affect the throw off of oil in the same proportions as mentioned for main bearings. In addition to this, the oil is thrown more directly into the cylinders. Worn or damaged connecting rod bearings flood the cylinders with such a large volume of oil that the pistons and rings, which are designed to control a normal amount of oil or a reasonable increase in the normal amount, are overloaded to such an extent that some oil escapes past them to the combustion chamber and causes high oil consumption. CAUTION – Insufficient bearing clearance can also produce piston, ring and cylinder damage as well as damage to the bearing itself.

Worn or Damaged Camshaft Bearings

Camshaft bearings are generally lubricated under pressure and, if the clearances are too large, excess oil will be thrown off. Large quantities of this oil may flood valve guide and stem areas resulting in increased oil consumption.

This information is reprinted from the following document:

AMSOIL TECHNICAL
SERVICE BULLETIN
TSB: MO-2004-04-03

More Next Month

All About Differential Fluid

Differential Fluid Solutions & General Information

What is a Differential?

In a rear-wheel-drive vehicle, the differential is a box of gears that takes the movement of the spinning driveshaft through a 90-degree angle to the axle, which turns the drive wheels. It also allows each side of the axle to rotate at different speeds. This is necessary because, when you go around a sharp curve, the outside wheel travels farther than the inside wheel and has to move more quickly than the inside wheel. In most front-wheel-drive cars, the differential is located in the same housing as the transaxle gears. Thus, the mechanisms share the same lubricant supply.

Differential Lubrication Checks

For rear-wheel-drive and 4-wheel-drive vehicles, you can check the differential fluid by locating the plug (which is typically a square drive bolt) on the front of rear of each separate differential. Remove the plug. The differential fluid should be level with the bolt hole, it may even dribble out a little. If it doesn't you can reach your finger inside the hole and feel for the level. If the fluid is dark in color it may mean that it is time to change it.



Changing [Differential Fluid](#)

Some differential have drain plugs, others require removal of the rear metal cover to drain the fluid, and with some you can use a [fluid evacuation pump](#) (AMSOIL Product Code: G2576-EA). Small amounts of metal shavings are normal; large amounts of shavings indicate wear to the differential gears, bearings, and shafts.

Evacuating the fluid may not bring out the metal particles with the oil. It is best practice to remove the metal cover and clean the magnet that "catches" some of the metal wear particles. After removing the cover, the old gasket must be scraped off of the cover and differential housing, and a new gasket must be installed to prevent leaks. Refill with the correct lubricant. If you are unsure of the correct lubricant, log-on to www.amsoil.com and enter your vehicle information in under the "Product Selection" area on the main page.



Differential gear lube sumps are equipped with magnets that attract metal wear particles.

How often should it be changed?

Some manufacturers recommend differential fluid change after the first 500 to 3,000 miles. However, many manufacturers do not specify a time-period for changing the factory-filled differential fluid.

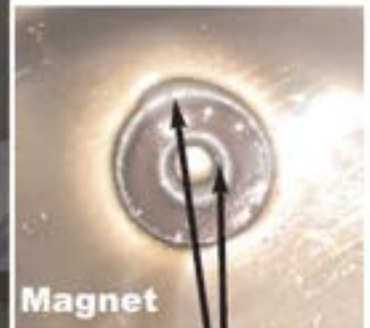
For optimum gear and bearing life, it is recommended that the factory-fill differential fluid be changed no later than the first 5,000 miles with new or rebuilt gears, followed by 50,000 mile drain

Note:

When refilling the differential fluid I would recommend using a [Bottle Hand Pump](#) (AMSOIL Product Code: G2039-EA). It is specifically designed to fit AMSOIL quart, gallon, and Twin Pack bottles. It will help eliminate any spills and reduce cleanup time.

Stay Tuned for:

Fluids Recap.....March 2012



Iron Wear Particles

Automotive Lingo:

Master Cylinder

Your Master Cylinder is located under your hood, usually up near the firewall on the driver's side of the engine compartment. The Master Cylinder is either a metal box, or on newer vehicles, a plastic container. You will know it is the Master Cylinder because on most all vehicles, the top will say DOT 3. It may be hard to read, but it is on there.



The Master Cylinder is filled with brake fluid and is connected to your brake pedal. The Master Cylinder is also connected to all four tires via brake lines which carry the brake fluid.

The most common problem with the Master Cylinder is that it will develop a leak internally or externally. If you are "topping off" the brake fluid frequently, it probably means that you have a leak. Brake fluid leaks are very dangerous because it reduces the effectiveness of your braking system and your braking system is the most important safety system on your vehicle.

For my truck, a new master cylinder runs about \$50 at the auto parts store and having a mechanic do the work will add about \$150 in labor charges.

Don's Corner

with Don Olson

I have included in this issue a very few of the special products that AMSOIL has to offer. For more information on any or all of the products go to www.amsoil.com or reply to the Email address of your choice on the front page of this newsletter.

If you desire a hard copy please send your address so we can send a hard copy to you.

AMSOIL also offers food grade grease NGLI #2 USDA H-1 High Temperature EP for superior lubrication in food and pharmaceutical equipment called [X-Treme Food Grade Grease](#).

AMSOIL also makes [Synthetic Oil for Compressors](#) and [Tractor Hydraulic Transmission Oil](#)

Don't forget to check out the [Severe Service Gear Lubes](#) available on the www.amsoil.com website

Light duty [Silicone Spray](#) is perfect for non-metallic surfaces that come in contact with metal, nylon, cardboard, fiberglass, wood or plastic surfaces.



Shop Talk

with Jon Olson

Teaching auto shop allows me to work with a wide variety of businesses in the automotive industry. Whether it be purchasing automotive parts, having the hydraulic lifts serviced, or even having chemicals disposed of properly all business interactions are different.

As with any consumer, I have the option to "shop around" when it comes to businesses. I compare prices, products, and service.

All companies will have differences in pricing. Auto Parts companies all sell radiator hoses, but the cost may be slightly different for the same item. Pricing is usually insignificant between companies for identical parts.

Product differences may be the most important of the three when it comes to preventative maintenance on your automobile. Most notably, AMSOIL oil compared to the generic brand oil you would purchase at the auto parts store. It is the difference between peace of mind and gambling with "what's on sale."

When it comes to being a consumer, customer service ranks highest in my book. This last quarter I piloted an automotive program which required purchasing a large quantity of automotive parts. I chose to do business with an auto parts company that was willing to work with the school and the students to ensure success in the program. My thought is that all businesses should want to work with their customers and assist them in any way possible. AMSOIL is a great example of a company that employs this ideal.