

MAINTENANCE



Russ Evans

Motor Oil...Synthetic vs. Conventional

One of the questions most asked of us on-air and through listener email has to do with oil. Should I use synthetic or conventional oil? And, what are the reasons?

To answer the question I'll start off by giving a brief description of the oils.

Conventional oil has been around as long as the internal combustion engine. It is made from crude oil straight from the ground that has been refined to an industry standard as defined by the API protection rating you see on the container. The service rating of motor oils is classified by the American Petroleum Institute (API). The program certifies that an oil meets certain OEM quality and performance standards. The service rating is shown in the API "Service Symbol Donut" on the product label. Within this label you will find letters designating the rating. The current rating adopted in 2004 is SM. Using motor oil with the latest rating assures that your engine is properly protected.

Synthetic Oil was originally developed for use in military applications where the high load demands of turbocharged aircraft engines would cause conventional oil to fail leading to the loss of the engine. When you hear "synthetic" the first thing that comes to mind is manufactured by man or not naturally occurring right? Well in the case of oils this is not true.

When oil is rated as synthetic it is referred to as such because it has been refined to a point that removes enough impurities like waxes and tars that it can hold up to higher service loads and meets the specifications needed to designate it as a synthetic. There are true synthetic oils out there created from bases other than Crude Petroleum oil.



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They are found in high performance oils such as Red Line®, Amsoil®, Delvac®, and some other specialty oils and are superior in temperature stability, viscosity, and thermal breakdown properties.

Semi-Synthetic Oils have been available for many years. They are made from petroleum oils and can contain no more than 30% highly refined base oils referred to as “synthetic” oil. All oils sold for use in today’s emission controlled cars contains a partial synthetic-blend of oil in order to meet ever increasing emission standards. The difference between semi-synthetic and conventional oil should be the amount of synthetic oil blended in (although there is no set level just less than 30%) and the type of additives used in the oil.

What oil is right for me? The oil you choose should be based on several factors.

1. How do you drive? Short trips, long

idle periods, highway miles?

2. How often do you change your oil? Are you a 3 month 3000 miler or is it 5000?

3. What engine do you have? Is it one with a history of sludge buildup failures?

4. What is the temperature of your part of the country?

All of these factors are very important when choosing your oil.

Conventional oil is satisfactory for most engines. If you follow the 3 month 3000 mile oil change interval and most of your trips involve the engine being run for 30 minutes or more, or until the engine has completely warmed up and has had a chance to burn all accumulated moisture out of the oil.

If you have one of the vehicles noted for sludge buildup, drive very short trips usually lasting five miles or less, or notice your oil is 3000 miles overdue each time you change it then a higher level of oil could be for you. A full synthetic

will not break down as fast so protection will last longer if you do go over, it will maintain its viscosity in colder temperatures allowing faster starts and quicker lubrication to protect parts, and because it has reduced impurities there will be less for moisture to bond with leaving behind sludge deposits.

If you absolutely have to have the ultimate for your vehicle, or it is subjected to very harsh loads and driving conditions like very heavy towing and racing then the true synthetics like the above mentioned Redline®, Amsoil®, Delvac®, and other true synthetics will fit the bill.

If you have questions about car care or want to know how something works then email Russ. Help@underthehoodshow.com For more free advice tune in to our automotive talk show Under the Hood! Each Thursday at 10:00 and Sundays at 5:00. [TMM](#)