

[Autos](#)[Boats](#)[Electronics](#)[Finance and Insurance](#)[Healthcare](#)[Homes](#)[Telecom](#)

The Saab Summer Challenge

[The Saab 2007 9-5 Sedan](#)

IntelliChoice Award winner for Lowest Maintenance Cost

[Compare to other luxury-class vehicles](#)

*2007, IntelliChoice Inc., www.intellichoice.com

Synthetic Motor Oils

[Home](#) > [Articles](#) > Synthetic Motor Oils

Related Articles

- [Video: Extended Warranties Part 1](#)
- [Video: Extended Warranties Part 3](#)
- [Video: Extended Warranties Part 1](#)
- [Video: Extended Warranties Part 2](#)
- [Using the Internet to Choose a Car](#)
- [Finding Car Information Online](#)

Motor oil is one of the most important fluids in your vehicle. The purpose of motor oil is to reduce friction and keep a vehicle's engine clean and corrosion-free. Another critical function is to buffer heat from moving parts in the engine. Most motor oils are manufactured from petroleum-based crude oil, which is processed into motor oil.

Over time, petroleum-based oils will degrade or break down from the heat and pressure inside the engine. As this occurs, the chemical composition of the oil changes and it becomes contaminated. After thousands of miles, petroleum-based oils are unable to protect the engine and must be replaced.

Synthetic motor oils have a higher tolerance to heat and aging. The performance characteristics of these

synthetic lubricants can be custom-designed to exceed the performance limits of petroleum-based motor oils – and their use can possibly increase the life of your engine.

What are the advantages of synthetic oil?

Synthetic oil was developed for high-temperature use in jet aircraft engines decades ago when engineers realized that petroleum-based oils break down and lose their lubricating capabilities when exposed to high heat. Over time, petroleum-based oils began to oxidize and create sludge, leaving damaging residue inside the engine.

Formulated in a laboratory, man-made synthetic oil doesn't contain the naturally occurring chemicals that break down at high temperatures. It is also manufactured without many of the chemical compositions that contribute to oil oxidation and sludge buildup. Synthetic oil can tolerate temperatures that would burn up petroleum-based oils.

Synthetic oil performs admirably in heat, but also offers many benefits in extreme cold. Petroleum-based motor oil thickens in cold temperatures, requiring the starter and battery to work much harder to start a cold engine. Synthetic oil is not as affected by low temperatures, and it will flow much easier at engine start-up. As an added benefit, the cold temperature properties allow it to be quickly pumped throughout the engine, offering much improved start-up protection against friction.

Custom-designed synthetic oils contain many additives. These keep the inside of the engine clean, and add additional engine protection for extended periods.

What are the disadvantages of synthetic oil?

Quite simply, the biggest disadvantage of synthetic oil is price. With a manufacturing process that is much more involved, synthetic motor oil costs nearly four times the price of petroleum-based motor oil. This means an oil change that would typically cost \$20 could cost nearly \$80. However, since synthetics are more durable, oil changes are not needed as often, and this fact partially negates the cost disadvantage of synthetics.

What is a synthetic blend?

Regular petroleum-based motor oil and synthetic motor oil are fully compatible, and can be readily mixed. Some manufacturers combine the two types of oil and package the mixture as a synthetic blend. Synthetic-blend oils offer many of the benefits of fully synthetic oil, but at a reduced cost. Be sure to consult your owner's manual or the vehicle manufacturer before considering a switch to synthetic blend oil.

Does my vehicle need synthetic oil?

There is little doubt that synthetic oil offers superior engine protection under extreme operating conditions. However, many owners may not operate their vehicles in conditions that warrant the additional engine protection of synthetic motor oil. For most owners, petroleum-based motor oils are just fine. Change the oil at the manufacturer's recommended interval (found in the owner's manual) and your vehicle will reward you with a long service life.

If your vehicle is turbocharged, used for towing heavy loads, driven on the racetrack, or operated in extreme temperatures, synthetic oil may be beneficial for extended engine life. Each of these harsh operating conditions demand more from your engine and motor oil, and synthetic oil can deliver the needed protection.

One other reason to consider synthetic motor oil is extended periods between oil changes. Petroleum-based oils generally require replacement every 3,500 to 7,500 miles, depending on service use. Synthetic oils can easily offer double the service life as their chemical composition does not break down over time. Several manufacturers have taken advantage of this and supply synthetic oil in their vehicles from the factory to extend oil-change intervals and extend engine longevity. Check your owner's manual or ask your service



Additional

- [R](#)
- [P](#)
- [A](#)
- [A](#)
- [E](#)

Better

- [N](#)
- [R](#)
- [I](#)

advisor if synthetic motor oil may be right for your vehicle or driving style.

ADD TO:  Blink  Del.icio.us  Digg  Furl  Google  Simpy  Spurl  Y! MyWeb

[Site Map](#) | [About Us](#) | [Contact Us](#) | [News & Press Releases](#) | [Privacy Notice](#) | [Advertising Notice](#) | [Legal Notices](#)

© 2007 J.D. Power and Associates, The McGraw-Hill Companies, Inc. All Rights Reserved

