



Fluids & Filters: Engine Oil



Description: The life-blood of your engine, engine oil consists of various weight mineral or synthetic oils combined with additives for engine protection. Oils may come in single or multi-grades and meet various oil performance standards. Multi-grade oils usually start out as single-grade base oils, such as SAE 10W (Society of Automotive Engineers is a large standard-setting organization for the automotive industry). Then viscosity-index improvers are added to modify viscosity. The end result is an SAE 10W-30 oil capable of flowing like a 10W oil at cold temperatures and a 30W oil at higher temperatures. The American Petroleum Institute also has classifications for oil, which are intended to address the formulation for different engine applications. You may see these designations also mentioned in your owner's manual or on the oil filler cap of the engine. The SH designation was designed for 1996 and older engines. This designation is now obsolete. The API SJ designation was introduced in 1996. Oils with an SL designation can be used to cover both SH and SJ applications. The most recent oil performance designation to be released is ILSAC GF-4. The new GF-4 oils provide significant performance upgrades and meet a stringent new specification that was jointly developed by auto and oil industry experts. Engine oils meeting this new standard began to appear in the marketplace during summer 2004. According to automobile manufacturers, these oils should provide gasoline-powered car engines with several benefits:

- Improved oxidation resistance, which means less oil thickening
- Improved deposit protection so that the engine won't form harmful deposits as quickly
- Better engine wear protection
- Better low-temperature performance over the life of the oil.

Purpose: Engine oil lubricates, cleans, and cools critical parts of the engine. The oil's additives also help to suspend dirt, where it can be drained at the next oil change.

Maintenance Tips/Suggestions: Be sure to use the correct oil as recommended by your car's manufacturer. Oil grades have changed over the years and you will want to make sure you use the right oil for the best engine protection. Periodic oil and filter changes keep your engine clean on the inside. Motor oil can become contaminated by dust, metallic shavings, condensation, and even antifreeze. Additives break down over time and can also act as contaminants. The best advice is to follow the guidelines provided in the vehicle owner's manual, but every 3,000 miles or 3 months is a good rule of thumb for oil and filter changes. Many car manufacturers today are recommending extended oil drain intervals for

some drivers. However, if you regularly make short trips in your car, drive in stop-and-go traffic, idle for extended periods, drive in dusty or dirty air conditions, tow a trailer or live in a cold-weather region, it's best to stick with a 3,000- mile/3-month regimen. If you change your own oil, be sure to properly dispose of all waste. A single quart of used engine oil has the capacity to pollute 250,000 gallons of ground water. Never pour used oil down the drain or into the ground. Not only is it illegal, it's also harmful to the environment. Used engine oil is converted for new uses, such as industrial fuel or lubricants. Put used oil into original oil containers or other clean, plastic closed containers, with the contents clearly labeled on the outside and bring the used to oil to a facility that accepts used engine oil.

Information provided by the Car Care Council (www.carcare.org)