



### What Motor Oil for My Car?

Oil is the lifeblood of your vehicle's engine and what you use will depend on the type of vehicle, the age of vehicle and the type of driving you do. Today's engines run hotter for cleaner exhaust emissions and require different oils than the vehicles of even five years ago. There are two main reasons why vehicle manufacturers specify lighter viscosity grades of motor oil.

First, a gain in fuel economy can be achieved with lower viscosity oil. At cold temperatures and at start up, lower viscosity oil will reduce internal engine friction. About 10% of the engine's horsepower is lost to internal engine friction, resulting in a drop in fuel economy. Additionally, vehicle manufacturers are struggling to meet higher fuel economy and lower emissions standards set by the Environmental Protection Agency (EPA).

Second, thinner motor oil is essential for easy starting, particularly in cold weather, and for proper lubrication once the engine starts. Today's smaller engines produce more horsepower, have tighter tolerances between moving parts. There have been some instances where engine damage has occurred because of inadequate lubrication with higher viscosity grades in colder weather (if the wrong oil is used the manufacturers warranty is null and void).

Thinner oils, such as SAE 5W-30, will flow faster during start-up and initial engine operation and will help protect the engine from excessive wear, yet still offer the same high temperature protection as single grade 30 motor oil. Always check your vehicle owner's manual to select the proper viscosity grade based on the expected temperature range.

Engine manufacturers have spent considerable time and expense experimenting with different viscosity grades and have indicated in the owner's manual the grades they feel will best protect the engine at specific temperatures. While one manufacturer's engine may require an SAE 10W-30, another manufacturer's engine may require an SAE 5W-20 viscosity grade. This is likely due to different tolerances within the engine or other engine design factors.

How often should you change you're engine's oil ... vehicle manufacturers say for severe driving conditions every 3 months or 5,000 km. Severe driving is defined as any of the following: if you drive in stop-and-go traffic; make short trips of fewer than 20 km, drive in dusty conditions, extreme hot or cold weather, and carry heavy loads or tow. One can use the start of each season as a reminder. Synthetic oil is heralded as extended life oil, however car manufacturers still specify 3 months or 5,000 km changes to keep your new car warranty valid, (the oil still gets contaminated and must be changed). Synthetics are superior lubricants compared to traditional petroleum oils; however you will have to decide if their high cost is justified in your application. With today's new vehicles starting at \$20,000 and upward and having a life expectancy of well over 300,000 km regular maintenance as specified in your owner's manual is the best protection you can provide to assure your vehicle stays in top condition.