

Odds 'N' Ends

Thought of The Day:

You do not have to brush all of your teeth, just the teeth that you want to keep.

Durability of modern car engines

The modern engines last longer than engines of the 1910's through to 1977 at which time the multi grade oils were introduced. From that time forward, the engines lasted longer between overhauls if the oil is kept relatively clean. The longer lasting modern engines have pretty well put the engine rebuilding shops out of business. Perhaps there are still and odd automotive machine shop still operating but it would be a rarity. In large cities, with the property values being so high, there are many well established garages going out of business as well.

The reason that the multi-grade oils provide better engine wear protection than the mono-grade oils is that it maintains optimum viscosity throughout the engine's operating temperature range. This is one factor but other factors include the precision machining that goes into the manufacturing of the engine and 'over-fueling' that occurs in cars that are equipped with carburetors that leaves excess unburned gasoline in the engine that will reduce the effectiveness of the lubrication from the oil through dilution. The modern engine is equipped with a computer to deliver the right amount of fuel through fuel injectors and sufficient oxygen/air for better combustion so that there would be less 'over-fueling'.

A car that is equipped with the computer and fuel injection gives advantages in the form of better engine durability and also better miles per gallon/litre of gas for the consumer over the carburetor equipped cars.

Prior to the use of the multi-grade oils, the most common oil used in the motor vehicles would be the mono-grade SAE# 30 viscosity oil. Some would say that this is a "30- weight oil." As the engines get worn, heavier, higher viscosity oils, such as SAE# 40 oil would be used. Viscosity may be described as a flow rate. The higher the number, the slower the flow rate. The slower the flow rate, the better the lubricating film will be on the moving parts of the engine. However, there is an optimum or ideal flow rate for each application. Example: High viscosity gear oil would not be used in the engine for lubrication.

The crankcase oil should be maintained to the level that the engine manufacturer considers desirable, the amount is shown on the dip-stick. Overfilling will cause foaming which, in turn will cause poor lubrication as the oil pump will pump air and oil instead of just the oil. Air has no lubricating value. The present-day oils for engines do contain an anti-foaming agent but overfilling the crankcase may still cause foaming when the engine is operating.

Note: Excessively dirty oil in some newer model cars can destroy the engine.

However ----- Not all oils in some of the modern car engines are multi-grade. Some hybrid cars in which the engine does not work hard, uses a very thin oil which is suppose to give better mileage on fuel consumption. As in many things in life, there are compromises:

- 1- The oil is expensive.
- 2 - The engine is likely to wear faster than if the multi-grade oil is used.