

# OIL VISCOSITY

## THE BASICS

All oils are intended for a particular application and in general are not interchangeable. You would not for example put an Automatic Transmission Oil or a Gear Oil in your engine! It's important to know what the oil's intended purpose is.

## MULTIGRADES VERSES MONOGRADES

Early oils (Monogrades) were only able to tell you what their viscosity would be at a midpoint temperature. However this didn't tell you how thin they were getting when the temperature of the engine rose or visa versa. The way people overcame this was to have a thinner monograde for winter use and back to a thicker oil for the summer.



In 1969 Esso gave us the first opportunity to purchase a **multigrade** off the shelf engine oil. For the first time, members of the public could afford to buy an oil that could guarantee to retain a certain viscosity at zero degrees Fahrenheit and at 100c (the boiling point of water) Scientists had finally discovered ways of restricting and measuring the amount of viscosity change that took place from very cold to very hot temperatures

in lubricating oils; known as the viscosity index.

The first multigrade engine oils tended to be 20W/50 which indicated that at zero Fahrenheit the viscosity index would be 20 and at 100c it would be 50. This enabled for the first time the paying public to differentiate between lesser oils that "fell away" in lubrication functionality at high and low temperatures compared to their mid temperature measurement monograde predecessors.

It's often misconstrued that those numbers in multigrades are actually the viscosity of the oil itself. This is not so; they are the Viscosity Index ratings, or put another way, how much they've stayed in grade compared with a bog standard base oil.