

Oil Viscosity Explained

The Basics

All oils are intended for an 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.

Viscosity

Most oils on the shelves today are “multigrades” which simply means that the oil falls into two viscosity grades (i.e. 10w-40 etc)

Multigrades were first developed some 50 years ago to avoid the old routine of using a thinner oil in winter and a thicker oil in summer.

In a 10w-40 for example the 10w part (W=Winter) simply means that the oil must have a certain maximum viscosity / flow at low temperature. The lower the W number the better the oil's cold temperature / cold start performance.

The 40 in a 10w-40 simply means that the oil must fall within certain viscosity limits at 100C. This is a fixed limit and all oils that end in 40 must achieve these limits. Once again, the lower the number the thinner the oil – a 30 oil is thinner than a 40 oil at 100C for example. Your handbook will specify whether a 30, 40 or 50 etc is required.