

## **GUIDE TO VISCOSITY - SAE SYSTEM**

The SAE numbering system was devised by the Society of Automotive Engineers. It is used to correlate the "thickness" of an oil (the measure of oil's resistance to flow) and the ability to lubricate moving parts at different temperatures. The system has been in use for many years and during 1980 was updated to more accurately describe lubricating oils. **Synthetic oils have the best low temperature flow characteristics.**

Oil viscosity is measured at both high and low temperatures-

High Temperature: At high temperature (i.e. 100°C the viscosity measurement is useful in selecting the correct oil to lubricate a working engine.

Low Temperature: At low temperature, the measurement predicts engine cranking or start-up characteristics and oil pump-ability. The viscosity measured at low temperature has "W" after the SAE number, which stands for "Winter" eg SAE 15W40.

## **RED LINE OIL – NATURAL MULTIGRADE**

**The synthetic base stock (poly~ol~ester) of Red Line synthetic oils have a natural multigrade property.**

Multigrade oils such as 10W40 or 20W50 are formulated to meet the control limits at low temperatures (ie the SAE **20W**-50 rating) and at high temperatures (SAE **20W50**). Multigrade oils provide better lubrication in a wide range of climatic conditions than monograde oils.

## **OPERATION TEMPERATURES**

The RED LINE product grades are recommendations, which cover ambient temperature operation, e.g. 0 degrees to 35 degrees Celsius. If operating in temperatures that are consistently outside this range, you may need to change to another Red Line product rated for higher or lower temperatures. Contact RED LINE Technical Services for alternative product recommendations.