

# Oil Viscosity

Viscosity is defined as resistance to flow. It has also been described as the oil's FLOWABILITY. It is the <u>principal</u> characteristic and the <u>most critical</u> attribute of any type oil. Recommending the right type of oil which has the wrong viscosity will eventually fail causing potential damage to the machine, parts and/or equipment.

The viscosity of oil varies with respect to temperature: the higher the temperature, the lower the viscosity and the greater the flowability. Here is a simple example. Think of a frying pan on the stove. Now pour in any kind of vegetable oil and look at the oil's viscosity. It is relatively thick at room temperature. Now turn on the stove. After a few minutes, move the pan around and look at the oil. It is considerably thinner. What happened? The oil viscosity changed as the temperature changed.

In general, high viscosity oils are used at slow speeds under high pressure, since the heavy oil better resists being squeezed out from between the rubbing or moving parts. Light oils are used at higher speeds and lower pressures because they do not impose drag and dissipate heat more rapidly.

Almost all the different types of equipment/machines used in today's manufacturing recommend a certain ISO VG (ISO viscosity grade) oil. If it is not stamped on the reservoir fill area of the machine, then the viscosity recommendations can be found in the machine's service manual.

There are several different scales in which viscosity is measured depending on the type of oil and the application the oil is used for. For converting the viscosity from one scale to another, please use chart #1 (attached).



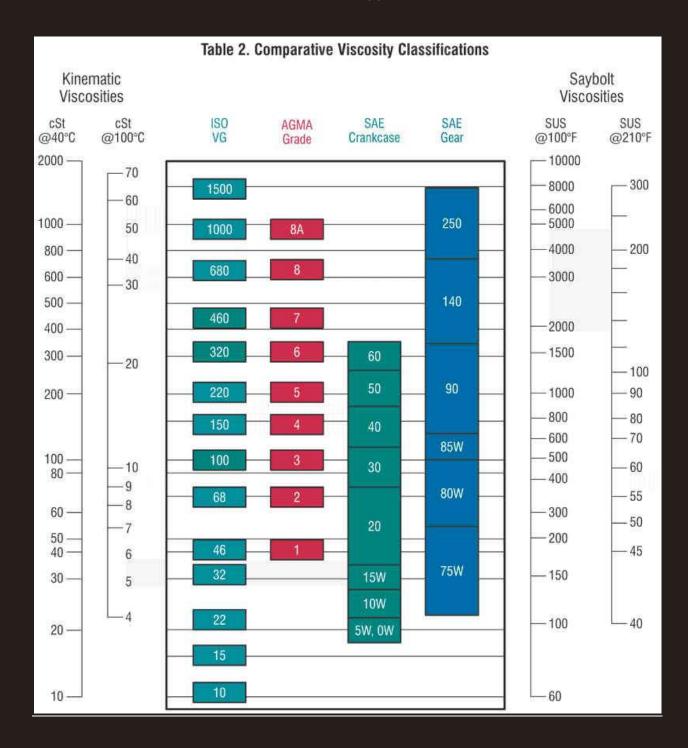
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### Chart #1



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#### QUALITY OIL & GAS COMPANY

203 West Broad Avenue Rockingham, N.C. 28379

PHONE: (800) 322-2997 FAX: (888) 511-7923

orders@qualityoilandgas.com

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