

KEY TERMS, MOST COMMON (page 1)

Additive	A compound mixed to the base oil to modify its properties or performance.
Ash	Metallic residue formed by high temps in the combustion chamber or other engine parts.
Anti-foam	An additive to reduce the foaming of petroleum products (ex.1) silicone to destroy surface bubbles (ex.2) polymer to reduce the count of small internal bubbles.
Anti-wear	An additive that creates a thin layer with good adhesive properties to prevent metal-to-metal contact at high load spots.
Base Oil	Usually refined crude oil fraction, or selected synthetic base stock. Additives are mixed into base oil during lubricant manufacturing.
Catalytic Converters	(1) Oxidizing catalytic converters remove hydrocarbons from the exhaust gas. (2) Reducing catalytic converters reduce the NOx emissions. Both contain noble metal which can be poisoned by lead or phosphorous present in fuel or lubricants.
Corrosion Inhibitor	An additive that protects the lubricated metal parts from the chemical attacks caused by water or other contaminants.
DPF	The Diesel Particulate Filter. A physical filter that reduces the solid particle content of the exhaust gases.
Detergent	An additive mixed to fuel and lubricants to keep the engine clean. (ex.) metallic soaps that have enough base reserves to neutralize the acids formed during engine operation.
Dispersant	An additive that keeps the solid contaminants in colloid suspension to prevent oil sludge & varnish build up on the engine parts. Typically non-metallic (ashless) and used together with detergent additives.
EGR	Exhaust Gas Recirculation. An engine system designed to reduce the NOx emission. It recirculates the exhaust gas back into the intake manifold, thus diluting the fuel/air mixture, reducing the temperature and NOx formation.
EP	An additive that prevents seizing of sliding surfaces under extreme pressure conditions.



KEY TERMS, MOST COMMON (page 2)

Finished Goods	The final product packaged and sold to customers after the blending process of base oil and additive packages.
Flash Point	Minimum temperature at which a fluid will support instantaneous combustion, but before it will burn continuously. An important indicator when determining the fire & explosion hazard of any petroleum product.
Friction	The resistance that occurs when one object is moved onto another object. The friction depends on the smoothness of the sliding surfaces and on the force used to press or move them onto one another.
HTHS	High Temperature High Shear Viscosity. A measure of a fluid's resistance to flow under conditions resembling highly-loaded journal bearings in fired internal combustion engines, typically 1 million per second @ 150° C.
Hydrofinishing	Hydrogen treatment of crude oil to saturate the molecules & increase stability.
Kinematic Viscosity	A fluid's resistance to flow when affected by gravity. Measured @ 40° C and @ 100° C.
Lubrication	A reduction of friction and wear using a friction-reducing layer (liquid, solid, or plastic).
Multi-grade Oil	A motor oil or gear oil that meets the requirements of more than one SAE viscosity grade and can be used in a wider range of temperatures.
Oxidation	Occurs when petroleum products react with oxygen and the process is accelerated by acids, light, heat, water, metallic catalysts or solid contaminants.
Oxidation Stability	The resistance to oxidation and affects product life both in storage and in use.
Pour Point	The fluidity of the oil or fluid in low temperatures. It's the lowest temperature at which the oil will still flow.
Pre-Ignition	The combustion of the fuel/air mixture that occurs in internal combustion engines before the spark plug fire. Caused by hot fuel or lubricant buildup in the combustion chamber and reduces engine power and can damage the engine.



KEY TERMS, MOST COMMON (page 3)

Pumpability	Determines to what extent that the oil can flow to the pumps at low temperatures.
Refining	A series of processes to convert crude oil into a petroleum product. Examples include thermal cracking, catalytic cracking, polymerization, alkylation, de-waxing, de-oiling, reforming, hydroforming, hydrogenation, hydrocracking, acid treating, hydrogen treating, solvent extraction, day filtration, de-asphalting.
Ring Sticking	Occurs when the piston rings stick into the groove due to excess contamination.
Sludge	A thick, dark residue that builds up on non-moving inner parts of the engine. Insoluble contaminants in the oil will accelerate sludge build up.
Synthetic Lubricant	A lubricant made of chemically modified petroleum components that have a specific set of pre-determined properties and characteristics.
Total Base Number/TBN	The amount of acid required to neutralize the lubricant basicity expressed in KOH equivalent.
Total Acid Number	The required amount of KOH to partially or fully neutralize a petroleum product's acidity.
Thermal Endurance	The capability & strength of a fluid relative to the aging criterion of the fluid. Thermal degradation affects the lubricating fluids and the equipment in which they're used when vibration, moisture and/or contaminants are present to cause potential failure.
Varnish	A thin, insoluble non-wipeable layer on the internal parts of an engine, causing the sticking and breakdown of internal moving parts.
Viscosity	The measure of a fluid's resistance to flow. Viscous quality.
Viscosity Index	The relationship between a fluid's viscosity and its temperature. Fluids with a higher viscosity change their viscosity to a lesser degree due to the change of temperature. Fluids with a low viscosity are affected more by temperature changes.
Viscosity Modifier	An additive designed to reduce the lubricant's change in viscosity when subjected to changes in temperature. Usually a polymer.

