

HYPOID GEAR OIL / GEAR LUBE

PURPOSE

- lubricates the moving parts of the manual gearbox
- protects gear parts from corrosion
- friction modifiers protect the gear tooth surfaces from wear
- acts as a coolant to remove the heat generated by operating gears

TYPES

- Grade. SAE grades range from 10 (very thin) to 140 (very thick). Thin oils are good for small, fast gears operating light loads. Heavy oils are good for large, slow and rough gears operating heavy loads. SAE is a measurement of viscosity standards as set forth by the Society of Automotive Engineers. Viscosity is the thickness of an oil or lubricant.
- Multi-Grade. 70W, 75W, 80W, or 85W (viscosity when cold) and 90 or 140 (viscosity when hot). Can be used year round during all weather seasons.
- R&O. Rust & oxidation inhibited for gears operating under high speed, low loads, uniform loading. Best under hydrodynamic or elastohydrodynamic lubrication conditions.
- EP. Extreme pressure lubricants have anti-scuff additives for film strength, used under slow speed, heavy loads and shock loading operating.
- Compounded. Formulated with synthetic fatty acid for increased lubricity and film strength, used in worm gear applications. Originally formulated for steam cylinder applications.

CONSIDERATIONS WHEN SELECTING A GEAR OIL

- Desired thickness of lubricating film between metal surfaces
- Operating under heavy or light load conditions
- Synthetic oils to resist oxidation & thermal breakdown vs. conventional oils for greater film thickness at certain operating viscosities
- Viscosity index, higher VI is more suitable for a wider range of ambient temperatures
- Performance challenges of increased power density & operating temperatures, longer operating cycles & service intervals, higher loading on gear teeth & bearings, wear & fatigue failures, plus lower oil volumes leading to higher oxidation & thermal stress
- Fluid recommendation in the vehicle or equipment owner manual

