



These USDA Authorized H1 and NSF Registered Lubricants are designed for use where superior anti-wear, rust and oxidation resistant properties and H1 performance is desired

**4010-4030 (H1)
QUINPLEX®**

WHITE OILS

4046 (H1)

QUINPLEX®

SYNTHETIC FOOD GRADE OIL

4090-4140 (H1)

QUINPLEX®

WHITE GEAR LUBRICANTS

4059 (H1)

QUINPLEX®

PENETRATING OIL & LUBRICANT

USER BENEFITS:

- **USDA "H1"** Performance – Perhaps the most critical requirement imposed on any lubricant. These extremely pure, non-staining, odorless, tasteless, translucent and non-irritating lubricants can be used with confidence where incidental food contact or staining can occur. Contains an antimicrobial agent.
- **Increased Productivity** – Through extended equipment life and less downtime. This is crucial with high capital, continuous process equipment. Downtime cost can often be devastating when production schedules must be changed, delayed or cancelled.
- **Timken OK load of 20 lbs.** (4090 & 4190), provides a margin of safety with superior anti-wear properties. Many white oils do not offer this measure of wear protection, since anti-wear additives are not included.

- **One Source for your H1 Lubricants** – Six versatile products for many different applications provide viscosity ranges to satisfy your requirements.

4010	SAE 10	ISO 46
4046	SAE 10	ISO 46
4020	SAE 20	ISO 68
4030	SAE 30	ISO 100
4090	SAE 90	ISO 220
4140	SAE 140	ISO 460
4059	SAE 30	ISO 100 (Aerosol)*

* Contains no ozone depleting chemicals

- 4059 has excellent penetrating characteristics, while leaving a protective oil coating upon evaporation of its H1 solvent.
- 4059 has excellent rust preventative characteristics. In a 100% humidity test chamber there was no rust after 48 hours with LE's 4059.

TYPICAL APPLICATIONS:

- Food Processing/Animal Feed Preparation – Lubricant and rust preventative for machinery and other equipment.
- Aluminum/Metallic Foil and Packages – Lubricant for drawing, stamping, forming and rolling metallic foil and packages used in food packaging.
- Textile – machinery lubricant.
- Paper – machinery lubricant.
- 4059 as a Penetrant and General Lubricant – Loosens corroded and frozen parts, protects surfaces from rust and corrosion, assists in water displacement, solvent helps dissolve and penetrate residues.

WHAT IS QUINPLEX®?

QUINPLEX is LE's exclusive proprietary additive created through LE's own R & D staff. This study was started in Europe and adapted by LE to Lubricant Technology thus providing yet another in a long series of unique LE contributions to the field of Lubrication. Quinplex imparts three important characteristics to 4010-4030-4046-4059-4090-4140:

- (1) Water Resistance
- (2) Tackiness (clingability)
- (3) Forms a barrier against corrosion and rust.



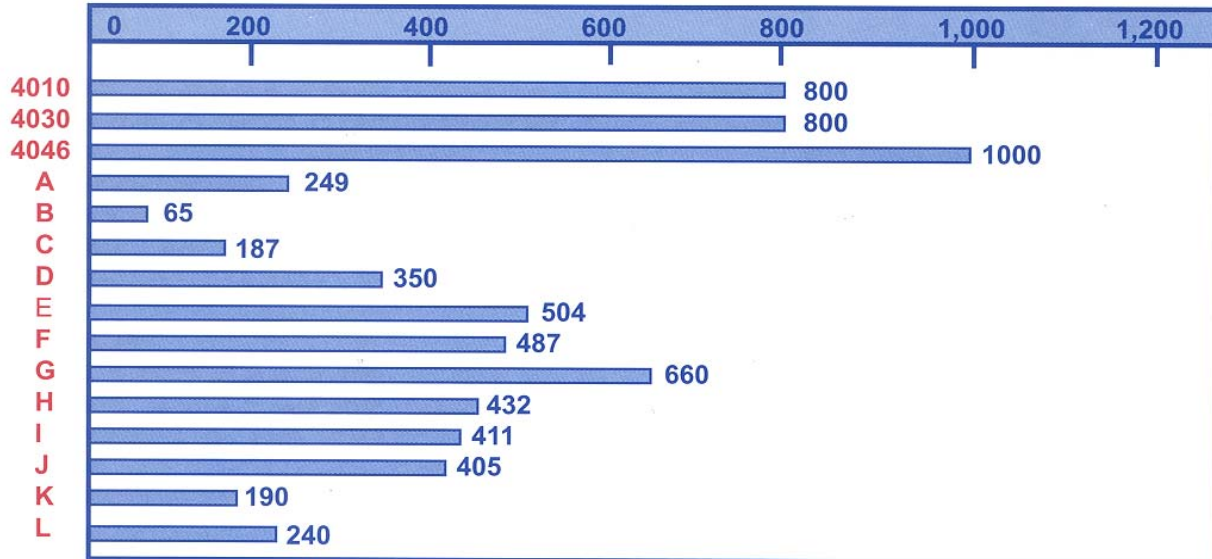
LUBRICATION ENGINEERS, Inc

LEADERS IN LUBRICANTS

LE Products manufactured under an ISO 9001:2000 Certified Quality System

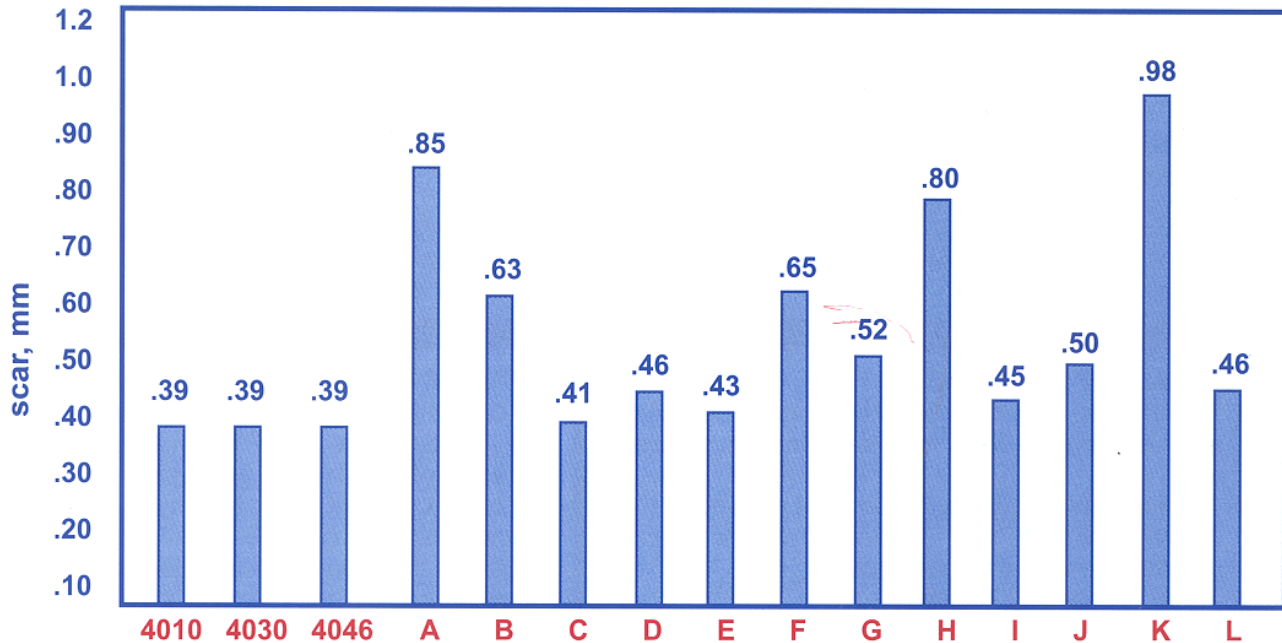
ROTARY BOMB OXIDATION TEST ASTM D-2272 (RBOT)

OXIDATION INDUCTION TIME (MINUTES)



The RBOT ASTM D-2272 Test illustrates the superior oxidation resistance of QUINPLEX® as compared to the various other compressor and industrial oils. In this test a sample of the oil is placed in a sealed container with water and a copper catalyst. It is pressurized with 90 psi of oxygen and heated to 150°C. (302°F.). The time is measured to 25 psi drop in pressure. This signifies a significant reaction has occurred between the lubricant and the oxygen – oxidation. **QUINPLEX® OILS HAVE LONGER OXIDATION LIFE LEVELS THAN ANY OF THE OTHER OILS TESTED – PETROLEUM OR SYNTHETIC!**

FOUR BALL WEAR TEST ASTM D-4172



The four ball wear test is used to determine the relative wear preventative properties of lubricant fluids. Lubricants are compared based on the average size of the scar diameters worn in the three lower balls after rotation of the upper fourth ball in the test procedure. A smaller wear scar size indicates the lubricant is providing better wear protection. **QUINPLEX® OILS HAVE THE SMALLEST SCAR AND BEST WEAR PROTECTION OF ALL OILS TESTED!**



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