

APPLICATION
Ingersoll Rand Drill Rig

CHALLENGE

Foaming, leaking and excessive oil usage in the top drive

SOLUTION

Monolec Gear Lubricant (704)

RESULTS

- Eliminated foaming and leaking
- Significantly reduced oil usage and labor
- Increased equipment life

Driller Reduces Foaming & Leaking with LE Gear Oil

CUSTOMER TESTIMONIAL

H.W. Schwope & Sons

Customer Profile

H.W. Schwope & Sons of Boerne, Texas, specializes in water well drilling, windmills, pressure tanks and water storage tanks. The company services five Hill Country counties in Texas, drilling more than 150 water wells annually, as well as pulling and repairing pumps. Hugo (H.W.) Schwope started the business in 1946, welding and building storage tanks. The company expanded to drilling and servicing wells in the mid 1960s. Today, the business is run by H.W.'s four sons. The company has been using LE products in 1974.

Application

H.W. Schwope's Ingersoll Rand T4W drill rig has a top drive system to drill commercial and residential water wells. This top drive uses a 75-hp motor in combination with a gear housing to rotate an output shaft to drive the borehole tricone rock bit. The top drive is the primary force responsible for the necessary torque required to drill the well, and without reliable performance, there is no drilling.

Challenge

With the gear oil they were using, H.W. Schwope was experiencing excessive foaming in the top drive. This caused the seals to leak and required daily replacement oil to cover the loss of the previous day's operation. The company wanted to eliminate the foaming and seal leakage, in order to reduce the quantity of oil used as well as the daily labor required for oil replacement. They also wanted to ensure long equipment life.

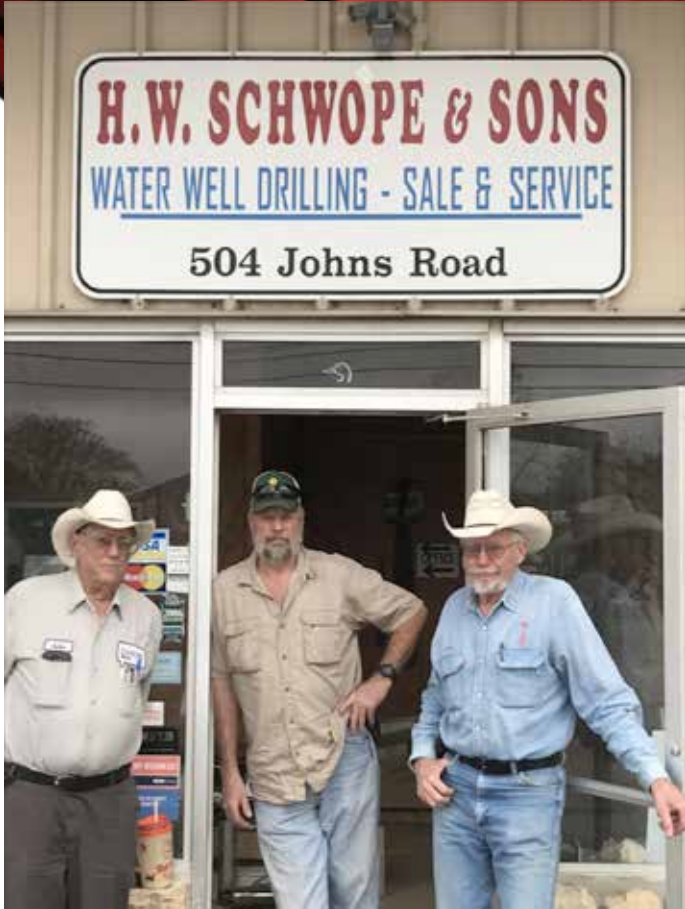
Results

Since H.W. Schwope began using Monolec 704 in 1975, foaming and leaking have been eliminated from the top drive. The amount of oil used and labor required have been reduced significantly because there is no longer any need for daily topping off of lost oil. In addition, the high-performance gear oil from LE has provided premium protection for this valuable piece of equipment. When Schwope & Sons made the switch to Monolec 704, a new top drive would have cost approximately \$20,000, not including labor and lost opportunity cost from downtime. The company has been operating this same IR drill rig with no top drive failures since that switch four decades ago.



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LE Solution

Bryan Stine, LE lubrication consultant, recommended Monolec® Gear Lubricant (704), a versatile, multiviscosity, extreme pressure gear oil. Monolec 704 contains a potent anti-foam agent that keeps operating temperatures low by breaking up entrapped air bubbles, thus reducing the possibility of entrainment and cavitation. Monolec Gear Lubricant also contains Monolec®, LE’s proprietary liquid wear-reducing additive that creates a single molecular lubricating film on metal surfaces, vastly increasing oil film strength without affecting clearances. Monolec allows opposing metal surfaces to slide by one another, greatly reducing friction, heat and wear.

Thank you to Brian Stine, LE consultant (pictured), and John Schwope, owner, for providing the information used in this report.



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