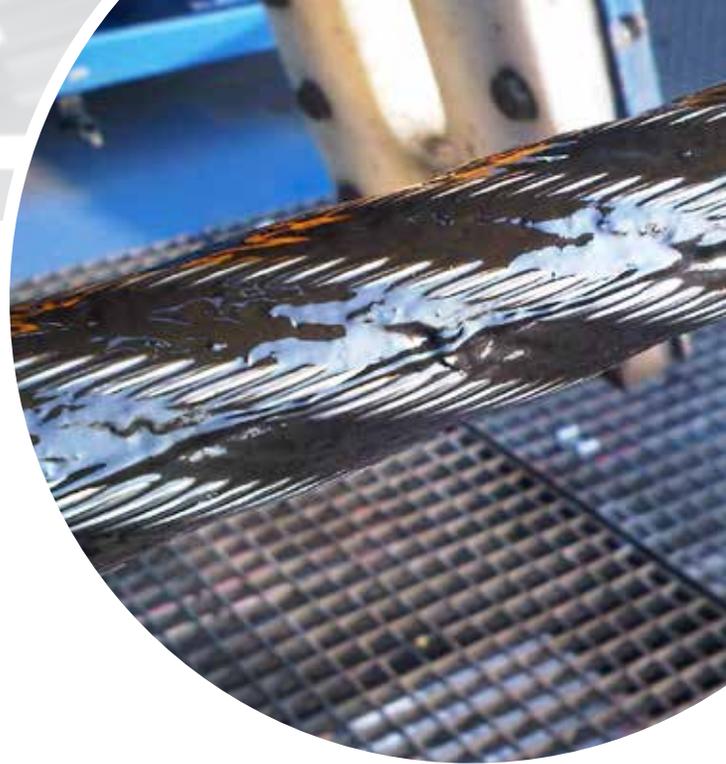


Maximize Wire Rope Life with Best Practices

Years of field experience have shown that wire rope life can be maximized by using the right lubricants combined with the right application method. Companies that have recognized the importance of proper wire rope lubrication and adopted best practices have gained a huge advantage by lengthening wire rope life, eliminating costly replacements and improving safety.

Factors that influence wire rope life and performance include type of operation, care and environment. Two problems include wear and corrosion. Wear is accelerated by stress-loading; shock-loading; heavy, jerking loads; or rapid acceleration or deceleration (speed of the cable stopping and starting). Corrosion is caused by fumes, acids, salt brines, sulfur, gases, salt air, and humidity; and can be accelerated by elevated temperatures. The right type and quantity of lubricant will protect the wire rope from degradation, regardless of cause.

Key performance attributes to look for in a wire rope lubricant are wear resistance and corrosion prevention. For wear resistance, look for products with anti-wear additives and proven results in the field. For strong corrosion protection in extreme environments, look for wire rope lubricants with salt spray resistance values above 60 hours and humidity cabinet values of more than 60 days. LE lubricants have been designed specifically to meet or exceed a variety of requirements, depending on the application and operating environment; check with your LE consultant for specific recommendations.



Lubricant Types for Protecting Wire Rope

- Penetrating lubricants contain an evaporative solvent that facilitates migration of the lubricant into the core of the wire rope, then evaporates, leaving behind a heavy lubricating film that protects and lubricates each strand.
- Coating lubricants penetrate slightly and seal the outside of the cable from moisture, reducing wear, rust and corrosion.

Because most wire ropes fail from the inside, it is critical to ensure the center core receives sufficient lubricant. LE recommends a combined regimen in which a penetrating lubricant is used to saturate the core, followed by a coating lubricant to seal and protect the outer surface.

Application & Cleaning

For maximum core penetration and coating, an automatic lubrication system is advised, and it should include a cleaning component. Cleaning wire rope prior to lubricant application is critical to effective lubrication. Contamination buildup can cause accelerated wear, acting as an abrasive. Buildup can also keep in water and increase rate of corrosion, as well as interfere with visual inspections.

Components of an Effective Wire Rope Lubrication Program



Coating & Penetrating Lubricants



Training



Automatic Lubrication System

Identify the suffering points

Move forward with proven solutions for extending wire rope life



Lubricant Application

Lubricating wire rope can be difficult. Many times it is done by hand, which is time consuming and can create a safety hazard for employees. Lubricant applied by hand can be messy, creating housekeeping challenges. To properly lubricate, it is important the lubricant makes its way to the core of the wire rope, something that is difficult to achieve with hand application.

LE Solution: Eliminate messy, time-consuming hand application with an efficient automatic lubrication system. With one pass, LE's Viper MKII system injects the perfect amount of lubricant to protect the rope, getting it into the core.



Product List

- Viper Maxi MKII (handles wire rope diameters from 50mm (1 31/32") to 165mm (6 1/2"))
- Viper Mid MKII (handles wire rope diameters from 8mm (5/16") to 67mm (2-5/8"))
- Viper Mini MKII (handles wire rope diameters from 6mm (15/64") to 36mm (1 13/32"))



Correct Lubricant

Wire rope lubricants have three principal functions: reducing the friction as the individual wires move over each other, providing corrosion protection in the core and inside wires and on the exterior surfaces, and preventing abrasive wear. Abrasive wear can occur on the inside and outside of the rope, depending on the operating environment. Abrasive wear usually reduces rope diameter and can result in core failure and internal wire breakage. Picking the correct heavy duty industrial wire lubricant is critical to prolonging wire rope life.

LE Solution: Lubrication Engineers has formulated industrial wire rope lubricants built to meet the challenges, whether you are looking for a penetrating or coating lubricant. When properly applied to the wire rope, their outstanding adhesive strength helps them remain on the rope; maintain a strong lubricating film between wires and strands; and resist oxidation, water and abrasive contaminants; all while remaining pliable in use.



Product List

- Wirelife® Monolec® Penetrating Lubricant (2001)
- Wirelife® Low Tox® Penetrating Lubricant (2011)
- Wirelife® Almasol® Coating Grease (451-453)
- Wirelife® Almasol® Coating Lubricant (2002)
- Wirelife® Almasol® Syn Coating Lubricant (2022)



Environmental Impact

Wire ropes are working pieces of equipment that are normally exposed to air, water and soil. Today, some industries are required to conform to certain environmental standards, such as the EPA VGP for the marine industry. Other industries, including forestry and logging, are seeking to implement their own green initiatives.

LE Solution: LE offers lubricants - including an EAL grease - formulated to minimize environmental impact if accidentally released into soil or aquatic environments.

Product List

- Earthwise™ EAL Wire Rope Grease (3353)
- Wirelife® Low Tox® Penetrating Lubricant (2011)



LE Enhanced Lubricants



Full Circle of Reliability

Armed with knowledge of best practices and all of the necessary tools to get the job done, your local LE lubrication consultant will help you plan and implement a world class lubrication reliability program to protect your assets.

Xpert Services

Xpert
Training



Xpert Equipment
Reliability &
Assessment



Wire Rope Lubricant Application & Cleaning



Seals, scrapers and cleaners are available as optional components with Viper automatic lubricators.



LE's state-of-the-art manufacturing facility, technology center, warehouse and primary office is located in Wichita, KS, with regional distribution out of Knoxville, TN, and Las Vegas, NV. Additional support functions are located in Fort Worth, TX. The company's international presence includes distributors in more than 60 countries.



LE Helps Protect Your Equipment & Grow Your Bottom Line

Leaders in Lubricants Since 1951

Does your lubricant supplier do all of this?

- ✓ Professional, onsite equipment reliability assessment
- ✓ Comprehensive lubricant line (industrial oils, engine oils and greases)
- ✓ Web-based oil analysis, with results reviewed by experts
- ✓ Storage systems, including stackable bulk units
- ✓ Visual identification, including tags, labels, color-coding and wall charts
- ✓ Handling and transfer equipment, including portable transfer containers, clear grease guns, grease pumps and lube reels
- ✓ Single- and multi-point automatic grease lubricators and lubricating systems
- ✓ Contamination exclusion and removal tools, including oil reservoir sight glasses, desiccant breathers and filtration equipment
- ✓ Local, factory-trained specialist available 24/7



Lubrication Engineers, Inc. is the total solutions provider for lubrication reliability. We work closely with our customers to learn about their specific equipment and lubrication needs, and then help them create a world class lubrication reliability program that provides equipment protection and enhanced profits.

We start with an onsite equipment assessment. A trained, local lubrication consultant provides a detailed report recommending lubricants, application methods, usage amounts, and drain or lube intervals.

LE's line of high-performance lubricants – manufactured in the U.S. and made of highly refined base oils and proprietary additives – far exceed the performance of conventional lubricants in a wide variety of industrial and automotive applications. In addition, your LE consultant can offer you several other best practice products and services to ensure the effectiveness of your program, including solutions for oil analysis, storage, handling and transfer, contamination exclusion, contamination removal, education and training.



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