



Kirkpatrick Wire Rope Lubrication Systems Dynagard Environmental Wire Rope Lubricants

Company Background:

The Kirkpatrick name in support of our customer's worldwide maintenance requirements extends back to 1967. This experience was first established in support of our own 400 Crane Rental Fleet and later with the wire rope lubrication systems developed to maintain those cranes load lines, pendants, and boom hoist cables. The Kirkpatrick Group, Inc. has been the manufacturer of wire rope lubrication equipment for almost three decades. We developed the first successful wire rope lubrication system in the world for our own use in 1982. Therefore, our reputation and field experience far exceeds any other producer of similar equipment because it was developed around our own requirements. No other producer can make this claim.

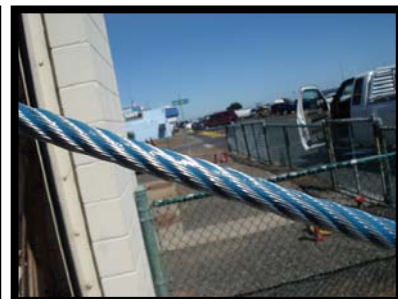
Kirkpatrick Wire Rope Lubrication Systems are excellent for Wire Rope & Cable Lubrication/Cleaning. In only one application wire rope can have its surface and groove pattern scraped clean of product build-up and grit while at the same time new lubricant is uniformly applied to the newly cleaned surface. Coating product then fills any open specs within the groove pattern and internal strands open to receive it. This is accomplished as the wire rope passes through a controlled 100% pressurized immersion within the internal Seal Lubrication Chamber. Surface moisture trapped within the internal strands is displaced and replaced with the newly applied wire rope coating product. Systems are functional with both low and high viscosity coatings. They can be incorporated as a Grease Applicator for tough applications where higher viscosity coatings are required to fight friction wear due to strand rubbing as well as a low viscosity oiling system required for certain Cable Cleaning & Lubrication applications.

An optional **Manual Stripper** is also available to be used as a rotational base for specially designed Helix Wire Rope Groove Cleaners (Not to be confused with another source's groove cleaner). This option allows users the capability to surface clean the wire rope separate from the lubrication process. Easy visually unhindered inspection can then be performed to determine the condition of the wire rope prior to servicing or in between service dates. This process is much more effective than the use of a labor intensive cable brush cleaner that incorporates individual wires that easily gum up and require frequent cleaning.



Kirkpatrick Wire Rope Lubrication Systems come in three basic configurations:

- Standard System**, Accommodates wire rope diameters 1/4" (5mm-6mm) to 1-7/8" (48mm),
- Jumbo System**, Accommodates wire rope diameters 3/8" (9mm-10mm) to 4" (104mm)
- Low Viscosity Internal Spray Configuration** (Designed for the application of low viscosity, "pourable" coatings) JUL Systems accommodate wire rope diameters through 2-1/4" (57mm/58mm).
- **Standard Systems** are available in three models: Each Standard System Model incorporates a 50:1 ratio / 100 oz. to 120 oz. per minute Lubricant Delivery System as well as a Lubrication Collar capable of accommodating Seal and Scraper Plate Kit diameters from 1/4" (5mm/6mm) to 1-7/8" (48MM).
 - **Model SU35B**: Fit for 5-Gallon (35 Pound / 15.87 Kgs.) Pails
 - **Model SU120**: Fit for 16-Gallon (120 Pound / 54.43 Kgs.) Mid Sized Drum (Keg)
 - **Model SU400**: Fit for 55-Gallon (400 Pound / 181.44 Kgs.) Full Sized Drum



- **Jumbo Systems** are available in two models: Each Jumbo System Model incorporates a high volume 50:1 ratio / 16 to 22 pound per minute capacity Lubricant Delivery System to accommodate medium to high viscosity lubricants used to service larger wire rope diameters, In addition, the Lubrication Collar will accommodate Seal and Scraper Plate Kit diameters up to 3-7/8" (98MM) providing the user the ability to service broader ranges of wire rope diameters.
 - **Model JU120:** Fit for 16 Gallon (120 Pound / 54.43 Kgs.) Mid Sized Drum (Keg)
 - **Model JU400:** Fit for 55-Gallon (400 Pound / 181.44 Kgs.) Full Sized Drum.



- **Internal Spray Configuration Systems** are available in three models. These Models are designed to apply low viscosity (liquid) products through four 4,000 psi rated spray nozzles. They are excellent for Wire Rope & EM Cable Lubrication / Cleaning and their high pressure application far exceeds low pressure oiling systems also available on the market.
 - **Model JU5L:** Fit for 5-Gallon sized pails. Approximate Delivery Rate: 4-Gallon per minute
 - **Model JU16L:** Fit for 16-Gallon sized mid sized drums. Approximate Delivery Rate: 4-Gallon per minute.
 - **Model JU55L:** Fit for 55-Gallon full sized drums. Approximate Delivery Rate: 4-Gallon per minute.

Note: JUL Systems are not engineered to accommodate medium to high viscosity coatings such as NLGI Grade 1 to NLGI Grade 3 greases.



Dynagard Blue Environmental Wire Rope Lubricant

Dynagard Blue is an extreme pressure unleaded environmental wire rope lubricant blended for excellent resistance to softening under severe working conditions, water resistance, and its compatibility with all Kirkpatrick Wire Rope Lubrication Systems in addition to manual hand application. Its slickness and viscosity allow it to stay alive with the wire rope as the strands move during load bearing operations. This attribute also allows it to continuously redistribute itself to cover any internal strand areas that may have been missed during the initial lubrication process. An unleaded extreme pressure additive provides exceptional protection against wear and shock loads, while additional additives enhance resistance to water wash-off, protection against fling off at high wire rope travel speeds, and long service in high temperature environments. Dynagard Blue has outstanding structural and chemical stability. It won't corrode steel and copper bearing alloys and is compatible with conventional seal materials. Aquatic toxicity tests on sensitive marine organisms performed by independent test laboratories have shown it to have over 25,000 PPM making it possibly the best LC-50 value of any wire rope lubricant marketed in the world. Copy of the test data is available upon request.

- Approved 2006 QPL MIL-G-18458-D Type I (NSN No. 9150-01-520-8116)

USS Wasp LHD-1



USCGC Kukui WLB-203



Dynagard "E" Biodegradable Env. Wire Rope Lubricant

(Environmentally Safe Wire Rope Lubricant)

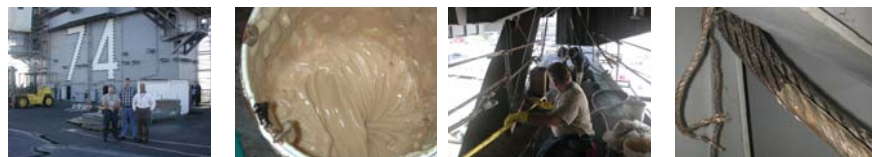
Dynagard "E" is a revolutionary non-toxic 97% biodegradable wire rope lubricant that meets the performance levels of petroleum-based greases in areas of fluid film and corrosion protection of wire rope strands. Exceptional for manual application; Dynagard "E" also meets the operational requirements for all Kirkpatrick Wire Rope Lubrication System Models providing optimum coating and penetration prolonging the working life of wire rope while at the same time meeting the environmental concerns of our customers. Dynagard "E" was the first seed oil based high viscosity grease introduced onto the world market in 1993. It also was the benchmark product used in 2002 to establish MIL-PRF-18458C Type II requirements under the "Environmentally Preferable Lubricants" program (NSWCCD, Code 632). Documentation is available upon request.

- Approved 2006 QPL MIL-G-18458-D Type II (NSN No. 9150-01-520-8143)

HOOVER DAM



**USS STENNIS
CVN-74**



Dynagard LVL Wire Rope Dressing

Dynagard LVL is a highly tenacious adhesive wire rope dressing formulated for use in both Marine and Mining applications where a quickly penetrating product is required with the low fling off adhesive attributes of a much higher viscosity coating. This is especially important at high wire rope travel speeds where fling-off is more apt to occur after the initial application of product. **Dynagard LVL** penetrates the outer strands of wire rope and cable and is excellent in displacing moisture when used with the Kirkpatrick JUL Internal Spray Systems. This product is also excellent for Mine Friction Hoist applications where slippage is a safety concern.

As the carrier solvent evaporates, a thin flexible film of lubricant is formed. This fluid film barrier prevents the incursion of moisture or dirt between the strands, and contains rust and corrosion inhibitors to prevent abrasive and corrosive wear. The fluid film barrier of the **Dynagard LVL** also protects against the formation of rust and prevents “rust binding”, which reduces cable flexibility and life; increasing friction wear between the wire strands. The barrier also offers protection against corrosion, preventing pitting of wire strands that can cause fatigue failure. The **Dynagard LVL** maintains optimal performance in both dry and high humidity/salt water environments.



Slope Rope & Personnel Hoist

Customer Application Questionnaire

Please answer the following to the best of your ability so that we can accurately provide you with a system that best suits your job requirements.

- What are your wire rope diameters and lengths?

- What is the number of outer strands for each diameter and direction of lay? Example 3/4" (19mm) 6-strand right hand lay. Please also note if they are Lang lay or long lay if you have that information as well.

- What is the maximum and minimum wire rope travel speed for each rope?

- Describe the kind of work application each rope is being used for. Example: Crane Boom Hoist, Crane Load Line, Mine Vertical Hoist, Mooring Line

- How heavily coated is each wire rope from old coatings that have been applied or environmental contaminants. (This helps us determine whether Groove Cleaners will be beneficial). New wire ropes do not initially require the use of Groove Cleaners.

- What is your wire rope condition? Example: burrs, broken strands, rough with surface rust, smooth with no broken strands.

- How has your wire rope maintenance been performed up to this point? Example: By Hand, Spray, or Vat. Etc.)

- How often?

- How far will your work location be from your air source?

- What length and what diameter is your air line?

- What has been the viscosity of the wire rope coating you have been applying to this point? Example: Liquid, Molasses consistency, Gel, Peanut Butter consistency or soft grease. What is the Trade Name?

- What is the temperature range in your working environment during your wire rope maintenance procedure?

Air Supply Required:

- Larger diameter (2" (51mm) and larger) 6-strand, 7-strand, 8-strand wire rope configurations require one of our Jumbo Systems. The air supply should therefore be at least 30 to 40 CFM for them to perform optimally. Most Plant or Shipboard air is adequate to run the Jumbo System Pump packages.
- Standard Systems (Wire rope diameters to 1-7/8" (48mm)) can function with compressors of 15 CFM or stronger capacity. Much depends on the wire rope travel speed that exists during the wire rope maintenance process.