

2015 Catalog

# Kirkpatrick Wire Rope Lubrication Systems

Dynagard Environmental Wire Rope Lubricants



## The Kirkpatrick Group, Inc.

Palisades Central II, 2435 North Central Expressway

Suite 1150, Richardson, TX 75080

(800) 466-4414 • (972) 509-2468 [www.TheKirkpatrickGroup.com](http://www.TheKirkpatrickGroup.com)

---





*From The Desk of R. T. Kirkpatrick, President*

For over 30 years, the use of Kirkpatrick Wire Rope Lubrication Systems has changed the manner in which wire rope preventative maintenance is performed on a worldwide scale. This has equated to labor savings and prolonging the working life of our customers' wire rope. We have decades of unsolicited third party data to support these claims as well. We also have implemented a new, well equipped training center in Dallas, Texas, USA to support our customers in the use of their Kirkpatrick Systems. This training is offered free of charge to any customers who have purchased a system from our Dallas offices or from an established stocking distributor of our product line. We have had clients arrive from around the globe to take advantage of the opportunity to participate in our training since its inception in 2012. The success of this program has proven itself to be beyond question and has even surprised us.

It goes without saying, with our continued success over the years there have been attempts to copy what we have created. There always will be. However, we were the first to develop pressure wire rope lubricators and still to this day, manage to lead the world in sales. There is no other product on the market that meets the operational performance or quality of craftsmanship of the 9 systems we offer. There is one very good reason for this: Our products have been developed as a result of the knowledge gained from being directly involved in our customer's preventative maintenance programs across many industries. Being able to offer a full library of videos taped onsite at the actual infield use of our systems over the years is proof that we have done our homework.

Our company has one focus: To provide our customers with the highest quality hardware in conjunction with a superior degree of customer service, troubleshooting and parts support that addresses every aspect of the care and maintenance of their wire ropes. We know that this is the driving force behind the wire rope longevity they deserve. This expertise has been, and will continue to be our strength as we evolve and innovate going forward.

I personally would not have it any other way.

Best Regards,

R. T. Kirkpatrick  
President

**The Kirkpatrick Group, Inc.**

*Kirkpatrick Wire Rope Lubrication Systems · Dynagard Environmental Wire Rope Lubricants*  
Palisades Central II · 2435 North Central Expressway Suite 1150 · Richardson, TX 75080  
Tel: (972) 509-2468 · Toll Free: (800) 466-4414 · Fax: (972) 608-3860  
[www.TheKirkpatrickGroup.com](http://www.TheKirkpatrickGroup.com) · [sales@thekirkpatrickgroup.com](mailto:sales@thekirkpatrickgroup.com)

# Table of Contents

<b>Introduction: The Kirkpatrick Group, Inc.</b>	5
<b>Section One: Standard Wire Rope Systems</b> <ul style="list-style-type: none"> <li>▪ Overview and Description</li> <li>▪ Models: SU35B · SU120 · SU400C</li> </ul>	7
<b>Section TWO: Jumbo Wire Rope Lubrication Systems</b> <ul style="list-style-type: none"> <li>▪ Overview and Description</li> <li>▪ Models: JU35 · JU120 · JU400</li> </ul>	13
<b>Section THREE: Jumbo Internal Spray Configuration Systems</b> <ul style="list-style-type: none"> <li>▪ Overview and Description</li> <li>▪ Models: JU5L · JU15L · JU55L</li> </ul>	19
<b>Section FOUR: Seal and Scraper Plates</b> <ul style="list-style-type: none"> <li>▪ Description and Part Number Charts</li> <li>▪ Standard · Jumbo · JUL</li> <li>▪ US/NATO National Stock Numbers</li> </ul>	25
<b>Section FIVE: Groove Cleaner Kits &amp; Smooth Bore Groove Cleaners</b> <ul style="list-style-type: none"> <li>▪ Description and Part Number Charts For Groove Cleaners</li> <li>▪ Standard · Jumbo · JUL</li> <li>▪ Description and Part Numbers Charts For Smooth Bore</li> <li>▪ US/NATO National Stock Numbers</li> </ul>	30
<b>Section SIX: Optional Components</b> <ul style="list-style-type: none"> <li>▪ Manual Stripper · Centering Bushing Part Numbers</li> <li>▪ Follower Plates · Drum &amp; Pail Covers · Hoses</li> </ul>	36
<b>Section SEVEN: Dynagard Wire Rope Lubricants</b> <ul style="list-style-type: none"> <li>▪ In Depth Environmental Review</li> <li>▪ Dynagard Blue Environmental Wire Rope Lubricant</li> <li>▪ Dynagard Blue CSS13 Wire Rope Lubricant</li> <li>▪ Dynagard "E" Wire Rope Lubricant</li> <li>▪ Dynagard LVL Internal Spray Applicator Dressing</li> <li>▪ Dynagard Plus Citric Solvent</li> </ul>	39
<b>Section EIGHT: Information Required For An Accurate Quote</b>	50
<b>Section NINE: Ordering Procedures</b>	51
<b>Section TEN: Kirkpatrick Systems In Field Applications</b>	52





# The Kirkpatrick Group, Inc.

*"The old cable cleaning method employed solvents and scraping with a wire brush to remove the old grease. Afterwards, the new grease was applied by hand. This process was time consuming and dangerous. A wire rope lubrication system is now used that automatically removes the old grease and re-applies new grease simultaneously. This process has reduced work time from 6 man hours to 30 minutes for 450 feet of cable, saving a total of 1,080 hours annually at a savings of nearly \$43,000 USD."*

*P2 AFLOAT Award Submittal,  
Commander  
Naval Base Norfolk  
Secretary of the Navy*

*"The manual process Required 6 workers and 2 full days to complete the cleaning and lubrication of a set of crane Cables. Utilizing The Kirkpatrick Wire Rope Lubrication System the process required 3 workers for 4 hours. Annual cost savings: \$366,356.48. Breakeven point: 10.5 days."*

*Chief of Naval Operations  
Pilot Ergonomics  
Program Evaluation*

The Kirkpatrick Group, Inc. has one goal and that is to provide your company with innovation, safety and support for the care, longevity and maintenance of your wire ropes.

Since 1982 when we first introduced our products to the world market, we have consistently created the most innovative processes and well supported methods for wire rope maintenance. Over the years we have continued to lead the way with improvements that make your job much easier and more cost effective. In honor of this tradition of visionary development: In 2015 we will be announcing further innovations with several Patents Pending design features.

Kirkpatrick Wire Rope Lubrication System's design features provide the most efficient way to field dress any wire rope for any preventative maintenance schedule. Our Lubrication Systems scrape the wire ropes, grooves and surfaces clean while simultaneously applying a new coat of lubricant. This process is all accomplished in one pass, at a tremendous savings in both time and expense.

In order to support the longevity of your wire ropes, the scraper plates and groove cleaners in the Kirkpatrick System are calibrated to fit the specific diameter, number of outer strands and lay pattern of each wire rope. This specific fit allows the wire rope to be efficiently scraped clean of any product build up, as well as grit and contaminants within each specific groove pattern. At the same time,

Dynagard Environmental Wire Rope Lubricants are uniformly applied to the newly cleaned surface, penetrating into any open spaces within the grooves and internal strands. The goal is to maintain the original factory applied lay-up material for as long as possible. This is done by using a lubricant coating product that marries well to the original lay-up material and doesn't cause it to disintegrate, thereby greatly increasing the working life of your wire rope.

The maintenance is accomplished as the wire rope passes through a 100% pressurized and controlled immersion within the Seal Center Chamber of the Lubrication Collar. Surface and internal moisture (trapped within the strands) is displaced as the wire rope lubricant coating is being applied. [Our Wire Rope Lubrication Systems are functional with both low and high viscosity coatings.](#)

What is unique about the impressive testimonials we provide throughout this catalog and our website is that they have all come to us through third party evaluations. Every conclusion and piece of data were arrived at independently by formal evaluation of our products in actual field applications. Not one of these testimonials has been solicited by our company.

After 32 years we are still committed to creating new ways to improve the performance, longevity maintenance programs of your wire ropes.

*“Diligent use of pressure Wire Rope Lubrication Systems can increase the service life of Wire Rope... Systems with a proven history of performance includes The Kirkpatrick Group, Inc.”*

*United States Coast Guard Naval Engineering Manual*



#### **Why Pressure Lubricate?**

- Wire rope passes through a 100% pressurized and controlled immersion many times faster than manual applications
- Labor cost reduced, safety improved and the working life of the wire ropes increased
- The outer surface and groove pattern is wiped clean of water and contaminants allowing optimal penetration of coating, resulting in less lubricant waste and more fluid film support between the strands, aiding against friction wear

#### **Why Kirkpatrick?**

- Experience. We have over 32 years in wire rope pressure lubrication, as well as 47 years of supporting our customers for their maintenance requirements world wide.
- We are experts when it comes to troubleshooting your applications due to this long term direct onsite experience.
- Our systems continue to evolve to accommodate the broadest possible field applications in the world.
- We are a proven entity, with Patent Pending innovations on the way. We stock and assure timely parts and system availability.
- We are approved by the United States Coast Guard, Navy, Army, Army Corps of Engineers, NATO, Canadian Coast Guard, Canadian Navy, Australian Navy along with many other worldwide organizations.

# Section ONE

## Standard Model Wire Rope Lubrication Systems

*"Navy Public Works Department, San Diego prevents WMSD's: Increases Productivity, and Reduces Costs With Automated Cleaning and Wire Rope Lubrication System (Kirkpatrick Model SU35B Wire Rope Lubricator)"*

*"Manual Wire Rope Preventative Maintenance of all of the ship's wires was taking a week to complete. Now, since receiving the Model SU35B Wire Rope Lubricator, the time to complete the project has been reduced to 1 day with fewer shipboard personnel involved."*

*USS Rushmore , BM1 Irwin*





# Standard Model Wire Rope Lubrication Systems

## Standard Model Wire Rope Lubrication Systems

- Available in three models that accommodate wire rope, seal and scraper plates diameters to 1-7/8 in. (49 mm).
- Each model is provided with one diameter seal and scraper plate kit and one diameter and lay groove cleaner kit as part of the complete system.
- Customers specify diameter, number of outer strands and lay direction of wire rope when ordering.

## Light Weight Hinged Proprietary Formulation Aluminum Lubrication Collar

- Weight 22 lbs./9.9 kg.
- Accommodates wire rope/seal diameters up to 1-7/8 in. (48 mm.)
- Hinged design feature provides safe set-up and maneuverability in cramped or high work locations. This feature protects against any accidental dropping of parts that may cause injury to those below.
- High grade specially formulated aluminum provides durable yet flexible protection against over tightening.
- Discharge tube acts as a handle for safety reasons as well as allowing excess lubricant to evacuate into catch container. This enables the operator to verify that the lubrication collar has become filled so the wire rope travel can commence.
- A recycling valve is attached to the discharge tube nipple. This allows the user to redirect lubricant flow back to the wire rope entrance port of the lubrication collar for optimized consumption and pressurization.
- Clear excess lubricant discharge hose attaches to recycling valve nipple. This item enables the operator to verify that the lubrication collar has filled. In addition it provides controlled evacuation of lubricant overflow during system operation for recycling.
- Two 3/8 in. shackles

## Standard Seal & Scraper Plate Kit

- New Patent Pending Design Features
- Weight 5 lb./2.25 kg.
- Customers specify diameter
- Seals lubrication collar neatly around the wire rope being treated for optimum penetration.
- Four piece metal scraper plate set provides a rotational base for the groove cleaner assemblies, they also smooth out the newly applied surface coating of the wire rope as it exits the lubrication collar.
- Standard system seals consist of specifically formulated, durable, polyurea materials, that provide better and longer term protection against chemical and friction wear over the less durable Nitrile rubber materials typically used in other wire rope servicing applications.
- Seal lubrication chamber design is sized to specific wire rope diameter ranges. This feature provides for optimum internal pressure to maintain controlled lubricant penetration, consumption and coating levels.
- Proprietary seal interlock design increases penetration and coating performance by directing lubricants

through and around hard to penetrate wire ropes from the centered lubrication chamber toward each end of the lubrication collar.

## Manual Stripper Assembly- See Section SIX

## Groove Cleaner Kits

- Weight 1/2 lb./23 kg.
- Each kit contains two individual groove cleaners (4 parts total). The customer specifies the diameter, number of outer strands and lay direction of their wire rope in order to place their order.
- Cleans wire rope groove pattern and outer circumference for better penetration and coating inside the lubrication collar (smooth bore groover design can be substituted for non-spin or multi strand wire rope configurations).

## 7,000 PSI Rated Stainless Steel Lubricant Control Valve- Additional Valve Offered With Each System

- With brass quick coupler nipple
- Allows the operator to control lubricant flow to the lubrication collars when adjustments are required for any increase or decrease in wire rope travel speed and/or available air pressure.

## 50:1 Ratio Pump: Maximum 128 oz./Minute Lubricant Delivery System

- Weight 30-40 lb./13.5-18 kg
- High volume feed keeps consistent pressurization at high wire rope travel speeds.
- The flow specification is based on a maintained 80 PSI air pressure setting utilizing NLGI Grade 1 (one) grease consistency at 80°F/27°C)

## Follower Plate

- Helps prevent air pockets as the lubricant level lowers in the pail

## Pail/Drum Cover

- Covers the top of the pail/drum
- Keeps the pump centered and secure during operation

## Air Components (FRL)

- 150 PSI rated, piggybacked, single piece FRL component regulates available air pressure, filters contaminants entering the air motor and lubricates the air supply preventing time consuming air motor icing during longer wire rope runs.

## 10 ft. Length 2,500 PSI Rated Lubricant Supply Hose

- Brass push to pull fittings for time saving and safe quick connect and disconnect function.
- Optional lengths are also available.

## Durable Storage Case for Component Parts

- Weight 20 lbs./9 kg.
- Military and Law Enforcement approved.

## Pump Repair Kit

## Technical Manual and Videos



# Kirkpatrick Standard Model SU35B

## Wire Rope Lubrication Systems

### Model: SU35B (US/NATO: NSN 4930-01-424-2197)

Standard System: 35 lb./5 gal./15.75 kg. Sized Pails

Accommodates Wire Rope Diameters to 1-7/8 in. /48 mm.

*Kirkpatrick Lubrication Systems comes as an all inclusive package. Each component is listed below with No extra charge for each item and No extra charge for each additional backup component provided. System training is available at The Kirkpatrick Training Center in Dallas, Texas USA with no charge to our customers.*

1	Heavy Duty Light Weight Aluminum Lubrication Collar: Wire Rope Diameters to 1-7/8" (48 mm)
1	Seal & Scraper Plate Kit: Scraper Plates Not Sold Separately <ul style="list-style-type: none"> <li>Customers Specify Diameter</li> </ul>
2	Wire Rope Groove Cleaner Kits: Includes Two Individual Groove Cleaners. (4 Parts Total) <ul style="list-style-type: none"> <li>Customers Specify Diameter, Number of Outer Strands &amp; Lay Direction</li> </ul>
1	Manual Wire Rope Stripper & Centering Bushing <ul style="list-style-type: none"> <li>Customers Specify Diameter</li> </ul>
1	50:1 Ratio Pumps- 8 lb./3.6 kg. Per Minute Max. Flow Rate <ul style="list-style-type: none"> <li>Includes One Pump Repair Kit</li> </ul>
1	35 lb./5 gal./15.75 kg. Sized Follower Plate
1	35 lb./5 gal./15.75 kg. Pail Sized Cover
1	Air Regulator/Filter/Oiler Assembly With Gauge (150 PSI Rated)
2	Stainless Steel Lubricant Flow Control Valve (7,000 PSI Rated) <ul style="list-style-type: none"> <li>One Additional Valve In Reserve</li> </ul>
1	10 ft./3 m. (2,500 PSI Rated) Lubricant Supply Hose <ul style="list-style-type: none"> <li>Custom Lengths Available Upon Request</li> </ul>
1	Pail of Environmentally Safe Dynagard Blue Wire Rope Lubricant <ul style="list-style-type: none"> <li>92,000 PPM Bio-Aquatic LC50 Rating at 90 Days</li> </ul>
1	Heavy Duty Storage Case (Military & Law Enforcement Approved)



# Kirkpatrick Standard Model SU120

## Wire Rope Lubrication Systems

### Model: SU120 (US/NATO: NSN 4930-01-462-6338)

Standard System: 120 lb./15 gal./54 kg. Mid-Sized Drums

Accommodates Wire Rope Diameters to 1-7/8 in./48 mm.

<i>Kirkpatrick Lubrication Systems comes as an all inclusive package. Each component is listed below with No extra charge for each item and No extra charge for each additional backup component provided. System training is available at The Kirkpatrick Training Center in Dallas, Texas USA with no charge to our customers.</i>	
1	Heavy Duty Light Weight Aluminum Lubrication Collar: Wire Rope Diameters to 1-7/8" (48 mm)
1	Seal & Scraper Plate Kit: Seal Kit Includes Scraper Plates (They Are Not Sold Separately): <ul style="list-style-type: none"> <li>Customers Specify Diameter</li> </ul>
2	Wire Rope Groove Cleaner Kits: Includes Two Individual Groove Cleaners. (4 Parts Total) <ul style="list-style-type: none"> <li>Customers Specify Diameter, Number of Outer Strands &amp; Lay Direction</li> </ul>
1	Manual Wire Rope Stripper & Centering Bushing <ul style="list-style-type: none"> <li>Customers Specify Diameter</li> </ul>
1	50:1 Ratio Pumps- 8 lb./3.6 kg. Per Minute Max. Flow Rate <ul style="list-style-type: none"> <li>Includes One Pump Repair Kit</li> </ul>
1	120 lb./15 gal./54 kg. Mid-Sized Follower Plate
1	120 lb./15 gal./54 kg. Mid-Sized Drum Cover
1	Air Regulator/Filter/Oiler Assembly With Gauge (150 PSI Rated)
2	Stainless Steel Lubricant Flow Control Valve (7,000 PSI Rated) <ul style="list-style-type: none"> <li>One Additional Valve In Reserve</li> </ul>
1	10 ft./3 m. (2,500 PSI Rated) Lubricant Supply Hose <ul style="list-style-type: none"> <li>Custom Lengths Available Upon Request</li> </ul>
1	Pail of Environmentally Safe Dynagard Blue Wire Rope Lubricant <ul style="list-style-type: none"> <li>92,000 PPM Bio-Aquatic LC50 Rating at 90 Days</li> </ul>
1	Heavy Duty Storage Case (Military & Law Enforcement Approved)



# Kirkpatrick Standard Model SU400C

## Wire Rope Lubrication Systems

### Model: SU400C

Standard System: 400 lb./55 gal./180 kg. Sized Drums

Accommodates Wire Rope Diameters to 1-7/8 in./48 mm.

*Kirkpatrick Lubrication Systems comes as an all inclusive package. Each component is listed below with No extra charge for each item and No extra charge for each additional backup component provided. System training is available at The Kirkpatrick Training Center in Dallas, Texas USA with no charge to our customers.*

1	Heavy Duty Light Weight Aluminum Lubrication Collar: Wire Rope Diameters to 1-7/8" (48 mm)
1	Seal & Scraper Plate Kit: Scraper Plates Not Sold Separately <ul style="list-style-type: none"> <li>Customers Specify Diameter</li> </ul>
2	Wire Rope Groove Cleaner Kits: Includes Two Individual Groove Cleaners. (4 Parts Total) <ul style="list-style-type: none"> <li>Customers Specify Diameter, Number of Outer Strands &amp; Lay Direction</li> </ul>
1	Manual Wire Rope Stripper & Centering Bushing <ul style="list-style-type: none"> <li>Customers Specify Diameter</li> </ul>
1	50:1 Ratio Pumps- 24 lb./10.9 kg. Per Minute Max. Flow Rate: <ul style="list-style-type: none"> <li>Includes One Pump Repair Kit</li> </ul>
1	400 lb./55 gal./180 kg. Sized Follower Plate
1	400 lb./55 gal./180 kg. Drum Sized Cover
1	Air Regulator/Filter/Oiler Assembly With Gauge (250 PSI Rated)
2	Stainless Steel Lubricant Flow Control Valve (7,000 PSI Rated) <ul style="list-style-type: none"> <li>One Additional Valve In Reserve</li> </ul>
1	10 ft./3 m. (2,500 PSI Rated) Lubricant Supply Hose <ul style="list-style-type: none"> <li>Custom Lengths Available Upon Request</li> </ul>
1	Pail of Environmentally Safe Dynagard Blue Wire Rope Lubricant <ul style="list-style-type: none"> <li>92,000 PPM Bio-Aquatic LC50 Rating at 90 Days</li> </ul>
1	Heavy Duty Storage Case (Military & Law Enforcement Approved)



# Standard Model Wire Rope Lubrication Systems





# Section TWO

## Jumbo Model Wire Rope Lubrication Systems

*“Mr. Raymond Beaudreau, a civilian consultant for Military Sealift Command, requested that the vessels’ 2-1/4” rusty and kinked tow wire be used for the operation. The wire was re-spoiled at approximately 150’ per min. through the Jumbo Wire Rope Lubrication Collar.*

*Results: “Examined 2-1/4” tow wire and found it to be scraped clean of rust and old lubricant. New lubricant had penetrated every visible part of the wire. The system performed well & achieved good results on substantially degraded rope (2-1/4” tow wire). A job that took days was complete in a few hours.”*

*U.S. Navy Supervisor of Salvage Evaluation of Kirkpatrick Jumbo Wire Rope Lubricator*



# Jumbo Model Wire Rope Lubrication Systems

## Jumbo Model Wire Rope Lubrication Systems

- Each jumbo system allows the user the capability of servicing a broader range of wire rope diameters and travel speeds due to a larger lubrication collar and a higher capacity lubricant delivery system.
- The system accommodates: wire rope, seal and scraper plates diameters from 3/8 in. (10 mm.) to 4-1/4 in. (108 mm.).
- Each model is provided with one diameter seal and scraper plate kit and one diameter & lay groove cleaner kit as part of the complete system.
- Customers specifies diameter, number of outer strands and lay direction of wire rope when placing order.

## Light Weight Hinged Proprietary, Specially Formulated Aluminum Lubrication Collar

- Weight 40 lbs./18 kg.
- Accommodates wire rope & seal diameters up to 4-1/8 in. (108 mm.).
- Hinged design feature provides safe set-up and maneuverability in cramped or high work areas. This feature protects against any accidental dropping of part that may cause injury to those below.
- High grade specially formulated aluminum provides durable yet flexible protection against over tightening.
- Discharge tube acts as a handle for safety reasons as well as allowing excess lubricant to evacuate into catch container. This enables the operator to verify that the lubrication collar has become filled so the wire rope travel can begin.
- A recycling valve is attached to the discharge tube nipple. This allows the user to redirect lubricant flow back to the wire rope entrance port of the lubrication collar for optimized consumption and pressurization.
- Clear excess lubricant discharge hose attaches to recycling valve nipple. This item enables the operator to verify that the lubrication collar has filled. In addition it provides controlled evacuation of lubricant overflow during system operation for recycling.
- Two 5/8 in. Shackles

## Jumbo Seal & Scraper Plate Kit

- New patent pending design features upcoming.
- Weight 16 lb./8 kg.
- Customer specifies diameter.
- Seals lubrication collar neatly around the wire rope being treated.
- Four piece metal scraper plate set provides a rotational base for the groove cleaner assemblies in order to smooth out the newly applied surface coating of the wire rope as it exits the lubrication collar.
- Jumbo system seals consist of specifically formulated, durable, polyurea materials provide better and longer term protection against chemical and friction wear over the less durable Nitrile rubber materials typically used in other wire rope servicing applications.
- Seal lubrication chamber design is sized to specific wire rope diameter ranges. This feature provides for optimum internal pressure to maintain controlled lubricant consumption and coating levels.

- Proprietary seal interlock design increases penetration and coating performance by directing lubricants through and around hard to penetrate wire ropes from the centered lubrication chamber toward each end of the Lubrication Collar.

## Manual Stripper Assembly- See Section SIX

## Groove Cleaner Kits

- Weight 1 lb./.45 kg.
- Each kit contains two individual groove cleaners (4 parts total). The customer must specify the diameter, number of outer strands and lay direction of their wire rope in order to place their order.
- Cleans wire rope groove pattern and outer circumference for better penetration and coating inside the Lubrication collar. (smooth bore groover design can be substituted for non-spin or multi strand wire rope configurations).

## 7,000 PSI Rated Stainless Steel Lubricant Control Valve- Additional Valve Offered With Each System

- With brass quick coupler nipple
- Allows the operator to control lubricant flow to the lubrication collars when adjustments are required for any increase or decrease in wire rope travel speed and/or available air pressure.

## 50:1 Ratio Pump: 384 oz. Maximum/Minute Lubricant Delivery System

- Weight 30-40 lb./13.5-18 kg.
- High volume feed keeps consistent pressurization on larger diameter wire rope traveling at higher speeds.
- The flow specification is based on a maintained 80 PSI air pressure setting utilizing NLGI Grade 1 (one) grease consistency at 80°F/27°C)

## Follower Plate

- Helps prevent air pockets as the lubricant level lowers in the pail

## Pail/Drum Cover

- Covers the top of the drum and keeps the pump centered and secure during operation

## Air Components (FRL)

- 250 PSI rated, piggybacked, single piece FRL component regulates available air pressure, filters contaminants entering the air motor and lubricates the air supply preventing time consuming air motor icing during longer wire rope runs.

## 10 ft. Length 2,500 PSI Rated Lubricant Supply Hose

- Optional lengths are also available)
- Brass push to pull fittings for time saving and safe quick connect and disconnect function.

## Durable Storage Case for Component Parts

- Weight 20 lbs./9 kg.
- Military and Law Enforcement approved.

## Pump Repair Kit

## Technical Manual and Videos

# Kirkpatrick Jumbo Model JU35

## Wire Rope Lubrication Systems

### Model: JU35

Jumbo System: 35 lb./5 gal./15.75 kg. Sized Pails

Accommodates Wire Rope Diameters to 4-1/4 in./108 mm.

<i>Kirkpatrick Lubrication Systems comes as an all inclusive package. Each component is listed below with No extra charge for each item and No extra charge for each additional backup component provided. System training is available at The Kirkpatrick Training Center in Dallas, Texas USA with no charge to our customers.</i>	
1	Heavy Duty Light Weight Aluminum Lubrication Collar: Wire Rope Diameters to 4-1/4" (108 mm)
1	Seal & Scraper Plate Kit: Scraper Plates Not Sold Separately <ul style="list-style-type: none"> <li>Customers Specify Diameter</li> </ul>
2	Wire Rope Groove Cleaner Kits: Includes Two Individual Groove Cleaners. (4 Parts Total) <ul style="list-style-type: none"> <li>Customers Specify Diameter, Number of Outer Strands &amp; Lay Direction</li> </ul>
1	Manual Wire Rope Stripper & Centering Bushing <ul style="list-style-type: none"> <li>Customers Specify Diameter</li> </ul>
1	50:1 Ratio Pumps- 24 lb./10.9 kg. Per Minute Max. Flow Rate: <ul style="list-style-type: none"> <li>Includes One Pump Repair Kit</li> </ul>
1	35 lb./5 gal./15.75 kg. Sized Follower Plate
1	35 lb./5 gal./15.75 kg. Pail Sized Cover
1	Air Regulator/Filter/Oiler Assembly With Gauge (250 PSI Rated)
2	Stainless Steel Lubricant Flow Control Valve (7,000 PSI Rated) <ul style="list-style-type: none"> <li>One Additional Valve In Reserve</li> </ul>
1	10 ft./3 m. (2,500 PSI Rated) Lubricant Supply Hose <ul style="list-style-type: none"> <li>Custom Lengths Available Upon Request</li> </ul>
1	Duo-Lube Hose Assembly For Two Sided Lubricant Feed (2,500 PSI Rated)
1	Pail of Environmentally Safe Dynagard Blue Wire Rope Lubricant <ul style="list-style-type: none"> <li>92,000 PPM Bio-Aquatic LC50 Rating at 90 Days</li> </ul>
1	Heavy Duty Storage Case (Military & Law Enforcement Approved)



# Kirkpatrick Jumbo Model JU120

## Wire Rope Lubrication Systems

### Model: JU120 (US/NATO: NSN 4930-01-462-6338)

Jumbo System: 120 lb./15 gal./54 kg. Mid-Sized Drums

Accommodates Wire Rope Diameters to 4-1/4 in./108 mm.

*Kirkpatrick Lubrication Systems comes as an all inclusive package. Each component is listed below with No extra charge for each item and No extra charge for each additional backup component provided. System training is available at The Kirkpatrick Training Center in Dallas, Texas USA with no charge to our customers.*

1	Heavy Duty Light Weight Aluminum Lubrication Collar: Wire Rope Diameters to 4-1/4" (108 mm)
1	Seal & Scraper Plate Kit: Scraper Plates Not Sold Separately <ul style="list-style-type: none"> <li>Customers Specify Diameter</li> </ul>
2	Wire Rope Groove Cleaner Kits: Includes Two Individual Groove Cleaners. (4 Parts Total) <ul style="list-style-type: none"> <li>Customers Specify Diameter, Number of Outer Strands &amp; Lay Direction</li> </ul>
1	Manual Wire Rope Stripper & Centering Bushing <ul style="list-style-type: none"> <li>Customers Specify Diameter</li> </ul>
1	50:1 Ratio Pumps- 24 lb./10.9 kg. Per Minute Max. Flow Rate: <ul style="list-style-type: none"> <li>Includes One Pump Repair Kit</li> </ul>
1	120 lb./15 gal./54 kg. Mid-Sized Follower Plate
1	120 lb./15 gal./54 kg. Mid-Sized Drum Cover
1	Air Regulator/Filter/Oiler Assembly With Gauge (250 PSI Rated)
2	Stainless Steel Lubricant Flow Control Valve (7,000 PSI Rated) <ul style="list-style-type: none"> <li>One Additional Valve In Reserve</li> </ul>
1	10 ft./3 m. (2,500 PSI Rated) Lubricant Supply Hose <ul style="list-style-type: none"> <li>Custom Lengths Available Upon Request</li> </ul>
1	Duo-Lube Hose Assembly For Two Sided Lubricant Feed (2,500 PSI Rated)
1	Pail of Environmentally Safe Dynagard Blue Wire Rope Lubricant <ul style="list-style-type: none"> <li>92,000 PPM Bio-Aquatic LC50 Rating at 90 Days</li> </ul>
1	Heavy Duty Storage Case (Military & Law Enforcement Approved)





# Kirkpatrick Jumbo Model JU400

## Wire Rope Lubrication Systems

### Model: JU400

Jumbo System: 400 lb./55 gal./180 kg. Sized Drums

Accommodates Wire Rope Diameters to 4-1/4 in./108 mm.

*Kirkpatrick Lubrication Systems comes as an all inclusive package. Each component is listed below with No extra charge for each item and No extra charge for each additional backup component provided. System training is available at The Kirkpatrick Training Center in Dallas, Texas USA with no charge to our customers.*

1	Heavy Duty Light Weight Aluminum Lubrication Collar: Wire Rope Diameters to 4-1/4" (108 mm)
1	Seal & Scraper Plate Kit: Scraper Plates Not Sold Separately <ul style="list-style-type: none"> <li>Customers Specify Diameter</li> </ul>
2	Wire Rope Groove Cleaner Kits: Includes Two Individual Groove Cleaners. (4 Parts Total) <ul style="list-style-type: none"> <li>Customers Specify Diameter, Number of Outer Strands &amp; Lay Direction</li> </ul>
1	Manual Wire Rope Stripper & Centering Bushing <ul style="list-style-type: none"> <li>Customers Specify Diameter</li> </ul>
1	50:1 Ratio Pumps- 24 lb./10.9 kg. Per Minute Max. Flow Rate: <ul style="list-style-type: none"> <li>Includes One Pump Repair Kit</li> </ul>
1	400 lb./55 gal./180 kg. Sized Follower Plate
1	400 lb./55 gal./180 kg. Drum Sized Cover
1	Air Regulator/Filter/Oiler Assembly With Gauge (250 PSI Rated)
2	Stainless Steel Lubricant Flow Control Valve (7,000 PSI Rated) <ul style="list-style-type: none"> <li>One Additional Valve In Reserve</li> </ul>
1	10 ft./3 m. (2,500 PSI Rated) Lubricant Supply Hose <ul style="list-style-type: none"> <li>Custom Lengths Available Upon Request</li> </ul>
1	Duo-Lube Hose Assembly For Two Sided Lubricant Feed (2,500 PSI Rated)
1	Pail of Environmentally Safe Dynagard Blue Wire Rope Lubricant <ul style="list-style-type: none"> <li>92,000 PPM Bio-Aquatic LC50 Rating at 90 Days</li> </ul>
1	Heavy Duty Storage Case (Military & Law Enforcement Approved)



# Jumbo Model Wire Rope Lubrication Systems



# Section THREE

## Jumbo Internal Spray Wire Rope Application Systems

*"Wire Rope used in up shaft ventilation was being lubricated at 50 ft. to 60 ft. per minute using a grease funnel installation. Since purchasing their Kirkpatrick System, lubrication speed has been increased by 100%. Mine personnel estimate the life of their wire rope has been increased by 50% to 90%."*

*Teck Corona Gold Mine*





# JUL Internal Spray Wire Rope Application Systems

## JUL Internal Spray Configuration Systems

- JUL systems available in 3 models are designed to apply low viscosity oils or thixotropic evaporative products through four internal nozzles giving a controlled 360° application within an enclosed lubrication chamber. Greases can also be used up to NLGI Grade "000" through NLGI Grade 2 viscosities.
- Each system accommodates wire rope, seal and scraper plates diameters through 2-1/4" (57 mm.) for low viscosity high flow spray applications such as oils.
- Each system also accommodates wire rope, seal and scraper plates diameters 4-1/4 in. (108 mm.) for heavier slow flow viscosities.
- Each model is provided with one diameter seal and scraper plate kit & one diameter and lay groove cleaner kit as part of the complete system.
- Customers specify diameter, number of outer strands and lay direction of wire rope when ordering.

## Light Weight Hinged Proprietary, Specially Formulated Aluminum Lubrication Collar

- Weight 40 lbs./18 kg.
- Accommodates wire rope and seal diameters up to 2-1/4 in. (57 mm.) for spray oil applications and up to 4-1/4 in. (108 mm.) for low flow viscosity greases.
- Hinged design feature provides safe maneuverability and set-up in cramped or high work locations. Single piece design feature protects against accidental dropping of parts that may cause injury.
- High grade specially formulated aluminum provides durable yet flexible protection against over tightening and metal fatigue.
- The discharge port leading through the lubrication collar wall, allows excess low viscosity lubricants (oil) to freely flow from the central seal lubrication chamber during spray applications so that the internal spray nozzles can maintain a consistent spray pattern & not be blocked by lubricant retained inside the seal chamber. It also acts to allow the central lubrication chamber to fill and become pressurized when using high viscosity greases. Both instances enable the operator to verify that the lubrication collar has become filled and wire rope travel can commence.
- Clear excess lubricant discharge hose allows operator to verify that the lubrication collar has filled and provides controlled evacuation of lubricant excess during system operation.
- Two 5/8 in. Shackles

## JUL Configured Seal & Scraper Plate Kit

- New patent pending design features
- Weight 5 lb./2.25 kg.
- Customer specifies diameter, number outer strands and lay direction of wire rope.
- Seals lubrication collar neatly around the wire rope being treated.
- Four piece metal scraper plates provide a rotational base for the groove cleaner assemblies in order to smooth out the newly applied surface coating of the wire rope as it exits the lubrication collar.
- JUL system seals consist of specially formulated, durable, polyurea materials provide better and long term protection against chemical and friction wear over the less durable Nitrile rubber materials typically used in other wire rope servicing applications.

- Seal lubrication chamber design is sized to specific wire rope diameters and provides optimum internal pressure, controlled lubricant consumption and coating levels through four high pressure application nozzles.
- Proprietary seal interlock design increases penetration and coating performance by directing lubricants through and around hard to penetrate wire ropes from the centered lubrication chamber toward each end of the lubrication collar.

## Manual Stripper Assembly- See Section SIX

### Groove Cleaner Kits

- Weight 1 lb./.45 kg.
- Each kit contains two individual groove cleaners. The customer must specify the diameter, number of outer strands and lay direction of their wire rope to place their order.
- Cleans wire rope groove pattern and outer circumference for better penetration and coating inside the lubrication collar. (smooth bore groover design can be substituted for non-spin or multi strand wire rope configurations).

## 7,000 PSI Rated Stainless Steel Lubricant Control Valve- Additional Valve Offered With Each System

- With brass quick coupler nipple
- Allows the operator to control lubricant flow to the lubrication collars when adjustments are required for any increase or decrease in wire rope travel speed and/or available air pressure.

## 50:1 Ratio Pump: 128 oz. Maximum /Minute Lubricant Delivery System

- Weight 30-40 lb./13.5-18 kg.
- Grease: 8 lb./3.6 kg. / Oils: 6 gal./22.71 liters per minute maximum flow rate
- High volume feed keeps consistent pressurization at high wire rope travel speeds.
- The flow specification is based on a maintained 40 PSI air pressure setting utilizing 30 weight oil viscosity coating product, however system will accommodate greases as well.

### Follower Plate

- Helps prevent air pockets as the lubricant level lowers in the pail

### Pail/Drum Cover

- Covers the top of the drum and keeps the pump centered and secure during operation

### Air Components (FRL)

- 150 PSI rated, piggybacked, single piece FRL component regulates available air pressure, filters contaminants entering the air motor and lubricates the air supply preventing time consuming air motor icing during longer wire rope runs.

## 10 ft. Length 2,500 PSI Rated Lubricant Supply Hose

- Optional lengths are also available
- Brass push to pull fittings for time saving and safe quick connect and disconnect function.

## Durable Storage Case for Component Parts

- (20 lbs./9 kg.)
- Military & Law Enforcement Approved

## Pump Repair Kit

## Technical Manual and Videos



# Kirkpatrick Model JU5L

## Internal Spray Wire Rope Application Systems

### Model: JU5L

Spray Nozzle Applicator: 35 lb./15.75 kg./5 gal./18.92 liters Size Pails

Oil Application/Wire Rope Diameters to 2-1/4 in./58 mm.

Grease Application/Wire Rope Diameters to 4-1/4 in./108 mm.

*Kirkpatrick Lubrication Systems comes as an all inclusive package. Each component is listed below with No extra charge for each item and No extra charge for each additional backup component provided. System training is available at The Kirkpatrick Training Center in Dallas, Texas USA with no charge to our customers.*

1	Heavy Duty Light Weight Aluminum Lubrication Collar <ul style="list-style-type: none"> <li>Accommodates Wire Rope Diameters to 58 mm. (Oil), 108 mm. (Grease)</li> </ul>
1	Seal & Scraper Plate Kit: Scraper Plates Not Sold Separately <ul style="list-style-type: none"> <li>Customers Specify Diameter</li> </ul>
2	Wire Rope Groove Cleaner Kits: Includes Two Individual Groove Cleaners. (4 Parts Total) <ul style="list-style-type: none"> <li>Customers Specify Diameter, Number of Outer Strands &amp; Lay Direction</li> </ul>
1	Manual Wire Rope Stripper & Centering Bushing <ul style="list-style-type: none"> <li>Customers Specify Diameter</li> </ul>
1	50:1 Ratio Pumps: (Grease) 8 lb./3.6 kg. (Oil) 6 gal./22.71 liters per min <ul style="list-style-type: none"> <li>Includes One Pump Repair Kit</li> </ul>
1	35 lb./5 gal./15.54 kg. Sized Follower Plate
1	35 lb./55 gal./15.54 kg. Sized Pail Cover
1	Air Regulator/Filter/Oiler Assembly With Gauge (150 PSI Rated)
2	Stainless Steel Lubricant Flow Control Valve (7,000 PSI Rated) <ul style="list-style-type: none"> <li>One Additional Valve In Reserve</li> </ul>
1	10 ft./3 m. (2,500 PSI Rated) Lubricant Supply Hose <ul style="list-style-type: none"> <li>Custom Lengths Available Upon Request</li> </ul>
1	Duo-Lube Hose Assembly For Two Sided Lubricant Feed (2,500 PSI Rated) <ul style="list-style-type: none"> <li>4 Individual Lubricant Feed Nozzles (5,000 PSI Rated)</li> </ul>
1	Pail of Environmentally Safe Dynagard Blue Wire Rope Lubricant <ul style="list-style-type: none"> <li>92,000 PPM Bio-Aquatic LC50 Rating at 90 Days</li> </ul>
1	Heavy Duty Storage Case (Military & Law Enforcement Approved)



# Kirkpatrick Model JU15L


## Internal Spray Wire Rope Application Systems

### Model: JU15L

Spray Nozzle Applicator: 120 lb./54 kg./15 gal./56.78 liters Mid-Sized Drums

Oil Application/Wire Rope Diameters to 2-1/4 in./58 mm.

Grease Application/Wire Rope Diameters to 4-1/4 in./108 mm.

<i>Kirkpatrick Lubrication Systems comes as an all inclusive package. Each component is listed below with No extra charge for each item and No extra charge for each additional backup component provided. System training is available at The Kirkpatrick Training Center in Dallas, Texas USA with no charge to our customers.</i>	
1	Heavy Duty Light Weight Aluminum Lubrication Collar <ul style="list-style-type: none"> <li>Accommodates Wire Rope Diameters to 58 mm. (Oil), 108 mm. (Grease)</li> </ul>
1	Seal & Scraper Plate Kit: Scraper Plates Not Sold Separately <ul style="list-style-type: none"> <li>Customers Specify Diameter</li> </ul>
2	Wire Rope Groove Cleaner Kits: Includes Two Individual Groove Cleaners. (4 Parts Total) <ul style="list-style-type: none"> <li>Customers Specify Diameter, Number of Outer Strands &amp; Lay Direction</li> </ul>
1	Manual Wire Rope Stripper & Centering Bushing <ul style="list-style-type: none"> <li>Customers Specify Diameter</li> </ul>
1	50:1 Ratio Pumps: (Grease) 8 lb./3.6 kg. (Oil) 6 gal./22.71 liters per min <ul style="list-style-type: none"> <li>Includes One Pump Repair Kit</li> </ul>
1	120 lb./15 gal./54 kg. Mid-Sized Follower Plate
1	120 lb./15 gal./54 kg. Mid-Sized Cover
1	Air Regulator/Filter/Oiler Assembly With Gauge (150 PSI Rated)
2	Stainless Steel Lubricant Flow Control Valve (7,000 PSI Rated) <ul style="list-style-type: none"> <li>One Additional Valve In Reserve</li> </ul>
1	10 ft./3 m. (2,500 PSI Rated) Lubricant Supply Hose <ul style="list-style-type: none"> <li>Custom Lengths Available Upon Request</li> </ul>
1	Duo-Lube Hose Assembly For Two Sided Lubricant Feed (2,500 PSI Rated) <ul style="list-style-type: none"> <li>4 Individual Lubricant Feed Nozzles (5,000 PSI Rated)</li> </ul>
1	Pail of Environmentally Safe Dynagard Blue Wire Rope Lubricant <ul style="list-style-type: none"> <li>92,000 PPM Bio-Aquatic LC50 Rating at 90 Days</li> </ul>
1	Heavy Duty Storage Case (Military & Law Enforcement Approved) 

# Kirkpatrick Model JU55L

## Internal Spray Wire Rope Application Systems

### Model: JU55L

Spray Nozzle Applicator: 400 lb./180 kg./55 gal./208 liters Sized Drums

Oil Application/Wire Rope Diameters to 2-1/4 in./58 mm.

Grease Application/Wire Rope Diameters to 4-1/4 in./108 mm.

*Kirkpatrick Lubrication Systems comes as an all inclusive package. Each component is listed below with No extra charge for each item and No extra charge for each additional backup component provided. System training is available at The Kirkpatrick Training Center in Dallas, Texas USA with no charge to our customers.*

1	Heavy Duty Light Weight Aluminum Lubrication Collar <ul style="list-style-type: none"> <li>▪ Accommodates Wire Rope Diameters to 58 mm. (Oil), 108 mm. (Grease)</li> </ul>
1	Seal & Scraper Plate Kit: Scraper Plates Not Sold Separately <ul style="list-style-type: none"> <li>▪ Customers Specify Diameter</li> </ul>
2	Wire Rope Groove Cleaner Kits: Includes Two Individual Groove Cleaners. (4 Parts Total) <ul style="list-style-type: none"> <li>▪ Customers Specify Diameter, Number of Outer Strands &amp; Lay Direction</li> </ul>
1	Manual Wire Rope Stripper & Centering Bushing <ul style="list-style-type: none"> <li>▪ Customers Specify Diameter</li> </ul>
1	50:1 Ratio Pumps: (Grease) 8 lb./3.6 kg. (Oil) 6 gal./22.71 liters per min <ul style="list-style-type: none"> <li>▪ Includes One Pump Repair Kit</li> </ul>
1	400 lb./55 gal./108 kg. Sized Follower Plate
1	400 lb./55 gal./108 kg. Sized Drum Cover
1	Air Regulator/Filter/Oiler Assembly With Gauge (250 PSI Rated)
2	Stainless Steel Lubricant Flow Control Valve (7,000 PSI Rated) <ul style="list-style-type: none"> <li>▪ One Additional Valve In Reserve</li> </ul>
1	10 ft./3 m. (2,500 PSI Rated) Lubricant Supply Hose <ul style="list-style-type: none"> <li>▪ Custom Lengths Available Upon Request</li> </ul>
1	Duo-Lube Hose Assembly For Two Sided Lubricant Feed (2,500 PSI Rated) <ul style="list-style-type: none"> <li>▪ 4 Individual Lubricant Feed Nozzles (5,000 PSI Rated)</li> </ul>
1	Pail of Environmentally Safe Dynagard Blue Wire Rope Lubricant <ul style="list-style-type: none"> <li>▪ 92,000 PPM Bio-Aquatic LC50 Rating at 90 Days</li> </ul>
1	Heavy Duty Storage Case (Military & Law Enforcement Approved)



# Jumbo Model Internal Spray Wire Rope Application Systems





# Section FOUR

## Seal And Scraper Plate Kits

*"I am writing this letter to tell you how impressed we are with the longevity and durability of your seal and scraper plates. We used a 3/4" set on 60,000 ft. of 3/4" 6 x 19 class IWRC that made up the topping, purchase and vang wires of deck mounted cargo booms on the Naval Reserve Ship USS Comet. We fully expected to replace this 3/4" seal and scraper plate kit after this job. This has not been the case. These seals and scraper plates have given us years and approximately 100,000 ft. of extra service."*

*Ed Swenson,  
Marine Sale West Coast Wire Rope  
Portland, Oregon*

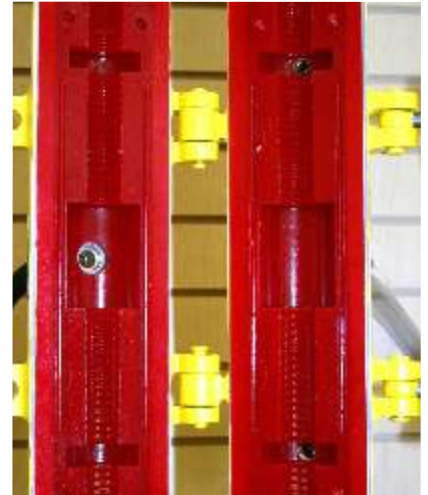


Seal & Scraper Plate Kits are comprised of two specially formulated proprietary polyurea seal halves along with a four piece metal scraper plate set. The seal halves are engineered to be neatly inserted into the correspondingly configured lubrication collar halves. They also incorporate a 1 to 2 millimeter compression factor for those wire ropes that may be marginally larger than their rated diameter.

The four scraper plate halves work to remove excess corrosion and debris from the outer circumference of the wire rope as it enters the lubrication collar and seals to allow for better penetration of the newly applied wire rope coating. In addition, the scraper plates smooth out newly applied lubricant as the wire rope travels from the lubrication collar.

### **Special Clarification:** Seal and Groove Cleaner Kits to Wire Rope Fit

There is no perfection in regard to rated wire rope diameters as opposed to their actual infield/under load diameter. In most instances they can be very close.



However, a diameter differential can become a fit factor when it comes to larger diameters such as 2" (51 mm) and above. As a matter of fact, there can be as much as a 1 to 4 mm. Variation depending upon the diameter.

Another influencing factor is the construction and the age of a particular wire rope. We have recently noted that some wire ropes manufacturers are now referring to a possible diameter variance in their rated specifications. This admission has been very supportive to our program because it helps our users understand that even though small variances are not a strong factor in ordering wire rope; it is a factor for us in providing the best fit possible for the components we supply with our systems.

For reference in 2015, Kirkpatrick Wire Rope Lubrication Systems has developed a new proprietary laser technology to manufacture our groove cleaners and seal kits to a fit that has not been available before and unmatched by our competition. Although this new production process is expensive, two individual groove cleaners will still be provided with each system.

# Seal And Scraper Plate Diameters Available

Standard · Jumbo · Internal Spray Configuration

**We now have tooling to provide Seals at 1 mm. increments through 4-¼ in. (108 mm).  
Call us for part numbers: Standard System 9110-S · Jumbo System 9111-J · JUL Internal Spray 9111-L**

Seal & Scraper Plate Kit Part Number	Diameter: Inch	Diameter Range: Millimeters
9110-S-18	1/8"	3 mm. - 4 mm.
9110-S-14	¼"	5 mm. - 6 mm.
9110-S-516	5/16"	7 mm. - 8 mm.
9110-S-38 9111-J-38 9111-L-38	3/8"	9 mm. - 10 mm.
9110-S-716 9111-J-716 9111-L-716	7/16"	11 mm. - 12 mm.
9110-S-12 9111-J-12 9111-L-12	1/2"	12 mm. - 13 mm.
9110-S-916 9111-J-916 9111-L-916	9/16"	13 mm. - 14 mm.
9110-S-1932 9111-J-1932 9111-L-1932	19/32"	15 mm. - 16 mm.
9110-S-58 9111-J-58 9111-L-58	5/8"	16 mm. - 17 mm.
9110-S-2132 9111-J-2132 9111-L-2132	21/32"	17 mm. - 18 mm.
9110-S-1116 9111-J-1116 9111-L-1116	11/16"	18 mm. - 19 mm.
9110-S-34 9111-J-34 9111-L-34	¾"	19 mm. - 20 mm.
9110-S-1316 9111-J-1316 9111-L-1316	13/16"	20 mm. - 21 mm.
9110-S-2732 9111-J-2732 9111-L-2732	27/32"	21 mm. - 22 mm.
9110-S-78 9111-J-78 9111-L-78	7/8"	22 mm. - 23 mm.



Toll Free: (800) 466-4414 Tel: (972) 509-2468 Fax: (972) 608-3860  
Sales@TheKirkpatrickGroup.com www.TheKirkpatrickGroup.com

# Seal And Scraper Plate Diameters Available

Standard · Jumbo · Internal Spray Configuration

**We now have tooling to provide Seals at 1 mm. increments through 4-¼ in. (108 mm).**  
**Call us for part numbers: Standard System 9110-S · Jumbo System 9111-J · JUL Internal Spray 9111-L**

Seal & Scraper Plate Kit Part Number	Diameter: Inch	Diameter Range: Millimeters
9110-S-1516 9111-J-1516 9111-L-1516	15/16"	23 mm. - 24 mm.
9110-S1 9111-J1 9111-L1	1"	25 mm. - 26 mm.
9110-S1-116 9111-J1-116 9111-L1-116	1-1/16"	26 mm. - 27 mm.
9110-S1-18 9111-J1-18 9111-L1-18	1-1/8"	28 mm. - 29 mm.
9110-S1-316 9111-J1-316 9111-L1-316	1-3/16"	30 mm. - 31 mm.
9110-S1-14 9111-J1-14 9111-L1-14	1-¼"	31 mm. - 32 mm.
9110-S1-516 9111-J1-516 9111-L1-516	1-5/16"	33 mm. - 34 mm.
9110-S1-38 9111-J1-38 9111-L1-38	1-3/8"	34 mm. - 35 mm.
9110-S1-12 9111-J1-12 9111-L1-12	1-½"	37 mm. - 38 mm.
9110-S1-916 9111-J1-916 9111-L1-916	1-9/16"	39 mm. - 40 mm.
9110-S1-58 9111-J1-58 9111-L1-58	1-5/8"	41 mm. - 42 mm.
9110-S1-2132 9111-J1-2132 9111-L1-2132	1-21/32"	42 mm. - 43 mm.
9110-S1-1116 9111-J1-1116 9111-L1-1116	1-11/16"	42 mm. - 43 mm.
9110-S1-34 9111-J1-34 9111-L1-34	1-¾"	44 mm. - 45 mm.
9110-S1-1316 9111-J1-1316 9111-L1-1316	1-13/16"	45 mm. - 46 mm.



Toll Free: (800) 466-4414 Tel: (972) 509-2468 Fax: (972) 608-3860  
 Sales@TheKirkpatrickGroup.com www.TheKirkpatrickGroup.com

# Seal And Scraper Plate Diameters Available

Standard · Jumbo · Internal Spray Configuration

**We now have tooling to provide Seals at 1 mm. increments through 4-¼ in. (108 mm).**  
**Call us for part numbers: Standard System 9110-S · Jumbo System 9111-J · JUL Internal Spray 9111-L**

Seal & Scraper Plate Kit Part Number	Diameter: Inch	Diameter Range: Millimeters
9110-S1-78 9111-J1-78 9111-L1-78	1-7/8"	48 mm. - 49 mm.
9111-J1-1516 9111-L1-1516	1-15/16"	49 mm. - 50 mm.
9111-J2 9111-L2	2"	50 mm. - 51 mm.
9111-J2-116 9111-L2-116	2-1/16"	52 mm. - 53 mm.
9111-J2-18 9111-L2-18	2-1/8"	54 mm. - 55 mm.
9111-J2-14 9111-L2-14	2-1/4"	57 mm. - 58 mm.
9111-J2-38	2-3/8"	60 mm.
9111-J2-716	2-7/16"	62 mm.
9111-J2-12	2-1/2"	64 mm.
9111-J2-916	2-9/16"	65 mm.
9111-J2-58	2-5/8"	66 mm.
9111-J2-1116	2-11/16"	68 mm.
9111-J2-34	2-3/4"	70 mm.
9111-J3	3"	76 mm.
9111-J3-18	3-1/8"	80 mm.
9111-J3-38	3-3/8"	85 mm.
9111-J3-12	3-1/2"	89 mm.
9111-J3-34	3-3/4"	95 mm.
9111-J3-78	3-7/8"	98 mm.
9111-J4	4"	101 mm.
9111-J4-14	4-1/4"	108 mm.





# Seal And Scraper Plate Kits: US/NATO National Stock Numbers

Seal & Scraper Plate Kit Part Number	Diameter: Inch	Diameter Range: Millimeters
NSN 5330-01-461-6205	5/16"	7 mm. - 8 mm.
NSN 5330-01-461-6202	3/8"	9 mm. - 10 mm.
NSN 5230-01-419-8319 NSN 5330-01-315-8370	1/2"	12 mm. - 13 mm.
NSN 5330-01-461-6201	9/16"	13 mm. - 14 mm.
NSN 5330-01-461-6200 NSN 5330-01-315-8371	5/8"	16 mm. - 17 mm.
NSN 5330-01-419-8320 NSN 5330-01-315-8372	3/4"	19 mm. - 20 mm.
NSN 5330-01-419-8321 NSN 5330-01-315-8372	7/8"	22 mm. - 23 mm.
NSN 5330-01-461-6199 NSN 5330-01-315-8374	1"	25 mm. - 26 mm.
NSN 5230-01-419-6198 NSN 5330-01-315-8375	1-1/8"	28 mm. - 29 mm.
NSN 5330-01-419-8323	1-1/4"	31 mm. - 32 mm.
NSN: 5330-01-461-6196	1-3/8"	34 mm. - 35 mm.
NSN 5330-01-419-8322 NSN 5330-01-315-8377	1-1/2"	37 mm. - 38 mm.
NSN 5330-01-315-8378	1-5/8"	41 mm. - 42 mm.
NSN 5330-01-315-8379	1-3/4"	44 mm. - 45 mm.
NSN 5330-01-315-8380	1-7/8"	46 mm. - 47 mm.



# Section FIVE

## Groove Cleaner Kits And Smooth Bore Groove Cleaners

Standard · Jumbo · Internal Spray Configuration

Groove Cleaner Kits are provided in three configurations:

- Right Lay Direction
- Left Lay Direction
- Smooth Bore

▪ Groove Cleaners clean not only the outer circumference, but the specific groove pattern of your wire ropes, removing contaminants that hinder the penetration of the new coating being applied inside the Seal Lubrication Chamber. For a proper fit and the best possible results, it is crucial that end users calibrate the specific diameter, number of outer strand and lay direction of their wire ropes.

▪ Some smaller diameter multi strand wire rope configurations and/or double armor cable configurations have such a limited groove pattern that it is difficult for groove cleaners to stay on track. Therefore, smooth bore cleaners, efficient at cleaning the outer circumference of the wire rope, are offered.

▪ Various numbers of outer strand right and left lay Groove Cleaners are available. Please enquire about our special tooling manufacture program which gives us the unique capability to match your exact wire rope configuration for a specialized fit and superior results.

*USS Hancock: "The Kirkpatrick Wire Rope Lubricator & Groove Cleaners, have eliminated the need for two people and 3 hours to complete this Preventative Maintenance Schedule (PMS). Now one maintenance man can clean and lubricate a cable in less than 30 minutes."*

- 10-Year Cost Savings: \$ 652,320
- Labor Reduction: 75%
- Break-even Point (Years) .10

U.S. Navy Pollution Prevention P2  
AFLOAT Program



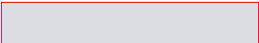
*Groove Cleaner manufactured using laser produced tooling for an excellent fit.*



# Groove Cleaner Kits

Right Lay · Left Lay

Groove Cleaners Part Number Right Lay	Groove Cleaner Part Number Left Lay	Number of Strands	Rated Diameter Millimeters	Rated Diameter Inches
11MM RL6		6	11 mm. - 12 mm.	7/16"
12MM RL6	12MM LL6	6	12 mm. - 13 mm.	1/2"
14MM RL6	14MM LL6	6	14 mm. - 15 mm.	9/16"
16MM RL6	16MM LL6	6	16 mm. - 17 mm.	5/8"
19MM RL6	19MM LL6	6	19 mm. - 20 mm.	3/4"
20MM RL6		6	20 mm. - 21 mm.	13/16"
22MM RL6	22MM LL6	6	22 mm. - 23 mm.	7/8"
22MM RL8		8	22 mm. - 23 mm.	7/8"
24MM RL6	24MM LL6	6	24 mm. - 25 mm.	15/16"
25MM RL6	25MM LL6	6	25 mm. - 26 mm.	1"
25MM RL8		8	25 mm. - 26 mm.	1"
26MM RL6	26MM LL6	6	26 mm. - 27 mm.	1"
26MM RL16		16	26 MM. - 27 MM.	1"
27MM RL6	27MM LL6	6	27 MM. - 28 MM.	1-1/16"
27MM RL16		16	27 mm. - 28 mm.	1-1/16"
28MM RL6	28MM LL6	6	28 mm. - 29 mm.	1-1/8"
28MM RL8		8	28 mm. - 29 mm.	1-1/8"
29MM RL6	29MM LL6	6	29 mm. - 30 mm.	1-1/8"
30MM RL6	30MM LL6	6	30 mm. - 31 mm.	1-3/16"
30MM RL18		18	30 mm. - 31 mm.	1-3/16"
32MM RL6	32MM LL6	6	32 mm. - 33 mm.	1-1/4"
32MM RL8	32MM LL8	8	32 mm. - 33 mm.	1-1/4"
32MM RL12	32MM LL12	12	32 mm. -33 mm.	1-1/4"
32MM RL16	32MM LL16	16	32 mm. - 33 mm.	1-1/4"

 Indicates This size is not currently available. Please contact sales for more information.



Toll Free: (800) 466-4414 Tel: (972) 509-2468 Fax: (972) 608-3860  
Sales@TheKirkpatrickGroup.com www.TheKirkpatrickGroup.com

# Groove Cleaner Kits

Right Lay · Left Lay

Groove Cleaners Part Number Right Lay	Groove Cleaner Part Number Left Lay	Number of Strands	Rated Diameter Millimeters	Rated Diameter Inches
33MM RL6	33MM LL6	6	33 mm. - 34 mm.	1-5/16"
	33MM LL8	8	33 mm. - 34 mm.	1-5/8"
33MM RL16		16	33 mm. - 34 mm.	1-5/16"
34MM RL4		4	34 mm. - 35 mm.	1-5/16"
34MM RL6	34MM LL6	6	34 mm. - 35 mm.	1-5/16"
35MM RL6	35MM LL6	6	35 mm. - 36 mm.	1-3/8"
36MM RL6	36MM LL6	6	36 mm. - 37 mm.	1-7/16"
37MM RL6	37MMLL6	6	37 mm. - 38 mm.	1-7/16"
37MM RL18		18	37 mm. - 38 mm.	1-7/16"
38MM RL6	38MM LL6	6	38 mm. - 39 mm.	1-1/2"
	38MM LL12	12	38 mm. - 39 mm.	1-1/2"
38MM RL16	38MM LL16	16	38 mm. - 39 mm.	1-1/2"
39MM RL6		6	39 mm. - 40 mm.	1-9/16"
40MM RL6	40MM LL6	6	40 mm. - 41 mm.	1-9/16"
41MM RL6	41MM LL6	6	41 mm. - 42 mm.	1-5/8"
42MM RL6	42MM LL6	6	42 mm. - 43 mm.	1-5/8"
	42MM LL8	8	42 mm. - 43 mm.	1-5/8"
43MM RL6	43MM LL6	6	43 mm. - 44 mm.	1-11/16"
44MM RL6	44MM LL6	6	44 mm. - 45 mm.	1-3/4"
44MM RL8	44MM LL8	8	44 mm. - 45 mm.	1-3/4"
44MM RL12		12	44 mm. - 45 mm.	1-3/4"
45MM RL6	45MM LL6	6	45 mm. - 46 mm.	1-3/4"
45MM RL12	45MM LL12	12	45 mm. - 46 mm.	1-3/4"
46MM RL6	46MM LL6	6	46 mm. - 47 mm.	1-13/16"

*Indicates This size is not currently available. Please contact sales for more information.*



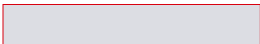
Toll Free: (800) 466-4414 Tel: (972) 509-2468 Fax: (972) 608-3860  
 Sales@TheKirkpatrickGroup.com www.TheKirkpatrickGroup.com



# Groove Cleaner Kits

Right Lay · Left Lay

Groove Cleaners Part Number Right Lay	Groove Cleaner Part Number Left Lay	Number of Strands	Rated Diameter Millimeters	Rated Diameter Inches
46MM RL8	46MM LL8	8	46 mm. - 47 mm.	1-13/16"
47MM RL8	47MM LL8	8	47 mm. - 48 mm.	1-7/8"
48MM RL6	48MM LL6	6	48 mm. - 49 mm.	1-7/8"
49MM RL8	49MM LL8	8	49 mm. - 50 mm.	1-15/16"
50MM RL6		6	50 mm. - 51 mm.	2"
54MM RL6	54MM LL6	6	54 mm. - 55 mm.	2-1/8"
58MM RL6	58MM LL6	6	58 mm. - 59 mm.	2-1/4"
	58MM LL8	8	58 mm. - 59 mm.	2-1/4"
59MM RL16	59MM LL16	16	59 mm. - 60 mm.	2-5/16"
60MM RL6		6	60 mm. - 61 mm.	2-3/8"
		6	62 mm.	2-7/16"
62MM RL18	62MM LL6	18	62 mm.	2-7/16"
	64MM LL6	6	64 mm.	2-1/2"
66MM RL6		6	66 mm.	2-5/8"
70MM RL6		6	70 mm.	2-3/4"
78MM RL6		6	78 mm.	3-1/16"
90MM RL6	90MM LL6	6	90 mm.	3-9/16"
92MM RL6		6	92 mm.	3-5/8"
94MM RL6		6	94 mm.	3-11/16"
95MM RL6		6	95 mm.	3-3/4"
98MM RL18		18	98 MM.	3-7/8"
100MM RL18		18	100 mm.	3-5/16"
108MM RL6		6	108 mm.	4-1/4"

 Indicates This size is not currently available. Please contact sales for more information.



Toll Free: (800) 466-4414 Tel: (972) 509-2468 Fax: (972) 608-3860  
 Sales@TheKirkpatrickGroup.com www.TheKirkpatrickGroup.com

# Smooth Bore Groove Cleaners

## Wire Rope Diameters

Smooth Bore Groove Cleaner Normal Width Body 3/8 in. (9.5 mm.) & Above Wire Rope Part Number	Center Hole Diameter: Inch	Center Hole Diameter: Millimeters
9MM SB	3/8 in.	9 mm. - 10 mm.
12MM SB	1/2 in.	12 mm. - 13 mm.
14MM SB	9/16 in.	14 mm. - 15 mm.
16MM SB	5/8 in.	16 mm.
19MM SB	3/4 in.	19 mm.
22MM SB	7/8 in.	22 mm. - 23 mm.
25MM SB	1 in.	25 mm.
28MM SB	1-1/8 in.	28 mm. - 29 mm.
32MM SB	1-1/4 in.	32 mm.
35MM SB	1-3/8 in.	35 mm.
38MM SB	1-1/2 in.	38 mm.
39MM SB	1-9/16 in.	39 mm. - 40 mm.
41MM SB	1-5/8 in.	41 mm.
44MM SB	1-3/4 in.	44 mm. - 45 mm.
48MM SB	1-7/8 in.	48 mm.
51MM SB	2 in.	51 mm.
54MM SB	2-1/8 in.	54 mm.
58MM SB	2-1/4 in.	58 mm.
64MM SB	2-1/2 in.	64 mm.
76MM SB	3 in.	76 mm.
84MM SB	3-1/4 in.	84 mm.
89MM SB	3-1/2 in.	89 mm.
95MM SB	3-3/4 in.	95 mm.
102MM SB	4 in.	102 mm.
108MM SB	4-1/4 in.	108 mm.



# Groove Cleaner Kits: US/NATO National Stock Numbers

Groove Cleaners Part Number Right Lay	Groove Cleaner Part Number Left Lay	Number of Strands	Rated Diameter Millimeters	Rated Diameter Inches
NSN 4930-01-462-1175	NSN 4930-01-462-1160	6	9 mm. - 10 mm.	3/8"
NSN 4930-01-462-1149	NSN 4930-01-462-1142	6	12 mm. - 13 mm.	1/2"
NSN 4930-01-462-1169	NSN 4930-01-462-1139	6	14 mm. - 15 mm.	9/16"
NSN 4930-01-462-1145	NSN 4930-01-462-1146	6	16 mm. - 17 mm.	5/8"
NSN 4930-01-462-1148	NSN 4930-01-462-1157	6	19 mm. - 20 mm.	3/4"
NSN 4930-01-462-1158	NSN 4930-01-462-1170	6	22 mm. - 23 mm.	7/8"
NSN 4930-01-462-1172	NSN 4930-01-462-1174	6	25 mm. - 26 mm.	1"
NSN 4930-01-462-1176	NSN 4930-01-462-1141	6	28 mm. - 29 mm.	1-1/8"
NSN 4930-01-462-1151	NSN 4930-01-462-1156	6	32 mm. - 33 mm.	1-1/4"



# Section SIX

## Optional Components Available

Manual Strippers · Centering Bushings · Pump Repair Kits · Pump Air Components · Pump Lubricant Flow Control Valve · Lubricant Discharge Valve · Follower Plates · Pail and Drum Covers

The Manual Stripper provides a rotational base for the Groove Cleaners. This device allows the user the ability to surface strip a majority of their wire rope for inspection purposes apart from the lubrication process. The manual stripper component can either be tied off to allow the wire rope to pass through it or it can be pulled along the wire rope in conjunction with the Groove Cleaner.



A Centering (alignment) Bushing with a center hole cut to the diameter of the wire rope is required to be inserted in the Manual Stripper to keep it centered and aligned. Each Manual Stripper is provided with one diameter Centering Bushing. Additional diameters are priced separately.



*We were rewarded by a system that not only lubricated the wire rope uniformly; it cleaned the surface and removed the moisture. An additional benefit was the tension it sets up on the wire rope while lubricating."*

*"If each district purchased a system for its individual sizes of wire rope, we could all have safer, easier, and most important, quality maintenance of wire rope."*

*Article In United States Coast Aids To Navigation Bulletin.*





# Optional Components Available

## Manual Strippers · Centering Bushings

The Manual Stripper provides a rotational base for the Groove Cleaners.  
Each Manual Stripper is provided with one diameter Centering Bushing.

Centering Bushings For: 9110MS 3/8 in. - 2 in. Wire Rope Part Number	Centering Bushings For: 9111MS 3/8 in. - 2 in. Wire Rope Part Number	Accommodates Wire Rope Diameter: Inch	Accommodates Wire Rope Diameter: Millimeters
MSB38S	MSB38J	3/8 in.	9 mm. - 10 mm.
MSB12S	MSB12J	1/2 in.	12.5 mm.
MSB916S	MSB916J	9/16 in.	13 mm. - 14 mm.
MSB58S	MSB58J	5/8 in.	16 mm.
MSB34S	MSB34J	3/4 in.	19 mm.
MSB78S	MSB78J	7/8 in.	22 mm. - 23 mm.
MSB1S	MSB1J	1 in.	25 mm.
MSB118S	MSB118J	1-1/8 in.	28 mm. - 29 mm.
MSB114S	MSB114J	1-1/4 in.	32 mm.
MSB1516S	MSB1516J	1-5/16 in.	33 mm. - 34 mm.
MSB138S	MSB138J	1-3/8 in.	35 mm. - 36 mm.
MSB112S	MSB112J	1-1/2 in.	37 mm. - 38 mm.
MSB191S	MSB191J	1-9/16 in.	39 mm. - 40 mm.
MSB158S	MSB158J	1-5/8 in.	41 mm.
MSB134S	MSB134J	1-3/4 in.	44 mm. - 45 mm.
MSB178S	MSB178J	1-7/8 in.	48 mm.
MSB2S	MSB2J	2 in.	51 mm.
	MSB218J	2-1/8 in.	54 mm.
	MSB214J	2-1/4 in.	57 mm. - 58 mm.
	MSB238J	2-3/8 in.	60 mm.
	MSB212J	2-1/2 in.	64 mm.
	MSB3J	3 in.	76 mm.

*Indicates This size is not currently available. Please contact sales for more information.*



# Optional Components Available

Pump Repair Kits · Pump Air Components · Valves · Follower Plates · Pail/Drum Covers

## Pump Repair Kits

Standard Systems & JUL Systems Repair Kits: Part Number 9110-PR-Kit

- Model SU35B
- Model SU120
- Model SU400

Jumbo System Repair Kits: Part Number 9111-PR-Kit

- Model SU400C

## Pump Air Components

- Standard & JUL Systems Air Components: Part No. 9110-FRL
- Jumbo System Air Components: Part No. 9111-FRL

## Pump Lubricant Flow Control Valve (7,000 PSI Rated). Used For All Pumps: FC7000TKG-A

Stainless steel (7000 PSI Rated) brass push-to-pull Q/C (quick connect) nipples. Customer must specify whether flow valve is for the Internal Spray System, Standard Model or Jumbo Model Systems

## Lubricant Discharge Valve: Part No. FC250-12

## Lubrication Supply/Discharge Hose

- 10' x 1/2" Diameter (2,500 PSI Rated)
- 1/2" Duo-Lube Split "T" Two-Sided Feed (Jumbo Systems Only)
- 10" x 1/4" Diameter (1,000 PSI Rated (Internal Spray System Only)
- 1/4" Duo-Lube Split "T" Two Sided Feed (Internal Spray Systems Only)
- 7' x 3/4" ID Clear Discharge Hose (Standard & Jumbo Systems)

## Follower Plates

- |         |                      |
|---------|----------------------|
| ▪ SU35B | Part No. 9110-35-FP  |
| ▪ SU120 | Part No. 9110-120-FP |
| ▪ SU400 | Part No. 9110-400-FP |
| ▪ JU120 | Part No. 9111-120-FP |
| ▪ JU400 | Part No. 9111-400-FP |

## Pail/Drum Covers

- |                 |                      |
|-----------------|----------------------|
| ▪ SU35B / JU5L  | Part No. 9110-35-DC  |
| ▪ SU120 / JU16L | Part No. 9110-120-DC |
| ▪ SU400/ JU55L  | Part No. 9110-400-DC |
| ▪ JU120         | Part No. 9111-120-DC |
| ▪ JU400         | Part No. 9111-400-DC |



# Section SEVEN

## Dynagard Wire Rope Lubricants And Solvents



***“This is a letter of thanks!”***

- What is Bio-Aquatic LC50 Testing?
- Specimens Used For Dynagard Testing
- Dynagard Environmental Wire Rope Lubricants Approved For Use
- Dynagard Blue Environmental Wire Rope Lubricant Description & Specifications
- Dynagard “E” Environmental Description & Specifications
- Vessel General Permit (VGP) Qualified Product Listing (QPL)
- Dynagard LVL Wire Rope Dressing
- Dynagard Plus Citric Solvent

*“I have been inspecting wire rope used for a variety of industrial applications now for over 18 years. The bulk of my work, and the most critical, is electromagnetic testing of personnel and haulage ropes in the mining industry. A majority of these ropes are in operation 24 hours per day. As such, they are exposed to extreme environmental and chemical wear that greatly detract from their over all service life. Lives and profitability depend on the reliability of these hoist ropes.*

*Several years ago, one of my clients, Morton Salt in Weeks Island Louisiana began using your wire rope lubrication system and Dynagard wire rope lubricants. I inspect Morton’s hoist ropes approximately every 6 months according to Federal guidelines. Prior to Morton’s use of your products, they were replacing their ropes about every 9-12 months. This is not good wire rope life for any application. These ropes were being retired because of excessive corrosion within the internal strands. Salt as well as potash mines have extremely corrosive environments and as a result their rope life is measurably shorter than other types of mining operations. It was discovered that the Dynagard Blue wire rope lubricant had significantly restricted internal corrosion over the competitive product previously used for the Morton ropes. In fact, in my opinion it had eliminated the corrosion according to my nondestructive testing of the ropes during the first 12 months it had been tracked. Given these initial test results, I anticipate that the rope life on Morton’s hoist ropes will go from a 9-month life to several years.*

*I have recommended your wire rope lubrication system to all of my clients. Most are now using your system, and I can categorically say that all but one of those customers have experienced a better life span incorporating your system into their maintenance programs...*

*I shall continue to recommend your products to any clients that I encounter. My job has been made much easier if the mine ropes are properly lubricated and maintained. Once again, thanks. Keep up the fine work. You have my permission to use this letter as a testimonial of a fine product and caring company who takes pride in customer support.”*

*Sincerely,*

*Bill Braniff, President & Senior Technician  
Braniff Inspection Systems*

# Environmental Review Of Wire Rope Lubricants

## Dynagard Blue & Dynagard “E”

*How Definitive Are The Environmental Specifications Of The Coating Product You Are Considering For Exposure To A Specific Marine Environment?*

**In layman’s terms here is a brief synopsis of what Bio– Aquatic LC50 testing is all about.**

This testing is performed with coating products that will be exposed in a marine environment where toxicity is a major concern to living aquatic organisms.

Correctly interpreted, it stands for the given amount of time (usually 24 hours or 48 hours) that test organisms are exposed in an aquatic environment to a contaminate such as a wire rope coating product. As the LC50 test progresses, it is verified by how many parts per million (PPM) it takes to kill 50% of the marine test organisms.

This testing provides a true picture of the environmental safety of a product as gauged by the number of parts per million (PPM) that it takes to reach the 50% kill level. The higher the PPM rating within the test time frame, the *safer* the product is to the marine life. The lower the PPM rating, the less environmentally friendly or safe the product is to marine life.

A 24 hour test period is naturally less definitive than the 48 hour test period. This distinction is worthy of consideration when evaluating Bio-Aquatic data on wire rope coating for your company or government branch.

### **Test Case Example**

A test was recently performed using one product claiming to be environmentally “friendly” and our

own Dynagard Blue. The LC50 findings for the competitive product were at 1334 PPM to kill off 50% of the test specimens in 24 hours.

*The same testing showed Dynagard Blue LC50 test results to be over 25,000 PPM in 48 hours with no specimen deaths.* These findings show the competitive product to be 18 times less safe to a marine environment in 24 hours than the Dynagard Blue was in 48 hours. We also received LC50 test results of our Dynagard “E” confirmed at 21,500 PPM for a 48 hours period .

The Tennessee Valley Authority duplicated these results for fresh water specimens independent of our company. The results: Dynagard Blue is now the approved lubricant for all fresh water systems and dams managed by the Tennessee River Authority.

We were so encouraged by these results that in 2014 we went back into the lab and had Dynagard Blue tested again this time for an extended period of 90 hours. With the test results coming in at 56,000 PPM. Remember, the higher the PPM (part per million), the safer the product for marine environment.

*These results placed both Dynagard Blue and Dynagard “E” in a category of Bio-Aquatic safety that is unparalleled by any competitive product in the marketplace.*



# Environmental Review Of Wire Rope Lubricants Dynagard Blue & Dynagard “E”

## *Definition Of The Specimens Used For The Dynagard Environmental Testing*

### **Salt Water: Americamysis bahia**

Is a microscopic shrimp like crustacean of the order Mysida, the opossum shrimps. It is native to estuarine waters in Texas and Florida in the United States. It is often referred to in the literature as Mysidopsis bahia, and is widely cultured and used in the laboratory for toxicology testing for its size and high sensitivity to pollutants in a marine environment. The use of this specimen has set the standard for salt water marine testing worldwide.

### **Fresh Water: Ceriodaphnia dubia**

A tiny aquatic invertebrate is used as an indicator organism to measure toxicity in aquatic fresh water environments. C. dubia is considered to be a representative of important creek organisms at the bottom of the food web. Toxicity to this species is believed to indicate poor water quality. Diazinon and chlorpyrifos have been identified as impairing water quality because they are occurring at levels toxic to Ceriodaphnia dubia. These pesticides can cause toxicity to Ceriodaphnia even at very low levels.

### **Ecology:**

The fathead minnow, Pimephales promelas, is a freshwater fish widely distributed in the United States usually found in brooks, ponds and small lakes. The species is tolerant of high turbidity, high temperatures and low oxygen concentrations.

### **Use In Aquatic Technology:**

Pimephales promelas is the EPA recommended vertebrate species for freshwater chronic toxicity tests. In these tests, larva are exposed for a predetermined period of time to different concentrations of effluent or to receiving water. Test results are based on the survival and weight of the larva.

# Environmental Review Of Wire Rope Lubricants

## Dynagard Blue & Dynagard “E”

*USS Wasp (LHD-1) Wins SECNAV Environmental Award For Addition Of New Environmentally Safe Equipment*

*Kirkpatrick Model SU35B Wire Rope Lubricator USS Wasp (LHD-1): 400' of 1 1/8" load line lubricated. 75% of 35 pound pail of QPL Approved Dynagard Blue wire rope lubricant used. 21 pounds of previously applied MIL-G-18458B lubricant removed.*

*Time from set up to completion of clean-up; 2 hours. Previous time frame to accomplish same project using manual methods: 1 full day, three men. One rag used for clean-up. (U.S.S. Wasp (LHD-1), Training session incorporating hangar deck crane. (1997))*

*“The USS Wasp has always been proactive in its approach to environmental protection and was working toward a goal of zero discharge even prior to receiving the equipment.”*

### **It's the test specimens used that makes all the difference:**

Many coating products test specifications use a hardy fish species such as trout to establish their Bio-Aquatic safety claims. Unfortunately, many times this creates data that is unclear or creates weakly defined test methods that tend to confuse the end user. In 1991 The Kirkpatrick Group used one of the most sensitive bio-aquatic marine organisms available to prove the strong Bio-Aquatic performance levels of our Environmental Dynagard formulations.

The organisms used for our testing purposes were the microscopic salt water estuary shrimp species, *Mysidopsis bahia*. We chose these organisms over the much harder fish or trout species to provide irrefutable evidence of the superior standards by which we test our Dynagard.

Environmental Wire Rope Lubricants. The United States Navy has adopted our test specifications and now uses *Mysidopsis bahia* estuary shrimp species for their Type II Environmental Qualified Products List as well.

### **Dynagard Environmental Wire Rope Lubricants Have Now Been Independently Approved For Use By The Following:**

- Bureau of Land Management: Colorado River- Hoover Dam
- U.S. Army Corps of Engineers Columbia River System Oregon
- Tennessee Valley Authority for all of their fresh water systems. This organization chose to do their own independent testing and still confirmed the bio-aquatic safety standards of the Dynagard product
- United States Coast Guard
- The Canadian Hydro Group for all fresh water systems in Canada, BC. Hydro performed an independent test of our Dynagard “E” product and found it to be 97% biodegradable.
- United States Navy for both the Type I and Type II Qualified Products List.
- Naval Sea Systems Command in conjunction with the NEC confirmed Dynagard Blue Type I and Dynagard “E” Type II meets these organizations bio-aquatic standards.
- All aforementioned confirmations were performed independent of The Kirkpatrick Group.

# 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 resistant and it's compatibility to all Kirkpatrick Wire Rope Lubrication Systems in addition to manual hand applications. Its viscosity and slickness allow it to stay alive throughout 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. 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 50,000 PPM, making it possibly the best LC50 value of any wire rope lubricant marketed in the world today. *Copy of the test data is available upon request.*

## U.S. Government & NATO National Stock Number: 9150-01-520-8116

MIL-PRF-18458C Type I & Type II <ul style="list-style-type: none"><li>Meets or Surpasses Requirements</li><li>U.S. Navy Qualified Products List (QPL)</li></ul> LC50 Bio-Aquatic Rating, EPA/600/4-90/027 <ul style="list-style-type: none"><li>Test Duration: 48 hours, Acute</li><li>Test Specimen: Salt Water Species (<i>Mysidopsis bahia</i>)</li></ul> Biodegradation Test @ 90 DaysLC50 Bio-Aquatic Rating, EPA/821/R-02/012 <ul style="list-style-type: none"><li>Test Duration: 48 hours, Contracted By Tennessee Valley Authority</li><li>Test Specimen: Fresh Water Species (<i>Ceriodaphnia dubia</i> &amp; <i>Pimephales promelas</i>)</li></ul> ViscosityColorTextureMineral Oil %Oil Separation % (Fed 791-321.1)Penetration: mm (ASTM D217)Viscosity, cST @ 40°CViscosity, cST @ 100°CDropping Point, C (F)Low Temperature Flexibility (Sec. 4.4.4, No cracks @ 6°C)Rust Test (ASTM D1743)Salt Fog Corrosion Resistance (ASTM B117)Salt Spray, Fed. Standard 791, TM 4001 (10 Days)Accelerated Weathering (ASTM G152, 153)Load Wear Index (ASTM D2596)Adhesive % (Sec. 4.6.6. 150 rpm @ 151 +/- 2°F)Volatile Matter (2.0% Max.)4-Weld, kg.4-Ball Wear Diameter, mm., Max.	Pass  05Q / 2006-268 Over 25,000 PPM - 2007 Retested @ 56,000 PPM - 2014  92,456 PPM Over 25,000 PPM - 2008  NLGI Grade 2 Blue Smooth/Creamy 50% Nominal 1.94% 305 320 21-23 177°C (350°F) Pass Pass 1,000 hr./Pass Pass Pass 34.43 99.7 1.02 250 0.65
---	---



# Dynagard Blue Environmental Wire Rope Lubricant

## Overview

A sample of Dynagard Blue Environmental Wire Rope Lubricant was used for a product testing study to determine the toxicity of a part per million dosage of product to the *Americamysis bahia* (marine invertebrate) over a 90 day period. Tests were run approximately at day 1, day 7, day 15, day 30, day 60 and day 90.

This test was designed to verify the maximum length of time that the Dynagard Blue would maintain its optimal LC50 levels over 90 days. Previous testing showed the product to have over 25,000 PPM at 48 hours. An LC50 test was then performed for 90 hours, the results were 56,000 PPM. Then a third biodegradation test was performed at 90 days and the LC50 results were over 90,000 PPM.

Day	Date	LC50	Upper CL	Lower CL	Upper Difference	Lower Difference
1	9/11/2014	62,942.45	67,130.11	59,016.02	4,187.66	3,926.43
7	9/18/14	61,520.57	65,537.96	57,749.44	4,017.39	3,771.13
14	9/25/14	51,375.05	56,741.46	46,516.18	5,366.41	4,858.87
22	10/3/14	55,624.68	60,743.86	50,936.92	5,119.18	4,687.76
69	11/19/14	76,285.13	83,832.81	69,416.99	7,547.68	6,868.14
91	12/11/14	92,456.21	99,678.70	85,757.05	7,222.49	6,699.16

## Definition Of The Specimens Used For The Dynagard Environment Testing

**Salt Water: *Americamysis bahia*** Is a microscopic shrimp like crustacean of the order Mysida, the opossum shrimps. It is native to estuarine waters in Texas and Florida in the United States. It is often referred to in the literature as *Mysidopsis bahia*, and is widely cultured and used in the laboratory for toxicology testing for its size and high sensitivity to pollutants in a marine environment. The use of this specimen has set the standard for salt water marine testing worldwide.

**Fresh Water: *Ceriodaphnia dubia*** A tiny aquatic invertebrate is used as an indicator organism to measure toxicity in aquatic fresh water environments. *C. dubia* is considered to be a representative of important creek organisms at the bottom of the food web. Toxicity to this species is believed to indicate poor water quality. Diazinon and chlorpyrifos have been identified as impairing water quality because they are occurring at levels toxic to *Ceriodaphnia dubia*. These pesticides can cause toxicity to *Ceriodaphnia* even at very low levels.

**Ecology:** The fathead minnow, *Pimephales promelas*, is a freshwater fish widely distributed in the United States usually found in brooks, ponds and small lakes. The species is tolerant of high turbidity, high temperatures and low oxygen concentrations.

**Use In Aquatic Technology:** *Pimephales promelas* is the EPA recommended vertebrate species for freshwater chronic toxicity tests. In these tests, larva are exposed for a predetermined period of time to different concentrations of effluent or to receiving water. Test results are based on the survival and weight of the larva.

*(Please review page 40 of this catalog for a complete explanation of Bio-Aquatic LC50 testing.)*





# Dynagard Blue CSS13 Environmental Wire Rope Lubricant

Dynagard Blue CSS13 is formulated with a high viscosity base oil and engineered with a unique combination of additives to create the highest level of adhesion performance against fling off at high speed wire rope travel. It is also designed to resist water wash off in severe working marine environments. This heavy duty coating product was developed for all maintenance applications where there is a high degree of friction wear due to severe work loads. Dynagard Blue CSS13 optimal levels of fluid film protection against friction wear inside the wire rope is possible because of its specialized formulation. The same superior fluid film performance and adhesion also generates the perfect protection against corrosion in both salt and fresh water environments. Due to its excellent water repellency, CSS13 is resistant to water wash off. It also has a wide operation temperature range, preventing both softening and extreme hardening within the most severe working environments. Dynagard Blue CSS13 has one of the safest Marine Bio-Aquatic LC50 ratings at over 19,000 PPM (Mysidopsis Bahia @ 48 hours).

NLGI Grade (ASTM D217)	Grade 2
Thickner Type	Calcium Sulfonate
Color	Blue
Marine Bio-Aquatic LC-50 Rating	19,922 PPM
▪ Mysidopsis bahia (48 hours)	
Base Oil Viscosity (ASTM D445)	
SUS @ 100°F	2468
SUS @ 210°F	148.2
cST @ 40°C	460
CST @ 100°C	30.2
VI	>94
Drop Point, Degrees F (ASTM DD2265)	+550
Worked Penetration @ 25°C (ASTM D217)	265-295
Changed after 100,000 strokes (ASTM D217)	<+20
Oil Separation, 25°C, 24 hours, % (ASTM D1742)	<1.0
Four Ball Weld Load, kg. (ASTM D2783)	500
Timken OK Load, lbs. (ASTM D2509)	65
Wear Scar Diameter, mm (ASTM D2266)	0.45
Water Washout, weight % loss @ 175°F (ASTM D1264)	1.3
Water Spray Test, hours (ASTM B117)	1,000 hours
Rust Test Rating (ASTM D1743)	Pass



# Dynagard "E" Environmental Wire Rope Lubricant

Dynagard "E" is a revolutionary non-toxic, 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 applications; Dynagard "E" also meets the operational requirements for all Kirkpatrick Wire Rope Lubrication Systems while providing optimal coating and penetration. Dynagard E not only prolongs the working life of wire rope, it also meets very real environmental concerns. Dynagard "E" is the first seed oil based high viscosity grease introduced into 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) for the United States Naval Sea Systems Command. It also meets the VGP requirements as non bio accumulative, non-toxic and biodegradable. *Documentation is available upon request, see results below.*

## U.S., NATO and Canadian National Stock Number: 9150-01-520-8143

### MIL-PRF-18458C Type II Environmental Designation

- DLA Qualified Products Database

### LC50 Acute Toxicity Bio-Aquatic Rating, EPA/600/4-90/027

- Test Duration: 48 hours
- Test Specimen: Microscopic Estuary Shrimp Species (*Mysidopsis bahia*)

### LC50 48 hours

- Test Specimen: *Acartia tonsa*

### EC50 Toxicity Rating

- Test Duration: 72 hours
- Test Specimen: Marine Alga (*Phaeodactylum tricornutum*)

### LC50 Toxicity Rating

- Test Duration: 96 hours LOEC
- Test Specimen: Turbot (*Scophthalmus maximus*)

Biodegradability Rating (CEC L-33-A-93)

Biodegradability Rating (Insoluble Substances BODIS)

- >20% (Over 60% @ 56 Days) OCED 301B

CEPHAS (OCNS Group Rating)

Viscosity

Color

Texture

Flash Point, (ASTM D92) (C/F)

Dropping Point, (ASTM D566)

Oil Separation % (Fed. Std. 791, TM 321)

Worked Penetration: mm, (ASTM D217)

Salt Spray, Fed. Std. 791, TM 4001

Accelerated Weathering (Fed 791-4001, ASTM G152, 153)

Rust Test (ASTM D1743)

Salt Fog Corrosion Resistance (ASTM B117)

Salt Spray, Fed. Std. 791, TM 4001 (10 Days)

Accelerated Weathering G23, (10 Days)

Low Temperature Flexibility (Sec. 4.4.4, No cracks @ 6°C)

Load Wear Index (ASTM D2596)

Adhesive % (Sec. 4.6.6. 150 rpm @ 151 +/- 2°F.)

Volatile Matter

Approved 2006, Renewed 2011

Over 19,500 PPM

15.9mg/l- Pass (Chemex)

Pass (Chemex)

>1,000mg/l (Chemex)

97%

37% (Complete Paste. 28 Days)

Pass

NLGI Grade 2

Semi-Clear Brown

Smooth/Creamy

316°C/601°F

Over 400°F

1.37

301 Typical

Pass

Pass

Pass

1,000 hr./Pass

Pass

2 Dots/Pass

Pass (No Cracking)

35.58

99.7%

.02% Max.



# Dynagard “E” Environmental Wire Rope Lubricant

**U.S., NATO and Canadian National Stock Number: 9150-01-520-8143**

The US Environmental Protection Agency's (EPA's) final Vessel General Permit (VGP) came into effect on December 19, 2013. It is presumed the pertinent portion of the regulation, as it pertains to wire rope lubricants, may fall under the more stringent effluent limits set for oil-to-sea interfaces and exhaust gas scrubber wash water discharges.

**DYNAGARD E** is on the QPL (qualified product listing) for MIL PRF 18458 (SH): Grease, Wire Rope and Exposed Gear. **Dynagard E** set the standard for environmental acceptability in this document. Valid 3rd party eco-toxicity data has been made publicly available since 2005 when it was first tested after being introduced as the first biodegradable seed oil wire rope dressing. These aforementioned test protocols, however, are not those specifically addressed in HOCNF regulatory requirements neither with CEFAS, SFT, etc., nor with the Nordic Swan requirements. Therefore, the series of tests that are required, have been addressed with the submitted samples to CHEMEX INTERNATIONAL in the UK. These tests have now been completed and the Dynagard “E” passed and is now registered under CEPHAS.

To the best of our knowledge, no other product has been officially 3rd party tested under the HOCNF protocols in regard to the VGP requirements. The Kirkpatrick Group, Inc. submitted Dynagard E in 2013. Many make the claim that their products comply with general industry information based upon the constituent components vs. the completed product. Our test procedures incorporated the complete Dynagard E paste with all of its components giving it a 37% rating well above the 20% minimum. **Using only the base Dynagard “E” oil, or extending the OECD 306, 28 day test to 56 days the product readily meets the >60% requirement.**

## Declaration VGP

Due to the independent laboratories evaluation of the Dynagard E product, including CHEMEX in Great Britain, Dynagard E is now registered with CEPHAS. Therefore, The Kirkpatrick Group, Inc. has determined that the Dynagard E product meets the VGP definition of an Environmentally Acceptable Wire Rope Lubricant, is not Bio-Accumulative and is Biodegradable (OECD 301B)



R. T. Kirkpatrick  
President  
The Kirkpatrick Group, Inc.  
Dated: June 2, 2014



# Dynagard Environmental Wire Rope Lubricants

## Dynagard Blue Environmental Wire Rope Lubricant

35 lb./15.87 kg. Pails  
120 lb./54.43 kg. Mid-Sized Drum  
400 lb./181 Kg. Full-Sized Drum



## Dynagard Blue CSS13 Environmental Wire Rope Lubricant

45 lb./20.25 kg. Pails  
140 lb./63.5 kg. Mid-Sized Drum  
450 lb./204 kg Full-Sized Drum



## Dynagard "E" Environmental Wire Rope Lubricant

35 lb./15.87 kg. Pails  
120 lb./54.43 kg. Mid-Sized Drum  
400 lb./181 kg. Full-Sized Drum



## Dynagard LVL (Low Viscosity)

5 gal./18.93 liter Pail  
15 gal./56.78 liter Mid-Sized Drum  
55 gal./208.19 liter Full-Sized Drum

## Dynagard Plus- Environmental Citric Cleaning Solvent

5 gal./18.93 liter Pail





# Dynagard LVL Wire Rope Lubricant

Dynagard LVL is a highly tenacious wire rope dressing formulated for use in both Marine and Mining. This product is especially effective in applications where a rapidly penetrating product is required along with the low fling off adhesive attributes of a much higher viscosity coating. This is particularly important for high speed wire rope travel 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 Configuration Models. 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 lubrication is formed. This fluid 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. 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.

Thickener	Organo Clay Resins
Fluid Type	Petroleum Oil & Resins
Color/Appearance	Black Semi-Fluid
Dropping Point of Dried Film (ASTM D-566)	350°F (177°C)
Specific Gravity	1.10
Density (lbs./Gal.)	9.15
Oil Separation: Wt. % Loss @ 212°F (100°C)	>3.0
Flash Point (ASTM D92)	>430°F (221°C)
Viscosity, Brookfield	
▪ (ASTM D2196)	64,000 - 12,000 cps
▪ #7 Spindle, 10 rpm @ 77°F (25°C)	
Additive Type	Organic:
	EP/AW/R&O/Graphite/MoS
Copper Strip Corrosion (ASTM D4048)	1A
Shell 4-Ball (ASTM D2596)	
▪ Weld Point, kgf	620
▪ Load Wear Index	>85
Service Rating	-25°F (-32°C) to 350°F (17°C)



# Dynagard Environmental Wire Rope Lubricants

## Dynagard Blue Environmental Wire Rope Lubricant

35 lb./15.87 kg. Pails  
120 lb./54.43 kg. Mid-Sized Drum  
400 lb./181 Kg. Full-Sized Drum



## Dynagard Blue CSS13 Environmental Wire Rope Lubricant

45 lb./20.25 kg. Pails  
140 lb./63.5 kg. Mid-Sized Drum  
450 lb./204 kg Full-Sized Drum



## Dynagard "E" Environmental Wire Rope Lubricant

35 lb./15.87 kg. Pails  
120 lb./54.43 kg. Mid-Sized Drum  
400 lb./181 kg. Full-Sized Drum



## Dynagard LVL (Low Viscosity)

5 gal./18.93 liter Pail  
15 gal./56.78 liter Mid-Sized Drum  
55 gal./208.19 liter Full-Sized Drum

## Dynagard Plus- Environmental Citric Cleaning Solvent

5 gal./18.93 liter Pail



# Section EIGHT

## Information Required For An Accurate Quote

**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, thank you.**

1. What are your wire rope diameters and lengths?
2. What is the number of outer strands for each diameter and lay direction? Also, please note whether they are lang lay or regular lay if you have that information available.
  - Example: ¾ in. (19 mm.), 6-strand right regular lay.
3. What is the maximum and minimum wire rope travel speed for each rope?
4. Describe the kind of work application each rope is being used for.
  - Example: crane boom hoist, crane load line, mine vertical hoist or mooring line
5. How heavily coated is each wire rope? How much build up do you have from previously applied coatings or environmental contaminants? Knowing this information helps us determine whether or not Groove Cleaners will be beneficial, as new wire ropes do not initially require the use of Groove Cleaners.
6. What condition is your wire rope in?
  - Example: burrs, broken strands, rough with surface rust, smooth with no broken strands.
7. How has your wire rope maintenance been performed up to this point?
  - Example: by hand, spray or vat, etc.
8. How often have you performed wire rope maintenance?
9. How far will your work location be from your air source?
10. What length and what diameter is your air line?
11. What is the viscosity of the wire rope coating you have been applying? What is the trade name?
  - Example: Liquid, molasses consistency, gel or peanut butter consistency, or soft grease
12. What is the temperature range in your working environment during your wire rope maintenance procedure?

---

### Air Supply Is 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 Systems.

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 used during the wire rope maintenance process.



# Section NINE

## Ordering Procedures

### **Please Review Our Catalog For Exact Part Numbers, Component Descriptions and Graphics**

*Complete systems are provided with all components required to begin immediate operation with the exception of the air source and the lubricant used.*

- All systems are provided with one diameter *Seal and Scraper Plate kit* and one diameter and lay *Groove Cleaner Kit*.
- The customer must specify wire rope diameter and the lay direction they require with each complete system order. Additional diameter and lay direction wire ropes require matching *Seal and Groove Cleaner Kits*. These are optional and are in addition to the complete system price.
- Wire ropes should be measured with a micrometer for accuracy prior to ordering *Seal and/or Groove Cleaner Kits*. Some new wire ropes can be nominally larger than their rated diameters. Conversely, older wire ropes can be nominally smaller in diameter than their rated size. This can be especially true for hemp/sisal core ropes after they have been in service.
- It is a good idea to document the lay pattern and number of outer strands of your wire rope prior to ordering *Groove Cleaner Kits*.
- Lay Pattern defined: right or left regular lay, right or left lang lay, right or left long lay.
- Number of outer strands defined: 6-strand, 7-strand, 8-strand, 12-strand or non-rotational multi strand.
- Shelf Life: Dynagard Blue Environmental Wire Rope Lubricant as approved under MIL-PRF-18458C (Ser05Q/2006-268) (NSN: 9150-01-520-8116) Type I and Dynagard "E" as approved under MIL-PRF 18458C Type II (Ser 05Q/2006-268) (NSN: 9150-01-520-8143) have a minimum shelf life of 5 years.

---

### **Applicable Warranty**

#### **Base Pump:**

2 Years: 100% against flaws in materials and workmanship

#### **Lubrication Collars:**

5 years: 100% against flaws in materials and workmanship.

#### **For Third Party Components:**

Product components not produced by The Kirkpatrick Group, Inc., the manufacturers warranty applies.

#### **Freight Policy:**

Customer is responsible for the return of any parts for warranty review prepaid to The Kirkpatrick Group, Inc. No components should be shipped to The Kirkpatrick Group, Inc. prior to contacting our offices for review.

#### **Note:**

Warranty does not apply to high wear items such as *Seals* and *Groove Cleaners*.



# Section TEN

## Kirkpatrick Systems In Field Applications







*"Since 1982"*

**Manufactured By:**

**The Kirkpatrick Group, Inc.**

Palisades Central II  
2435 North Central Expressway  
Suite 1150  
Richardson, Texas 75080

Toll Free: (800) 466-4414

Tel: (972) 509-2468

Fax: (972) 608-3860

**Website**

[www.TheKirkpatrickGroup.com](http://www.TheKirkpatrickGroup.com)

**Email**

[Sales@TheKirkpatrickGroup.com](mailto:Sales@TheKirkpatrickGroup.com)

**Sales**

Jerry Swords

Director of Sales Domestic and International

[jswords@thekirkpatrickgroup.com](mailto:jswords@thekirkpatrickgroup.com)

Karl Kuckenbacker

[karlk@thekirkpatrickgroup.com](mailto:karlk@thekirkpatrickgroup.com)