

Wire Rope Lubricator - Frequently Asked Questions

Does use of the GREASE SAFE® Wire Rope Lubricator increase wire rope life comparative to traditional lubricating methods?

Yes, there is a significant increase in Rope life due to the penetration of the lubricant to the core of the rope. Typically wire rope users are manually applying lubricant to the outer strands or using a low pressure applicator that only fills the wire rope valleys. The GREASE SAFE Wire Rope Lubricator will apply lubricant to the core of the wire rope sealing out moisture and protecting the strands against fretting, corrosion and fatigue failure. In marine applications such as ROV umbilical wires, ship deck winches, oil rig applications and wharf cranes the ropes typically corrode from the inside out.

Also in many highly loaded applications such as large cranes and mine winders the ropes suffer fatigue failure due to the wire rope having friction from the strands rubbing against each other as the rope travels over sheaves and onto the drum. When using a Wire Rope Lubricator the rope is protected against corrosion and internal friction is reduced and therefore the Wire Rope life is improved. Major wire rope manufacturers such as Bridon suggest that lubrication with a pressure lubricator may increase wire rope life by up to 300% compared to unlubricated wire ropes.

How time consuming is the GREASE SAFE Wire Rope Lubricator to use?

In comparison to manual lubrication the GREASE SAFE Wire Rope Lubricator delivers a significant reduction in labor and downtime, once the GREASE SAFE Wire Rope Lubricator is set up and the wire rope speed versus pump speed is adjusted then the operation is virtually automatic. Lubrication can occur at speeds of up to 3,333 feet per hour (1,000 meters per hour).

Why does the GREASE SAFE Wire Rope Lubricator come in a Kit form?

The GREASE SAFE Wire Rope Lubricator Kit includes a complete suite of proven accessories that allows for rapid on-site deployment and enables the manufacturer to offer a standard 12 month warranty on all parts (excluding normal wear & tear).

What is the weight of the GREASE SAFE Wire Rope Lubricator Collar?

The GREASE SAFE Wire Rope Lubricator Collar weighs approximately 16kg / 35lbs with Scraper plates. The fact the unit is one piece with quick tighten toggles means it is more maneuverable and easier to set up than other two piece units.

How do you select the correct Seal and Scraper size to suit a wire rope?

Please refer to the document – “GREASE SAFE Wire Rope Lubricator Seal & Scraper Selection Guide”. The seals and scrapers are installed into the collar to achieve the most effective sealing of lubricant between the collar and wire ropes. Seals are made in approximately 3/16" (5mm) increments and are interference fit depending on the size rope. Scrapers are supplied 2mm / 5/64" larger than the actual wire rope size to allow for Rope flexing. It is recommended that wire ropes be physically measured prior to ordering seals and scrapers as ropes in service can stretch and sizes may vary.

How long will a set of Seals last when lubricating wire ropes?

This depends on a number of factors including the condition of the wire ropes being lubricated and whether there are abrasive contaminants on the ropes prior to them entering the seal. However as an example a marine customer recently lubricated 7,000 metres / 4.3 miles of 1-3/8" (34mm) wire ropes while their ship was in dry dock. At the end of the lubrication session the customer feedback was that there was no leakage from the seal and that the seal had virtually no wear visible. It is estimated that in normal use GREASE SAFE Wire Rope Lubricator seals will last 40,000 – 50,000 feet (12,000 to 15,000 meters).

How effective is the GREASE SAFE Wire Rope Lubricator in lubricating; Locked Core / Non Rotating / Armoured wire ropes?

These types of wire ropes have extremely tightly wound strands with little space between the strands for wire rope lubricants to penetrate. While it cannot be guaranteed that the GREASE SAFE Wire Rope Lubricator will enable penetration of lubricant to the core with these types of ropes, it can be guaranteed that it will provide significantly improved lubrication compared to traditional manual lubrication methods. It is even more important with these types of ropes to select a Wire Rope lubricating product that offers penetration and provides an outer coating protection.

In what applications would you use the GREASE SAFE Wire Rope Lubricator?

The GREASE SAFE Wire Rope Lubricator can be used in any application where wire ropes can be drawn through the collar, please refer to the applications listed below.

Crane Wire Ropes

- Static overhead cranes
- Mobile cranes
- Tower cranes
- Ship cranes
- Wharf Cranes

Marine Applications

- Ship deck winches
- Ship Cranes
- Mooring lines
- Remote Operated Vehicles (ROV's) umbilical cables
- Dredge cables
- Anchor cables
- Tug Boat winches
- Dam sluice gate lubrication

Mining Applications

- Mine winder applications
- Stacker Reclaimer boom wires
- Bucket Wheel excavator boom wires

Industrial Applications

- Overhead cranes
- Conveyor cable lubrication
- Wire manufacturers (coating while in production)

Who are some of the customers that have successfully used the Wire Rope Lubricator?

- **BHPB Iron Ore** - Iron ore ship loaders
- **BHPB Petroleum** - Oil and Gas rigs at sea
- **Woodside Petroleum** - Oil and Gas rigs at sea
- **Alcoa Aluminum** - Ship loader
- **Xstrata Coal** - Mine winder cable
- **Mentrade** - OEM - Deck winch manufacturer
- **Dof Subsea** - ROV umbilical wire lubrication
- **Clough Engineering** - ROV umbilical wire lubrication
- **Cervan Marine** - Ship loader
- **MOL Tankships** - Ship Management Company - Oil tanker
- **OSG Ship Management Company** - Ship mooring lines
- **SeaTrucks** - Marine pipe laying ship
- **Aceryg** - Marine Engineering Company
- **VSL** - Cable manufacturers - Pre-coating of cables to the core
- **Mermaid Marine** - New vessel with submersible
- **Marine Equipments Pte Ltd** - OEM Winch Supplier
- **BHPB Olympic Dam Uranium Mine** - Mine Winder
- **Waterway Constructions** - Bridge Building Crane Ropes
- **LMS Ship Management** - Ship Cranes

What technical support and backup is available for the GREASE SAFE Wire Rope Lubricator?

Fluid Defense Systems is fully available to support the GREASE SAFE Wire Rope Lubricator; via email, phone or fax. The GREASE SAFE Wire Rope Lubricator is a proven, high quality unit that features only the best standard of accessories to ensure long term reliable service.

What if users want to lubricate wire ropes smaller than 5/16" (8mm)?

The smallest wire rope the GREASE SAFE Wire Rope Lubricator supports is 5/16" (8mm). For smaller wire ropes it is recommended to use a lubricant that can be applied with a small garden sprayer or pump up applicator. The right high quality lubricant will penetrate smaller ropes to the core, providing corrosion protection and anti wear protection.