

## Viper Wire Rope Lubricator (WRL) Common Questions & Answers

**Q1: When I use the Viper WRL, with a high quality wire rope lubricant, will the life of my wire ropes increase?**

A1: Yes, there is a significant increase in Rope life due to the penetration of the lubricant to the core of the rope, as well as reduced friction on both the inner and outer strands.

Typically wire rope users are manually applying lubricant to the outer strands of the rope or using a low pressure applicator that only fills the wire rope valleys.

In marine environments such as 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 friction created as the strands rub against each other as the rope travels over sheaves and onto the drum.

Due to the unique seal design and hence improved sealing arrangement, the Viper WRL maintains a positive pressure and will force lubricant into the core of the wire rope, sealing out moisture and protecting the strands against fretting, corrosion and fatigue failure.

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 poorly lubricated wire ropes.

**Q2: Is the use of the Viper WRL time consuming?**

A2: In comparison to manual lubrication the Viper WRL provides a significant reduction in labor and downtime. Once the Viper is set up and the wire rope speed versus lubricant flow has been adjusted, the operation is virtually automatic.

Lubrication can occur at speeds of up to 2,000 meters per hour.

The use of a high quality specialised wire rope lubricant such as Viper WRL VCG-0 and LE WireLife also increases the interval between reapplication of lubricant compared to standard, commercial lubricants as it remains in place longer and is resistant to water washout, etc.



### **Q3: Why does the Viper Mk II WRL come in a kit form?**

A3: Lubrication Engineers Pty Ltd have developed the Viper Mk II Kit over the past 10 years, selecting components which provide the optimum performance in a combined package.

By providing all of the required components in the kit, allows the user to open up the Viper Case and have everything they need to begin lubricating with the Viper WRL without having to source other parts.

Use of the selected components allows LE to provide a 12 month guarantee on all parts (excluding normal wear & tear) in the kit.

### **Q4: What dimensions and weight is the Viper WRL kit.**

A4: The complete Viper Kit in an Aluminium case has the following dimensions and weight

- Dimensions - L80cm x H45cm x W35cm
- Weight - 42kg

### **Q5: What is the weight of the new Viper Mk II collar?**

A5: The new Viper Mk II Collar weighs only 9.5kg (30% lighter than previous model) and being a one piece with in built handles and quick tighten toggles means it is more maneuverable and easier to install than two piece units.

### **Q6: How do we select the correct Seals and Scrapers to match our wire rope?**

A6: The most effective way to select the correct Seals and Scrapers is to reference the **“Viper Seal & Scraper Selection Guide”**.

The seals and scrapers are installed into the collar to achieve the most effective sealing of lubricant around the wire rope being lubricated. Seals are made in approximately 2mm to 3mm (1/16” to 1/8”) increments and are typically an interference fit on the rope.

Scrapers are supplied 2mm (5/64”) or 9% larger than the actual wire rope size to ensure the rope does not contact them during use.



For compact style ropes we recommend no more than 1mm interference between the seal and rope. If more of a coating effect is required than a seal the same size or up to 1mm larger than the rope is recommended.

**Please Note: Lubrication Engineers recommend that wire ropes be physically measured prior to ordering seals and scrapers as ropes in service can stretch and actual sizes may vary.**

**Q7: How long will a set of Viper WRL seal last?**

A7: It is estimated that a new set of Viper seals will lubricate between 12,000 and 15,000 metres of wire rope under normal operating conditions.

**Q8: How effective is the Viper Mk II at lubricating Locked Core / Non Rotating & Armoured wire ropes?**

A8: These types of wire ropes have extremely tightly wound strands with little space between for wire rope lubricants to penetrate.

While it cannot be guaranteed that the Viper 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 other applicators or manual lubrication.

It is important with these types of ropes that a lubricant with high adhesion ability is used.

**Q9: In what applications can the Viper WRL be used?**

A9: The Viper 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 whilst in production)

#### **Q10: Who are some of the customers that have successfully used the Viper WRL?**

A10: Examples of Viper WRL customers are listed below:

- 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 loaders
- Xstrata Coal – Mine winder cable
- Dof Subsea – ROV umbilical wire lubrication
- Clough Engineering – ROV umbilical wire lubrication
- Cervan Marine – Ship loader
- Star Reefer Shipping.
- MOL Tankships – Ship Management Company – Oil tanker
- OSG Ship Management Company – Ship mooring lines
- Sea Trucks – Marine pipe laying ship
- Acergy – Marine Engineering Company
- VSL – Cable manufacturers – Pre-coating of cables to the core
- Mermaid Marine – New vessel with submersible
- Marine Equipment's Pte Ltd – OEM Winch Supplier



- BHPB Olympic Dam Uranium Mine – Mine Winder
- Prominent Hill Uranium Mine
- Rolls Royce Syncrolifts Ship Lifters
- Waterway Constructions – Bridge Building Crane Ropes
- LMS Ship Management – Ship Cranes

**Q11: What in field technical support and backup is available?**

A11: LE Pty Ltd and our nominated world -wide distributor network are available to support the Viper WRL. Users can contact LE Pty Ltd via email, phone or Skype and can expect a response within 24 hours.

Please use the following contact numbers and email when contacting LE Pty Ltd.

**Lubrication Engineers**

300 Bailey Avenue • Fort Worth, TX 76107

WEBSITE: [www.LElubricants.com](http://www.LElubricants.com)

PHONE: 800-537-7683

EMAIL: [info@LE-inc.com](mailto:info@LE-inc.com)

FAX: 800-228-1142

**Q12: What options are available with the Viper Mk II to clean installed wire ropes?**

A12: A new range of Viper Rope Cleaners (VRC) has been developed that very effectively remove contamination from the outside profile of the wire rope prior to it being lubricated.

The design is a full female copy of the rope profile and uses a heavy duty SS clamp to secure the 3 segments of the VRC around rope.

The new VRC's are available for 6 and 8 stand ropes, both right and left lay for ropes from 14mm (6 strand) / 20mm (8 strand) up to 65mm ropes.

For quick and easy selection, please reference the Viper Rope Cleaner Selection Guide, supplied separately.





## Viper Mk II Q & A

**Q13: What options are available to lubricate wire ropes larger than 67 mm (2 1/2”), IE: larger than the standard Viper MK II can accommodate?**

A13: There is now an option available for larger rope sizes.

The new Viper Maxi WRL will lubricate ropes between 68mm and 160mm in diameter.

For further assistance on the larger ropes, please contact LE Pty Ltd with the specific requirements and an appropriate recommendation will be made.



'Superior Protection for Wire Ropes'

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

phone: 800-537-7683



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