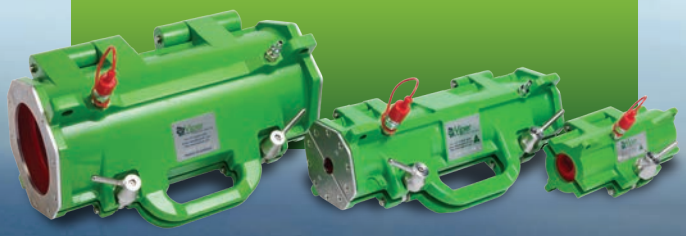
VIPER WRL RANGE
MAXI, MID AND MINI



Viper®
WIRE ROPE LUBRICATOR

MAINTAINING THE MISSION

INNOVATIVE MAINTENANCE SOLUTIONS ENHANCING DEFENCE CAPABILITIES

In recent years, the global defence landscape has experienced rapid transformation, driven by evolving geopolitical situations, changes in Information and Communication Technologies (ICT) and the pressing demands of modern warfare.

Closer to home, Australia is now facing strategic challenges not seen since World War II. Polarisation of influence across the region is accelerating. The pace at which challenges have emerged and the need for independence in critical capabilities has increased. Re-invigorating The Quad and the advent of AUKUS are both responses to Australia's new strategic reality. Additionally, there has been an accelerated design and procurement of defensive and offensive systems and platforms across Navy, Army and Air Force. Concurrently, workplace reforms are being implemented to achieve an integrated, mobile and agile workforce incorporating the Australian Defence Force (ADF), Australian Public Service (APS), industry and other partners.

Amid Australia's heightened strategic challenges, the focus extends beyond just acquiring new systems to ensuring their continuous operational readiness. As the nation confronts its new strategic realities, **the need to maintain its military equipment becomes paramount**. This dual focus on both acquisition and maintenance ensures the ADF's consistent preparedness.

Sustainment of defence materiel focuses on the upkeep and assistance of the ADF's unique military equipment collections. This includes ongoing support for naval, ground, and aerial platforms and systems used by the ADF. Proper maintenance of these naval, ground, and air resources is crucial for the ADF to remain ready and execute operations. Annually, the ADF's spending on sustainment is comparable to its expenditure on new equipment purchases. The Defence Funding for 2022-23 has allocated **$17.7 billion to Operating which includes Sustainment (repair and maintenance)**. Reflecting a significant portion of its entire departmental budget of **36.8%** to ensure the ADF's equipment is fully operational.[1]

> DEFENCE FUNDING FOR 2022-23
> **$17.7 BILLION**
> TO OPERATING WHICH INCLUDES
> **SUSTAINMENT**
> (REPAIR AND MAINTENANCE)

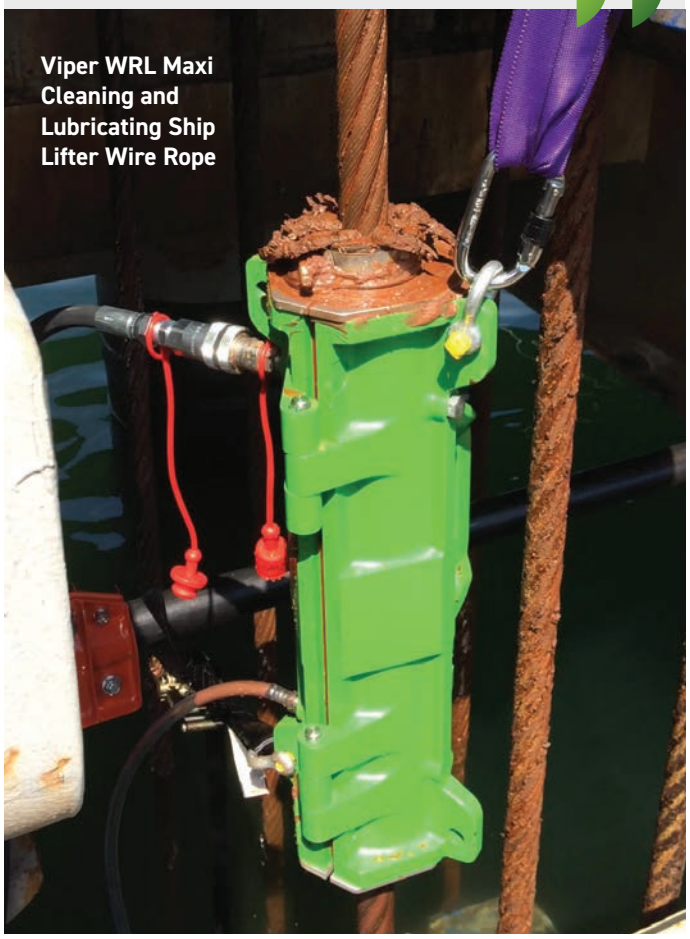
While much of the attention in innovations is directed towards the acquisition of innovative technology and advanced weaponry, the **maintenance of these assets frequently takes a back seat, despite its critical importance.** At the core of these dynamics is the machinery and equipment that underpin military capabilities. Despite the challenges posed by

disruptions in supply chains in recent times, the ADF, in collaboration with its industry partners, has seen a notable increase in acquisition spending. There's a growing trend within Defence to engage with 'the small, the smart, and the many'. This signifies a **shift towards seeking cost-effective, autonomous systems** that can be swiftly produced by the local Australian industry.[2]

A prime example of the importance of maintenance in the defence sector is showcased by the use of wire ropes. While they may seem rudimentary, **wire ropes play a pivotal role in various military operations**. One often overlooked but critical component of naval operations is the Davit Crane system. Used by navies worldwide, including the US Coast Guard, Davits are used to lower and raise small boats with personnel aboard. The wire ropes that enable this function are of utmost importance. A failure in these ropes can lead to catastrophic accidents. Given the vital role Davits play in naval operations, their maintenance, especially the wire ropes, cannot be stressed enough.

GIVEN THE VITAL ROLE DAVITS PLAY IN NAVAL OPERATIONS, THEIR MAINTENANCE, ESPECIALLY

THE WIRE ROPES CANNOT BE STRESSED ENOUGH



Viper WRL Maxi Cleaning and Lubricating Ship Lifter Wire Rope

"It is easy to be captivated by the allure of advanced weaponry and innovative technology. However, the foundation of operational success often lies in the regular upkeep of components, such as wire ropes."

Bill Gommers

International Sales Manager for Viper WRL.

Their significance underscores the broader point: even the most basic components, when maintained properly, can enhance the overall efficacy and readiness of a nation's defence capabilities.

In a defence landscape that is constantly evolving, **the maintenance of even the most basic components, like wire ropes, can be the difference between operational success and failure**. At Viper, we have seen firsthand how advanced maintenance solutions can enhance the longevity and reliability of these crucial assets.

"In considering modern defence strategies, it is easy to be captivated by the allure of advanced weaponry and innovative technology. However, the foundation of operational success often lies in the regular upkeep of components, such as wire ropes," said Bill Gommers, International Sales Manager for Viper WRL. "Their longevity and reliability can be the unsung heroes that determine the effectiveness of a mission. The future of defence does not just hinge on acquiring new assets, but also on **innovatively preserving and enhancing the assets already in the ADF's possession**."

Historically, wire rope maintenance has come with its own set of challenges. Lubrication, a key aspect of wire rope upkeep, has typically been a manual application. Technicians would use gloves to rub the lubrication onto the wire or employ tools like a paintbrush or spray. These manual methods not only present safety and environmental challenges but are also labour-intensive. A critical oversight in this approach is the belief that the lubricant provides comprehensive protection. In truth, it merely coats the surface,

"The ADF can enhance its operational readiness, extend the lifespan of its equipment, and ensure the safety of its personnel."

Bill Gommers – International Sales Manager for Viper WRL

failing to penetrate deep into the core of the wire rope where it is most needed. This surface-level application can jeopardise the wire rope's durability, integrity and functionality, highlighting the need for **more sophisticated maintenance solutions**.

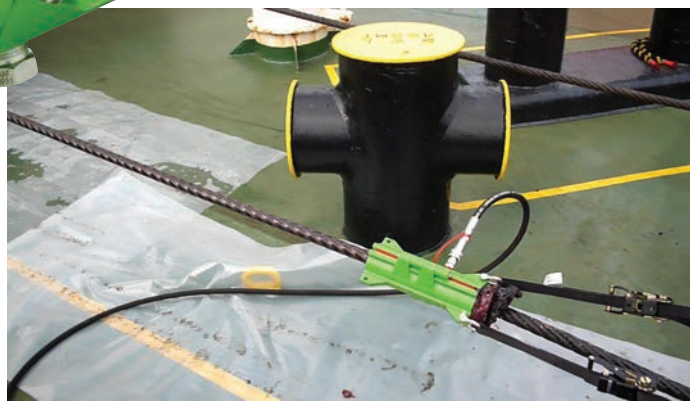
In an era where equipment **reliability has a direct bearing on national security outcomes**, operational efficiency, safety, and cost-effectiveness remain at the forefront of the ADF's concerns. Given Australia's vast geography and diverse climates, the ADF faces unique challenges in maintaining its equipment.

Commenting on this, Bill offered, "While the principles of wire rope maintenance represent just one area from which the ADF can draw insights, they offer **valuable strategies** to address these challenges. By integrating such principles, the ADF can enhance its **operational readiness**, **extend the lifespan of its equipment**, and ensure the **safety of its personnel**. This approach will in turn lead to further **strengthening the ADF's capacity** to uphold its regional security commitments."

- Cleans and lubricates wire ropes fast and efficiently
- Increases the life of wire rope assets by up to 300%
- Increases the time between relubrication
- Provides a safer, cleaner work environment
- Made in Australia

AUSTRALIAN MADE

Viper WRL Mini MK 3



Viper WRL Mini Lubricating a Mooring Rope

TARGETING MAINTENANCE

OPERATIONAL EFFICIENCY, SAFETY AND COST EFFECTIVENESS

1. LIFESPAN EXTENSION

The ADF's assets, ranging from recovery vehicles and their winches to naval cranes and mooring ropes, represent significant investments. Regular maintenance and lubrication, especially when using advanced systems like the Viper, are crucial across these diverse assets. For instance, the lifespan of the Steel Wire Rope (SWR) used in both winches and naval applications can be **extended by up to 300% with proper care**, ensuring optimal value for the investment. This not only safeguards the equipment's longevity but also results in substantial long-term cost savings for the ADF.

2. OPERATIONAL READINESS

For the ADF, ensuring that its fleet of **Medium and Heavy Capability logistic vehicles, especially recovery vehicles fitted with winches, are ready for deployment is crucial**. Regular maintenance and lubrication using a system such as the Viper Mid Kit guarantees that the winches are in top serviceable condition, minimising downtime and ensuring readiness for missions.

3. SAFETY

Malfunctioning winches on recovery vehicles can pose **significant risks to ADF personnel**. Ensuring proper maintenance and regular lubrication, especially with advanced systems like the Viper WRL, guarantees that all components are in optimal working condition.

The Viper WRL system ensures every gram of lubricant is used on the rope with no leakage, eliminating waste and reducing environmental impact. Additionally, personnel have **no direct contact with the lubricant**, and the rope can be lubricated from a **safe distance**, further enhancing the **safety of personnel**, and ensuring **improved health** and **environmental safety standards**.

4. PERFORMANCE

In critical defence operations, **equipment performance can make the difference between success and failure**. Regular maintenance and proper lubrication of the SWR on equipment ensures that it operates at peak performance, **reducing risks and enhancing the likelihood of mission success**.

> REGULAR MAINTENANCE AND LUBRICATION USING A SYSTEM SUCH AS THE VIPER MID KIT
>
> **GUARANTEES**
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> WINCHES ARE IN TOP SERVICEABLE CONDITION,
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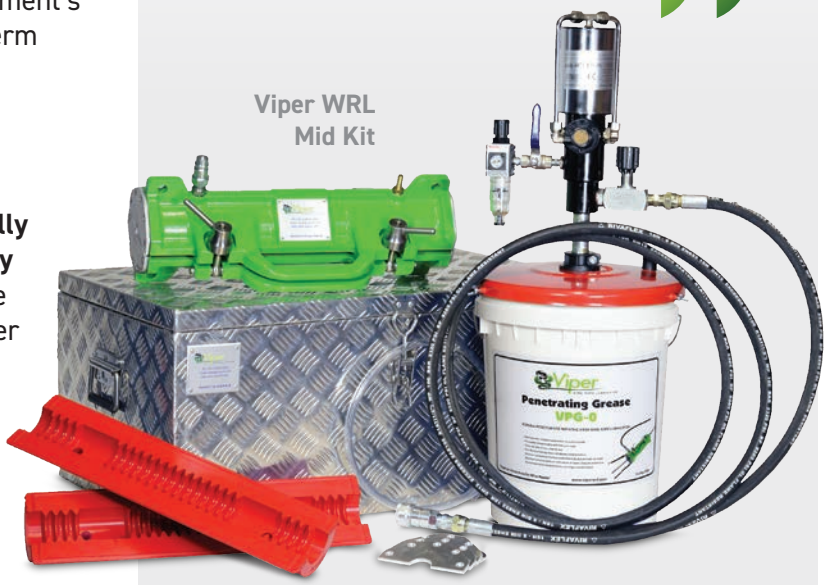
> **ENSURING MISSION READINESS**



Recovery vehicle similar to that used by the Australian Army

5. ECONOMIC EFFICIENCY

Regular maintenance is pivotal in preventing catastrophic failures that come with hefty repair or replacement costs. By proactively addressing potential issues, the ADF can significantly cut down on long-term expenses. Using an automated solution like the Viper system not only reduces the risk of costly breakdowns but streamlines the maintenance process. With the Viper Wire Rope Cleaners (VRC), the process of cleaning and lubricating the rope is **done in a single pass**, ensuring positive penetration of the rope, and guaranteeing optimum efficiency and performance of the equipment. This innovative approach greatly reduces mess and cleanup times. **Consider a real-world example:** During a scheduled maintenance, there was a need to re-lubricate **14 mooring ropes**. Traditionally, this task would have taken **two personnel** a total of **224 hours** to complete. However, with the assistance of the **Viper Mid Kit**, the same **two personnel** were able to finish the job in merely **28 hours**. This translates to a significant time-saving of **196 hours**.

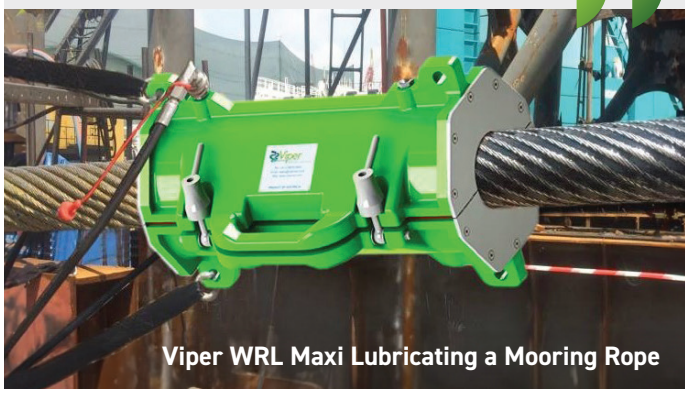
14 MOORING ROPES – 2 PERSONNEL

224 HOURS

USING VIPER MID KIT – 2 PERSONNEL

28 HOURS

SAVING OF 196 HOURS



Viper WRL Maxi Lubricating a Mooring Rope

6. ADHERENCE TO STANDARDS

Defence forces, including the ADF, have strict standards for equipment maintenance to ensure consistency, reliability, and safety. Adhering to these standards is critical for the credibility and effectiveness of the force. Using the Australian-made Viper Wire Rope Lubricator System - Mid and Mini Kits which have been allocated **NATO NSNs (National Stock Number)** and used by the **Australian, US and UK defence forces**, ensures adherence to these high standards.

7. ENVIRONMENTAL CONSIDERATIONS

Proper maintenance using the Viper system ensures that **every gram of lubricant is used** on the rope with **no leakage**, **eliminating waste** and **environmental impact**. Studies indicate that annually, ports and harbours globally receive a significant **"operational lubricant discharge"** of up to **32.3 million litres** representing about **80% of the total pollution from ships**.

This highlights the magnified issue of marine pollution. For the ADF, this means meeting the **Environmentally Acceptable Lubricants (EAL)** standards and adopting a more environmentally friendly approach to maintaining their assets, reducing emissions and other environmental impacts for the long-term.[3,4]

"At Viper, we have observed that innovation in a defence force's sustainment is as crucial as the weaponry itself. In an era marked by rapid technological advances and environmental imperatives, it is the blend of innovative equipment and its diligent upkeep that will define the true strength and readiness of a nation's defence capabilities," concluded Bill.

By prioritising both **acquisition and sustainment**, the ADF not only ensures **operational efficiency** but also **maximises the return on its significant investments**. Viper's emphasis on **innovative maintenance solutions** serves as a reminder that in the realm of defence, it is **not just about having the best tools but also about keeping them in prime condition**. As the defence sector continues to navigate the challenges of the modern era, the lessons drawn from the principles of maintenance will undoubtedly play a crucial role in shaping the future of national security.

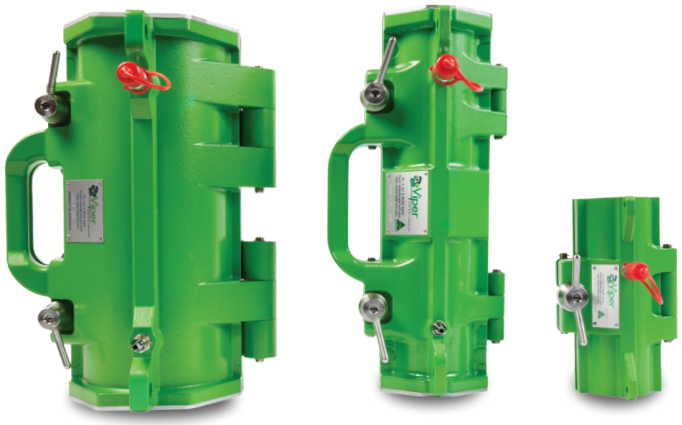
1. https://aspi.org.au/report/cost-defence-aspi-defence-budget-brief-october-2022-2023. **2.** https://aspi.org.au/report/cost-defence-aspi-defence-budget-brief-2022-2023. **3.** https://www.sciencedirect.com/science/article/abs/pii/S0043135419309571. **4.** https://www.frontiersin.org/articles/10.3389/fmars.2020.566363/full.

For more information on how Viper WRL's enhances defence capabilities visit viperwrl.com

Viper®
WIRE ROPE LUBRICATOR

Viper WRL Pty Ltd is a family-owned business that manufactures and supplies superior wire rope lubrication equipment and lubricant to the Mining, Oil and Gas, Shipping, Marine, Defence Force and other relevant industries. The Viper WRL Range enables wire ropes to be safely, quickly and effectively lubricated, and has the potential to extend their life significantly. The Viper WRL eliminates manual lubrication, reduces downtime and improves equipment availability. It is the safer way to lubricate wire ropes, reduce lubricant usage and reduce mess – leading to best practice lubrication reliability.

The award-winning Viper WRL is the world leader in wire rope lubrication and has a distribution network in more than 80 countries.



NATO NSN

(National Stock Number)

Mid 6mm-67mm (NATO NSN 4730-66-166-9603)
Mini 6mm-44mm (NATO NSN 4930-66-166-8448)

For more information on how Viper WRL's enhances defence capabilities visit viperwrl.com

COVER IMAGE: Forty-two ships and submarines representing 15 international partner nations manoeuvre into a close formation during Rim of the Pacific (RIMPAC) Exercise 2014. Twenty-two nations, more than 40 ships and six submarines, more than 200 aircraft and 25,000 personnel participated in the RIMPAC exercise from June 26 to Aug. 1, in and around the Hawaiian Islands and Southern California. The world's largest international maritime exercise, RIMPAC 2014 was the 24th exercise in a series that began in 1971.