

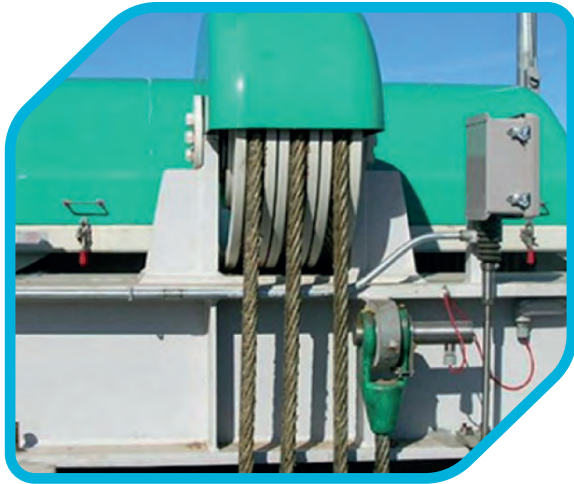
**ROCOL**<sup>®</sup>

Performance you can trust



**SYNCROLIFT**<sup>®</sup>  
LUBRICATION GUIDE

# LUBRICATION SELECTION ENSURES RELIABLE SYNCROLIFT® OPERATION



As with any industrial machinery, the moving parts of a **Syncrolift** require regular maintenance and re-lubrication. However, as a **Syncrolift** operates under harsh environmental conditions, all parts (including lubricants) must be carefully designed and selected to withstand operation in various conditions. These include; fluctuating temperatures, high loading and severely corrosive salty atmospheres containing dust and dirt. The correct selection of high performance lubricants, made whilst keeping these requirements in mind, will ensure the safe and reliable operation of **Syncrolift** systems.

## WIRE ROPES

Wire ropes are like complex machines requiring dedicated lubricants to perform. Although simple in appearance, like any machine, they must be lubricated to achieve optimum performance and service life.

A wire rope lubricant is designed not only to reduce friction and wear, but also provides corrosion protection to both the outer strands and inner core of the rope, protecting ropes from their primary failure mode.

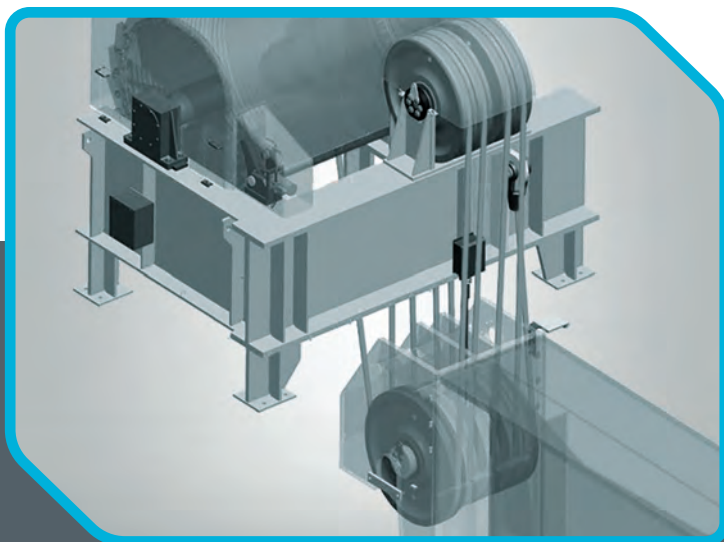
As the most expensive consumable of a **Syncrolift**, extension of the lifetime of wire ropes can lead to significant cost savings. Routine inspection can also identify corrosion and wear before they become a serious issue. Due to harsh operating environments, **Syncrolift** wire ropes should be treated with a product which penetrates and lubricates the internal surfaces of the rope, whilst leaving a tenacious external film. This will prevent ingress of water and protect both outer and inner strands against corrosion over extended periods of time.

### BIOGEN WIRESHIELD®

**BIOGEN WIRESHIELD** is a high performance, EU Ecolabel certified, biodegradable, VGP compliant wire rope lubricant featuring advanced pseudoplastic rheology.



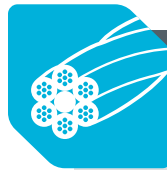
**BIOGEN WIRESHIELD** has been developed with a no compromise approach on the performance, environment and health & safety. Furthermore, it demonstrates industry leading corrosion protection and an outstanding operating temperature range of -50°C to +180°C.



### WIRE ROPE DRESSING

**WIRE ROPE Dressing** is a high performance, semi-fluid grease designed for complete lubrication and corrosion protection on most types of wire ropes, particularly in hostile conditions.

The lubricant is highly resistant to water wash-off, reduces wear and offers outstanding corrosion protection.



#### Key Requirements Summary

- Extreme corrosion protection
- Highly penetrating
- Clean & easy to apply
- Reduces friction and wear
- Eliminates water wash off and fling

#### Recommended ROCOL® Products

<b>BIOGEN WIRESHIELD</b>
20064 18kg
20069 160kg
<b>WIRE ROPE Dressing</b>
20026 4kg
20024 18kg

## LOWER SHEAVE & WHEEL BEARINGS

Due to the position below the **Syncrolift** platform, the lower sheaves and wheels become fully immersed in water during operation. Therefore the bearings used in these areas require additional protection from water and corrosion.

### SAPPHIRE® Aqua 2

**SAPPHIRE® Aqua 2** is an extreme pressure, water resistant bearing grease, ideal for applications subjected to damp, humid or wet conditions.

It offers excellent resistance to water and corrosion, ensuring protection even in submerged conditions.



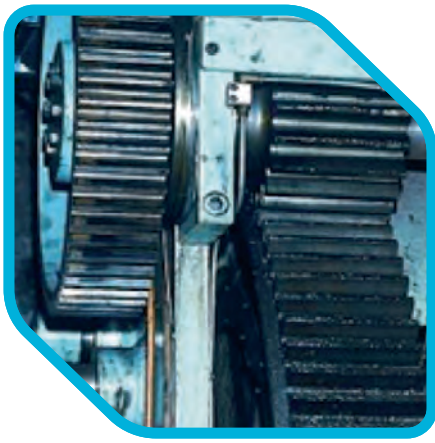
#### Key Requirements Summary

- Outstanding corrosion protection
- Extreme water resistance
- Excellent EP/AW protection

#### Recommended ROCOL® Products

<b>SAPPHIRE® Aqua 2</b>	
12751 380g	12755 4kg
12754 18kg	12758 50kg





# OPEN GEARS

**Syncrolift®** gears operate under extremely heavy loading. If inadequately lubricated the teeth can suffer severe wear, potentially leading to breakage and downtime.

In addition, the open gears of a **Syncrolift** face the full force of the marine environment and any lubricant applied must be able to maintain its integrity in salt water conditions and protect the gears from corrosion.

## TUFGEAR UNIVERSAL

**TUFGEAR Universal** is a heavy duty open gear grease designed for the effective lubrication and protection of gears used in extreme environments. It is a highly water resistant, long life open gear grease with excellent corrosion protection and outstanding EP performance.

# BEARINGS & PINS

Bearings are used to support the load and reduce friction between two moving components. Although bearings rarely fail, if they do, it can be catastrophic. Failures are not often caused by mechanical fatigue, the most common cause is incorrect lubrication.

Running a bearing with insufficient lubricant can lead to wear, resulting in increased vibration and possible seizure. However, using too much or the wrong type of lubricant for the bearing can be equally as detrimental. This is because it can cause slippage of the bearing elements or degradation of the lubricating medium, which can increase friction and heat, leading to premature failure.

**Syncrolift** bearings should be lubricated with highly water-resistant grease which will protect the elements from corrosion, prevent wash-out of the grease, and exclude particulates from the moving surfaces.

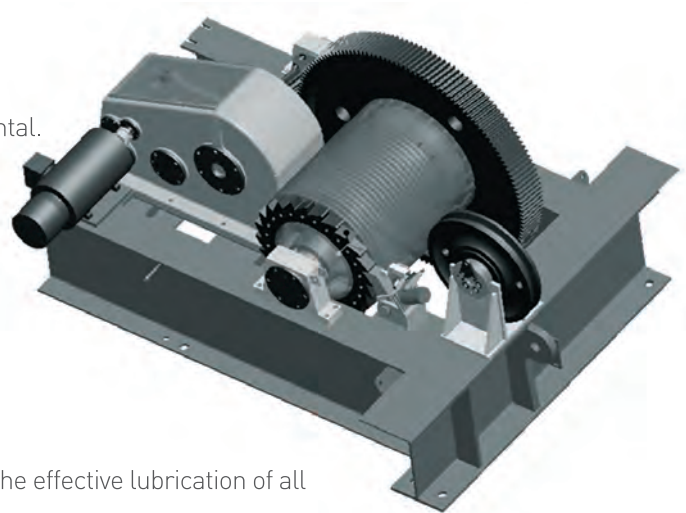


### Key Requirements Summary

- Outstanding corrosion protection
- High adhesion & salt water resistance
- Excellent EP/AW protection

### Recommended **ROCOL®** Products

TUFGEAR Universal	
18302 400g	18305 5kg
18304 18kg	



## SAPPHIRE® 2

**SAPPHIRE 2** is a triple life, multi-purpose bearing grease designed for the effective lubrication of all types of bearings.

The revolutionary multi-complex soap technology provides superior EP performance and outstanding corrosion resistance even in wet conditions.



### Key Requirements Summary

- High water resistance
- High corrosion protection
- Excellent EP/AW protection

### Recommended **ROCOL** Products

SAPPHIRE® 2		
12171 400g	12176 5kg	
12175 18kg	12178 50kg	
12179 185kg		



SYNCROLIFT APPLICATION	RECOMMENDED Rocol PRODUCT	KEY FEATURES	BENEFITS
<b>WIRE ROPE</b>	<b>BIOGEN WIRESHIELD®</b> 20064 18kg 20069 160kg	Temperature range: -50°C to +180°C	High performance in both; low arctic temperatures and at high temperatures
		European Ecolabel certified; biodegradable, non-bioaccumulative, minimally toxic	Provides independent verification that it meets the most stringent environmental standards and the US VGP regulations
		Advanced pseudoplastic rheology	Allows maximum penetration and increases pumpability of the lubricant
		Unique high performance additive packages. Offers industry leading corrosion protection and excellent wear prevention.	Extends lifetime of wire ropes, protecting them from their primary failure modes
		Does not drip off or fling off and withstands extreme wet conditions	Keeps work area clean and safe, whilst ensuring extended re-lubrication intervals
		Thin film keeps ropes clean from dust and dirt	Reduces usage of the wire rope lubricant
	<b>WIRE ROPE DRESSING</b> 20026 4kg 20024 18kg	Temperature range: -30°C to +100°C	One product gives protection for all seasons
		Excellent internal & external wear and corrosion protection	Extends lifetime of wire ropes
		Does not drip or fling off and withstands extreme wet conditions	Keeps work area clean and safe, whilst ensuring extended re-lubrication intervals.
		Thin film keeps ropes clean from dust and dirt	Reduced usage of the wire rope lubricant
<b>LOWER SHEAVE AND WHEEL BEARINGS</b>	<b>SAPPHIRE® AQUA 2</b> 12751 380g 12755 4kg 12754 18kg 12758 50kg	Temperature range: -20°C to +150°C	One product gives protection for all seasons
		Good EP performance (315 kg weld load)	Extends lifetime of bearings and sheaves
		Good corrosion resistance	Extends lifetime of bearings and sheaves
		Excellent resistance to water, even in submerged conditions	Provides the opportunity to prolong lubrication intervals in the harshest operating environment
<b>OPEN GEAR</b>	<b>TUFGEAR UNIVERSAL</b> 18302 400g 18305 5kg 18304 18kg	Temperature range: -40°C to +120°C	One product gives protection for all seasons
		Good adhesion to the gear teeth- no fling off	Greatly extends lubrication intervals
		Excellent water resistance	Extends lifetime of gears
		Excellent corrosion protection	Extends lifetime of gears
		Outstanding EP performance (800 kg weld load)	High load carrying capacity to prevent wear and fatigue
		Contains a blend of high performance solids	High load carrying capacity to prevent wear and fatigue
<b>WHEEL BEARINGS</b> <b>SHEAVE BEARINGS</b> <b>PILLOW BLOCK BEARINGS</b> <b>PAWL PIN</b> <b>TRANSDUCER PIN</b> <b>COUPLING LS.</b> <b>ACTUATOR ROD</b>	<b>SAPPHIRE® 2</b> 12171 400g 12176 5kg 12175 18kg 12178 50kg 12179 185kg	Temperature range: -30°C to +150°C	One product gives protection for all seasons.
		Outstanding EP performance (>800 kg weld load)	Extends lifetime of bearings and pins
		Good corrosion resistance	Extends lifetime of bearings and pins
		Revolutionary multi-complex soap technology	Greatly extends lubrication intervals- typically 3 times longer than conventional soap thickened greases



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