



TECSIA LUBRICANTS

Designed to comply with your industry's standard



Specialty Lubricants for Seaport Equipment



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Introduction

The seaport equipment (e.g. port cranes, rail, wire ropes) require appropriate lubricant that have to withstand heavy load, severe weather, salt water spray and constant attacks by corrosion for the long period of time. These factors reduced the lifespan of equipment that eventually lead to poor performance

However, the user could not afford to shutdown the port operations frequently for maintenance in order to sustain peak performance of the equipment.

In response to these considerations, our engineers have carefully selected and recommended a range of premium lubricants in accordance to the specific requirements of critical equipment in seaport.

Through our long-standing experience, we deliver the right products, at the right time, to the right place. Reliably, so that you can operate your port equipment more efficiently and cost effectively.

Critical Equipment in Seaport

The equipment in seaport plays a crucial role in loading and unloading of cargo. Therefore, this equipment cannot compromise any downtime as it will delay the shipment process.

However, port equipment is often exposed to tough weather condition, salt water spray and heavy loading pressure, which subsequently reduce the equipment lifespan rapidly. To minimise equipment downtime, it is important to pay special attention on applying the right lubricant to the right applications.

Seaport Equipment



1 Quayside crane

2 Rubber tyred/rail wheel gantry crane

3 Straddle carrier

4 Reach stacker

5 Empty Container Handler

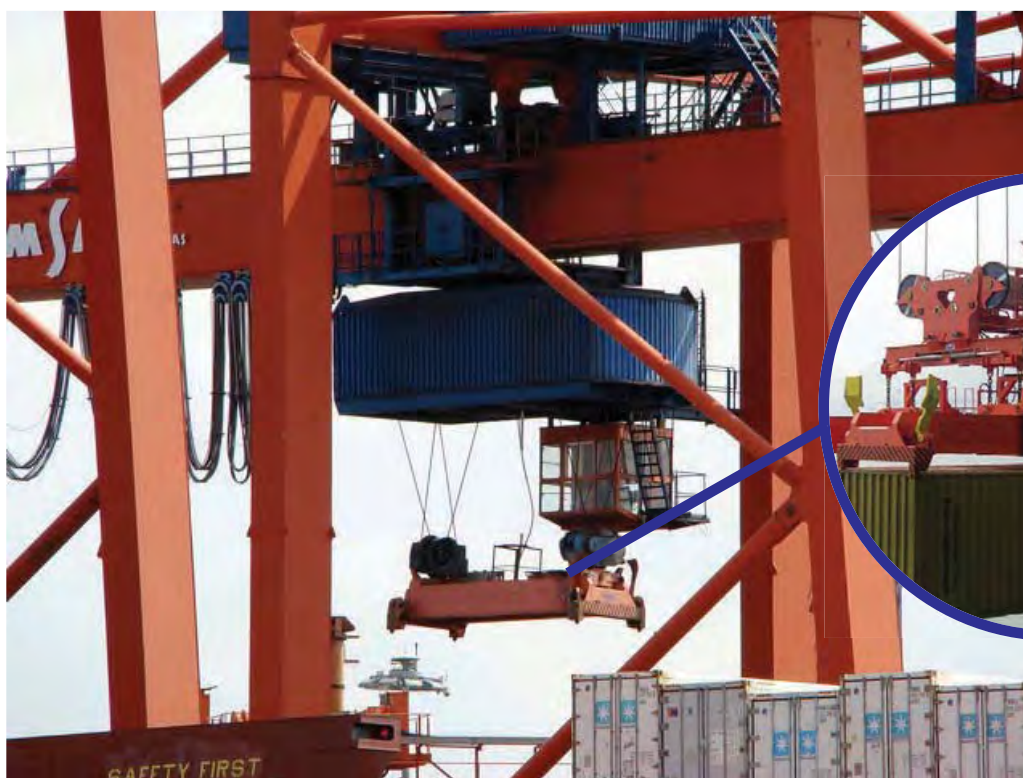
6 Prime mover



Quayside Crane

A quayside crane that loads and unloads container to and from the ship, has to perform under heavy loading pressure and seaport environment. Therefore, lubrication is essential to protect the mechanism from wears and corrosion.

Lubricant Solutions for Quayside Crane



1 Wire Rope



Many users normally believe that by coating heavily onto the surface will give a better protection to the wire rope. However, most of the wire rope fail from inside, it is important to make sure that the center core receives sufficient lubricant.

Lubricants	Thickening Agent	NLGI	Dropping Point (°C)	Operating Temp (°C)
TACBECON 105WR	Modified Organic Clay	00	Non-melting	-10 to 150
TACBECON 305WR	Calcium Sulfonate	0	>260	-20 to 160

Crane Spreader - Chain



The chain in the spreader is driven by a drive to extend or contract the lateral extension frames that allow a variety of containers with different lengths to be suspended. Due to intensive surface contact, the chain components wear off easily.

Chain lubricants are required to protect the chain from wears and providing resistance to corrosion especially when exposing to weather and seawater.

Lubricants	Base Fluid	ISO Viscosity	Flash Point (°C)	Operating Temp (°C)
TACBECON WR 460	Mineral	460	240	-10 to 150

Crane Spreader - Slider



The extension frames supported by sliders such that they may contact with each other through sliding motion. Due to the intensive surface contact, the sliders become worn and prevent them from functioning properly. The use of specialized lubricant can significantly help to reduce wears and corrosion.

TACBECON SG 1000S is an ideal lubricant because it has the ability to adhere to the sliders in order to keep the metal surface lubricated even there are vibrations.

Lubricants	Thickening Agent	NLGI	Dropping Point (°C)	Operating Temp (°C)
TACBECON SG 1000S	Li-Ca	2	>190	-20 to 120

Crane Spreader - Locking Device



The guide arm can be swung from upper, turned-over open position into position for engagement with a corner of the container. Corrosion may cause the friction and obstruction to the movement of the guide arm. We offer TACBECON SG 1000S which has the ability to prevent the inception of corrosion when exposing to weather and saltwater environment.

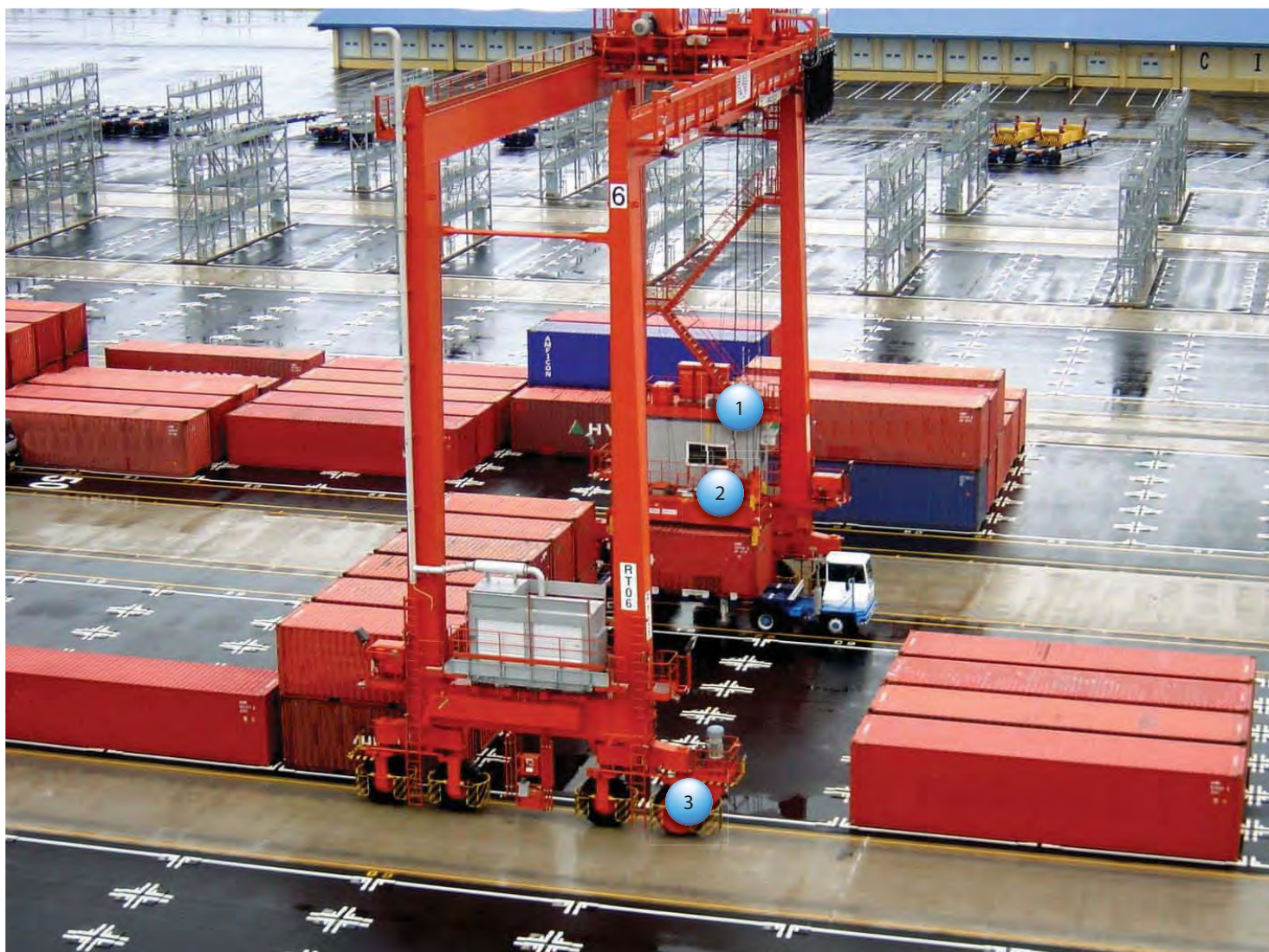
Lubricants	Thickening Agent	NLGI	Dropping Point (°C)	Operating Temp (°C)
TACBECON SG 1000S	Li-Ca	2	>190	-20 to 120



Rubber Tyred Gantry (RTG) Crane

A Rubber Tyred Gantry crane (RTG) is a mobile gantry crane used for stacking shipping containers within the stacking areas of a container terminal. This application demands lubricant to minimise friction and corrosion especially in the seaport environment.

Lubricant Solutions for RTG Crane



1 Wire Rope



These lubricants are specially designed for wire rope that not only protects against external corrosion but also penetrates to give internal lubrication and protection against wears.

Lubricants	Thickening Agent	NLGI	Dropping Point (°C)	Operating Temp (°C)
TACBECON 105WR	Modified Organic Clay	00	Non-melting	-10 to 150
TACBECON 305WR	Calcium Sulfonate	0	>260	-20 to 160

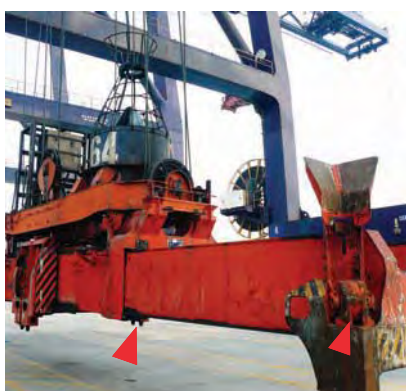
2 RTG Crane Spreader - Chain



The chain lubricants help to protect the spreader chain from wears and providing resistance to corrosion especially when exposing to extreme weather condition and seawater.

Lubricants	Base Fluid	ISO Viscosity	Flash Point (°C)	Operating Temp (°C)
TACBECON WR 460	Mineral	460	240	-10 to 150

RTG Crane Spreader - Slider and Locking Device



Designed for maximum film strength, Tacbecon SG 1000S is recommend for spreader mechanisms such as slider and locking device. This strong oil film helps in providing resistance to corrosion and cushion against shock loads.

Lubricants	Thickening Agent	NLGI	Dropping Point (°C)	Operating Temp (°C)
TACBECON SG 1000S	Li-Ca	2	>190	-20 to 120

3 RTG Crane Wheel Assembly - Power Chains



The power chain in the wheel assembly drive the RTG crane to move from one location to another. It is important to apply lubricant to protect the power chains from seizure and damages.

Lubricants	Base Fluid	ISO Viscosity	Flash Point (°C)	Operating Temp (°C)
TACBECON WR 460	Mineral	460	240	-10 to 150

RTG Crane Wheel Assembly - Driving Motor



Where there is high speed involving in driving motor bearings, heat is generated. Therefore, these application require high temperature grease to protect the bearings from wears.

Lubricants	Thickener	NGLI	Dropping Point (°C)	Operating Temp (°C)
TACBECON SGH 200S	Alassca Complex	2	>300	-20 to 160



Straddle Carriers

The straddle carrier is an economical solution when handling and transporting over 5000 containers per year in seaport. The faster and long-travel speeds are used to decrease cycle times when longer distances are encountered within the duty cycle.

Lubricant Solutions for Straddle Carriers



1 Straddle Carrier Hoisting Mechanism - Motor Bearing



TACBECON SGH 200S is an excellent choice for motor bearing that operate under high speed and high temperature condition. In addition, this grease has an excellent water resistance and longer service life that requires longer re-lubrication interval.

Lubricants	Thickener	NGLI	Dropping Point (°C)	Operating Temp (°C)
TACBECON SGH 200S	Alassca Complex	2	>300	-20 to 160

2 Straddle Carrier Hoisting Mechanism - Chain



The recommended chain lubricants are specially designed to maintain a consistent protective film on the metal surfaces while performing under heavy-loading pressure and seawater condition.

Lubricants	Base Fluid	ISO Viscosity	Flash Point (°C)	Operating Temp (°C)
TACBECON WR 460	Mineral	460	240	-10 to 150

3 Straddle Carrier Spreader



TACBECON SG 1000S is an recommended product for all spreader application because of its offer longer service life, improved lubricity when carrying heavy loads.

Lubricants	Thickening Agent	NLGI	Dropping Point (°C)	Operating Temp (°C)
TACBECON SG 1000S	Li-Ca	2	>190	-20 to 120



Reach Stacker

A reach stacker is a type of fork lift with a telescopic boom and toplift attachment used for lifting and stacking containers. Its design enables it to reach beyond the first row to pick up a container.

Lubrication is mostly applied on the telescopic boom and spreaders mechanisms (e.g. slider, chain and locking devices).

Lubricant Solutions for Reach Stacker



1 Telescopic Boom



TACBECON SOG 3000A is an excellent choice for telescopic boom application as it contains superfine graphite that not only helps in cushioning shock loads but it helps in smoothening the irregularities of pad-to-boom surfaces for smoother operations. In addition, this lubricant has longer service life which keeps the wear pad of the boom lubricate for a long period of time before relubrication.

Lubricants	Thickening Agent	NLGI	Dropping Point (°C)	Operating Temp (°C)
TACBECON SOG 3000A	Al Complex	00	>200	-10 to 150

Top Pick Spreader - Reduction Gear System



TACBECON SG 1000S is recommended for use in exposed gears. This lubricant is ideal for gears when operating under heavy loading pressure and outdoor conditions as it provides a tacky lubricant film that adheres to gear surfaces so as to protect against corrosion, rust, wears and shock load.

Lubricants	Thickening Agent	NLGI	Dropping Point (°C)	Operating Temp (°C)
TACBECON SG 1000S	Li-Ca	2	>190	-20 to 120

Top Pick Spreader - Side Shift



When carrying heavy load, the side shift of the top pick spreader requires lubricant to reduce wears caused by friction in sliding contact. Formulated extreme pressure additive, TACBECON SG 1000S grease leaves a stronger film strength to protect the mechanisms from high-loading pressure.

Lubricants	Thickening Agent	NLGI	Dropping Point (°C)	Operating Temp (°C)
TACBECON SG 1000S	Li-Ca	2	>190	-20 to 120

Top Pick Spreader - Telescopic Beams



Typically, the beam sections are greased with a lubricant so that the multiple sections can slide inside one another easily with reduced friction. TACBECON SOG 3000A enhanced the smooth operations with its superfine graphite by smoothening the irregularities of the metal surfaces.

Lubricants	Thickening Agent	NLGI	Dropping Point (°C)	Operating Temp (°C)
TACBECON SOG 3000A	Al Complex	00	>200	-10 to 150

Top Pick Spreader - Twistlocks



TACBECON SG 1000S can be applied on the top pick spreader twistlock mechanism because it leaves a stronger film strength on the metal surface to protect the mechanisms from high-loading pressure.

Lubricants	Thickening Agent	NLGI	Dropping Point (°C)	Operating Temp (°C)
TACBECON SG 1000S	Li-Ca	2	>190	-20 to 120

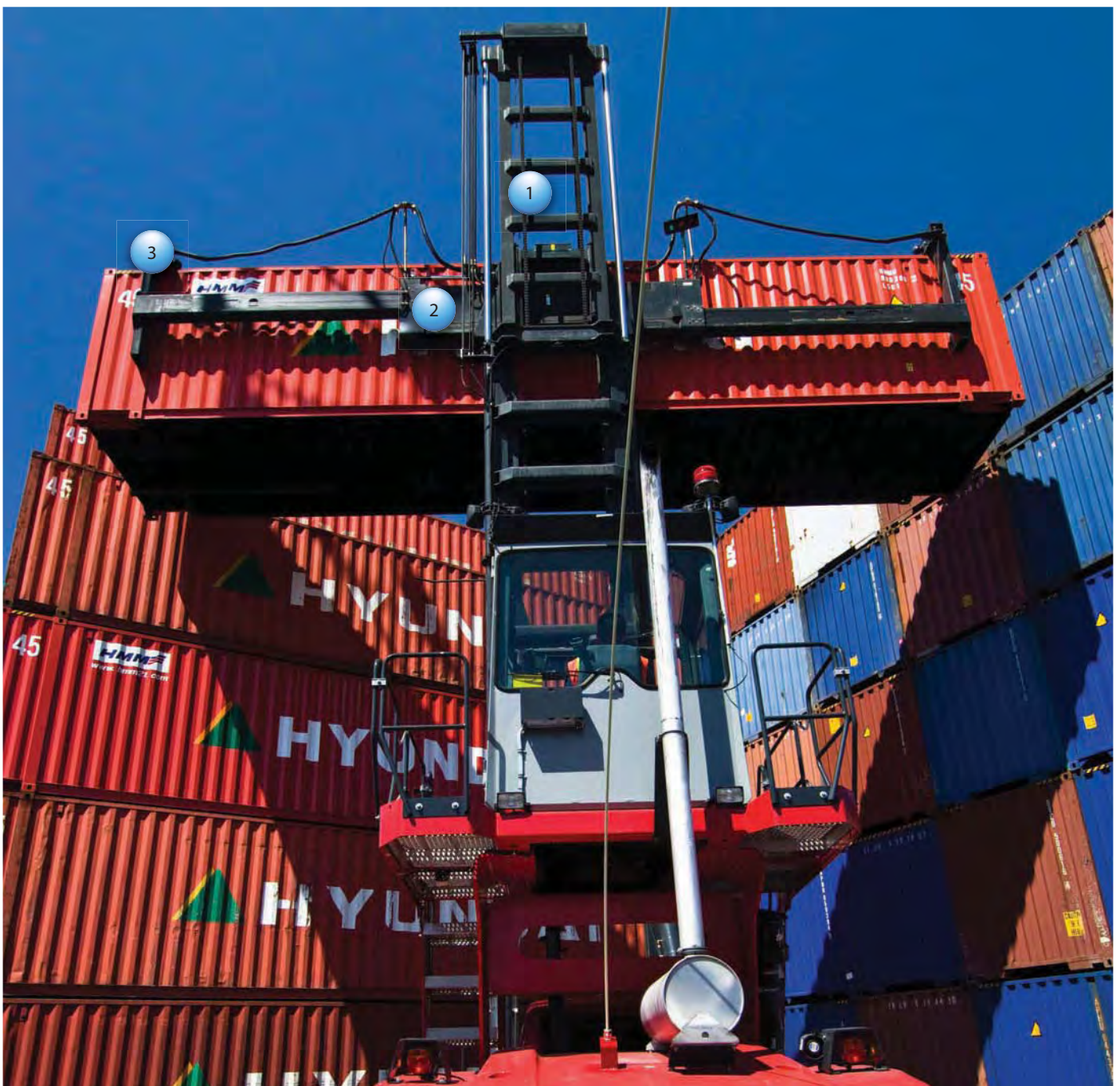


Empty Container Handler

The Empty Container Handler fulfils both the conditions of fast and efficient stacking and the condition of minimum ground area by the two empty container trucks ranges.

The mechanisms that require lubrication are mainly chains and side spreaders, twistlocks.

Lubricant Solutions for Empty Container Handler



1

Roller Chain



Chain lubricating oil is applied to protect the chain from wears and seizure. In addition, it provides resistance to corrosion especially when operating in seawater environment.

Lubricants	Base Fluid	ISO Viscosity	Flash Point (°C)	Operating Temp (°C)
TACBECON WR 460	Mineral	460	240	-10 to 150

2

Telescopic Side Spreader



TACBECON SG 1000S, a heavy duty grease, can be applied to reduce the sliding friction in the telescopic side spreader as well as to protect the metal part from corrosion especially operating in the seaport environment.

Lubricants	Thickening Agent	NLGI	Dropping Point (°C)	Operating Temp (°C)
TACBECON SG 1000S	Li-Ca	2	>190	-20 to 120

3

Vertical Twistlocks



TACBECON SG 1000S can be applied on the vertical twistlock because it protects the mechanisms from high-loading pressure and corrosion when operating in seaport environment.

Lubricants	Thickening Agent	NLGI	Dropping Point (°C)	Operating Temp (°C)
TACBECON SG 1000S	Li-Ca	2	>190	-20 to 120



Prime Mover

At seaport, prime movers are deployed as a mean of containers transportation. These applications requires lubrication to sustain optimal performance in the seaport environment.

Lubricant Solutions for Prime Mover



1 Fifth Wheel Coupling



The fifth wheel coupling requires grease with extreme-pressure and anti-wear properties. TACBECON SG 1000S is an excellent choice as it offers benefits including: excellent water and corrosion resistance; excellent shear stability.

Lubricants	Thickening Agent	NLGI	Dropping Point (°C)	Operating Temp (°C)
TACBECON SG 1000S	Li-Ca	2	>190	-20 to 120

2 Truck Hub Bearing



It is essential to lubricate the truck hub bearings as it offers protection from wears in any situation such as heat, water, and pressure. TACBECON SG 500 and TACBECON TS 312 are recommended for this application.

Lubricants	Thickening Agent	NLGI	Dropping Point (°C)	Operating Temp (°C)
TACBECON SG 500	Li-Ca	2	>200	-20 to 130
TACBECON TS 312	Ca Complex	1	>260	-20 to 150





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