



Pyroshield® Syn Open Gear Grease (5182)

Northport Sdn Bhd – Port Klang, Selangor, Malaysia

Bromma Spreader – Twistlock

- Significantly lengthened greasing intervals, from 250 hours to 2,250 hours
- Saved time by reducing the need for manual grease application
- Saved costs on lubricant, labour and downtime

Customer Profile

Northport Sdn Bhd is one of the largest multipurpose ports of its kind in the national ports system, offering dedicated facilities and services to handle a wide variety of cargoes ranging from containers to cars. It can handle break bulk cargoes and has the capacity to handle liquid and dry bulk cargoes of all types and shipment sizes. Northport has been in business since 1901 and has been an LE customer since 2013.

Application

Northport uses a Bromma Spreader Eh 132 with twistlock for container carrying.

Challenge

The spreader required frequent greasing of every 250 hours, which contributed to significant downtime and excessive lubricant and labour costs. The grease that Northport was using was not staying in place due to the heavy loads and extreme conditions. The twistlock had to be regreased frequently to ensure the equipment was properly protected against wear.

LE Solution

The LE distributor recommended Pyroshield® Syn Open Gear Grease (5182), which would enable Northport to extend their lubrication interval from 250 hours to 2,250 hours, while still providing protection for their equipment.



The Bromma Spreader Eh 132 is an important piece of equipment at the busy Northport facility, handling frequent heavy loads.

LE's Pyroshield 5182 is a heavy-duty synthetic lubricant developed for large unshrouded open gears in the mining, mineral processing and cement industries, and for other severe service applications that require a lubricant with superior wear protection, exceptional load-carrying ability, outstanding tackiness and ease of application at various temperatures. It also works well for applications in which gears experience high point-of-contact temperatures of 327°C and above. Pyroshield 5182 is formulated with high-viscosity synthetic base oil, a non-melting thickening system and LE's proprietary heat stable additives. It contains a synergistic mix of Almasol®, LE's exclusive wear-reducing additive, and a unique combination of extreme pressure additives.

Results

After implementing the switch in early 2014 to Pyroshield 5182 on all 38 of its spreader units, Northport technicians tested grease samples from the twistlock every 250 hours to evaluate its ability to stay in place and provide protection as promised.



After 2,250 hours, they found that the Pyroshield grease did perform as promised. The much longer lubrication interval made the LE grease cost less over time. Lubricating 38 spreader units with four application points per unit, the total cost of grease plus labour for the old grease was MYR 33,516, while it was MYR 24,320 for the Pyroshield grease.

In addition to these savings, there were 342 total hours of downtime for regreasing when using the previous grease. After switching to Pyroshield grease, there were only 76 hours of downtime for the same 2,250-hour period of operation.

Other LE Products Used

- Monolec® Extend EM Grease (1282)
– Electric motor on quay crane
- Almaplex® Ultra-Syn Lubricant (1299)
– Barrel coupling
- Perma® Flex Lubricator prefilled with Monolec® Extend EM Grease (1282)
– Quay crane

Thank you to LE's Mr. Saifuddin and to Northport's Equipment & Maintenance Division of RTG Section, for providing the information used in this report.

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Pyroshield Test

After starting to use LE's Pyroshield 5182 for the twistlock and landing pin, the technicians begin testing the grease during every PM (250-hour increments).

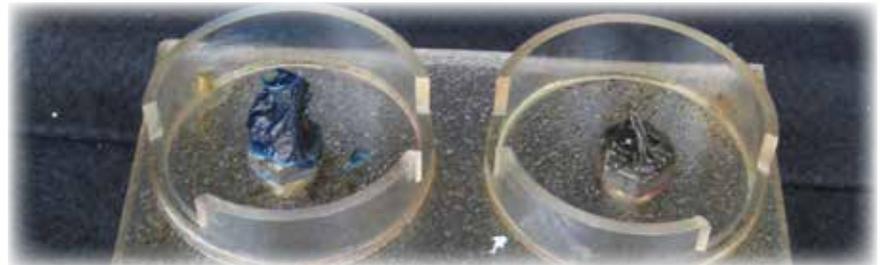


After 6 Months

The twistlock and landing pin shown up close after Pyroshield 5182 has been in use for six months.



Impact Tester



LE's Impact Tester (with 60-lb bar pressure) is used to check the grease's condition after applying an extreme load. Left: A sample of the previously used grease (blue) was taken from a new tube for testing purposes. Right: A sample of Pyroshield 5182 grease (brown) was taken from the twistlock after use.

Results



Left: After the impact test, the previously used grease (blue) splashes, showing it is not suitable for the load. Right: Pyroshield 5182 grease remains at the hammer head, which means a film layer remains to protect against the friction caused by metal-to-metal contact.