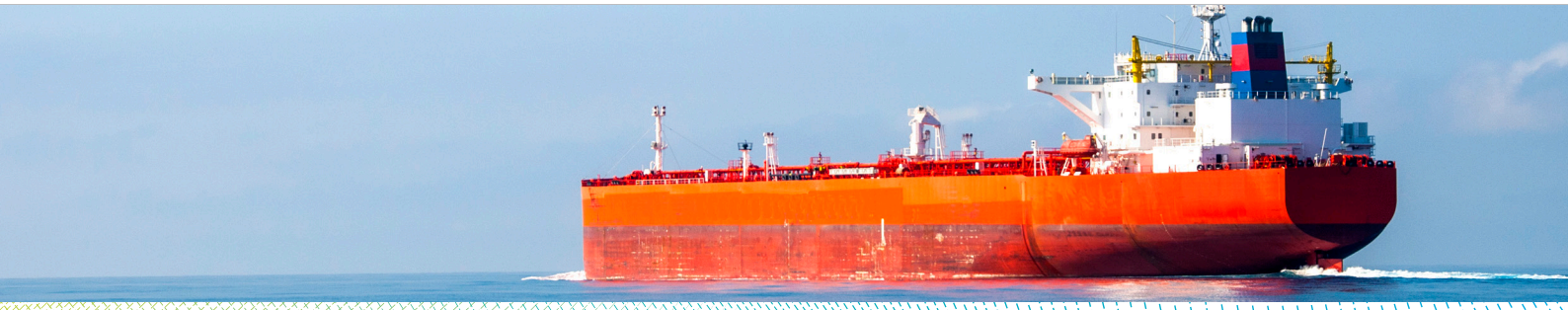
Mobil Gard™
Performance by ExxonMobil

Mobilgard™ 540 delivers outstanding engine cleanliness for vessel operating on low sulphur fuel



Energy lives here™

Mobilgard™ 540's high performance formulation and the insights from **Mobil Serv℠ Cylinder Condition Monitoring** ensured that a major ship management company could optimise one of its vessel's cylinder oil feed rate without compromising on engine performance or cleanliness.

ExxonMobil Marine Lubricants worked alongside a large ship management company to maintain the safe and reliable operation of its vessels during the transition to IMO 2020-compliant fuels. This successful collaboration was initiated by switching the Winterthur Gas and Diesel (WinGD) engine of one of its gas tankers to **Mobilgard 540** cylinder oil.

Background

A large ship management company needed to ensure that the move to 0.50% sulphur fuel did not hamper the operation of its vessels. Failure to successfully manage the switchover could lead to avoidable engine damage and maintenance, which would result in costly downtime. It therefore needed a high performance lubricant that would provide reliable engine protection and peace of mind during the transition to low sulphur fuels.

Situation

One of the company's gas tankers is powered by a WinGD W6X62 Tier II engine. The engine builder recommends used oil analysis and cylinder condition monitoring to ascertain a lubricant's ability to safely support engine operations. Regular testing is advised to identify and maintain the optimal feed rate. WinGD also advocates the use of a 40BN cylinder oil for use in its engines running on 0.50% sulphur fuel.

Having already adopted an IMO 2020-compliant fuel in readiness for 1 January deadline, the vessel was switched to **Mobilgard 540**, a 40BN cylinder oil specifically formulated to provide excellent keep-clean performance for engines running on 0.50% sulphur fuels.

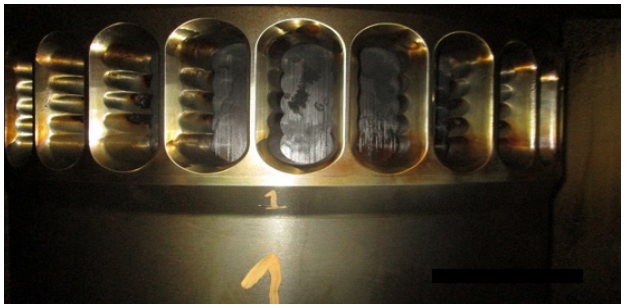


Fig 1 Image of piston top land

Fig 2 Image of piston ring pack

Recommendation

In line with OEM guidelines, throughout this collaboration ExxonMobil implemented **Mobil Serv Cylinder Condition Monitoring,** its scrape down oil analysis service. This provides users with ongoing engine insights on issues including under- and over-lubrication and the presence of wear metals. Its use onboard the ship quickly established the optimum feed rate for **Mobilgard 540**.

This was supplemented by periodic visual inspections via scavenge ports to map historic wear patterns and assess the overall engine cleanliness, such as the presence of lacquering around liners and piston rings and deposits on piston crowns and top lands.

Impact

The switch to **Mobilgard 540**, in combination with the data from **Mobil Serv Cylinder Condition Monitoring,** helped maintain the cleanliness and operational efficiency of the vessel's engine during and after the switch to a low sulphur fuel.

The customer reported that the engine, including components such as the crown and piston rings, were visibly clean. In addition, the optimised feed rate effectively controlled the presence of black lacquering tracks, which had previously been an issue. **Mobilgard 540** proved to be the optimal lubricant choice, ensuring peace of mind for the vessel operator.

"As a vessel operator with over 35 years' experience, we pride ourselves on delivering fully compliant operations. We therefore needed to find the best solutions to help ensure a successful transition to low sulphur fuels," said a fleet manager from the customer.

"Thanks to ExxonMobil's expertise and services, we had the confidence to change over to an IMO 2020-compliant fuel without compromising the cleanliness and performance of our engine. The switch to **Mobilgard 540**, in combination with the insights from **Mobil Serv Cylinder Condition Monitoring**, enabled us to set the optimal feed rate for the oil and maintain engine cleanliness."

Based on the experience of a single customer. Actual results may vary depending upon the type of equipment used, its condition, its maintenance, operating conditions and environment and any prior lubricant used.