

# A switch to Mobilgard<sup>™</sup> 5100 cylinder oil helped cut cylinder oil consumption by 26 per cent

## Wärtsilä 12RT-flex96C



Energy lives here<sup>™</sup>

A change to Mobilgard<sup>™</sup> 5100 cylinder oil, and implementing Mobil Serv<sup>SM</sup> Cylinder Condition Monitoring, helped prevent cold corrosion, enabled effective engine operation under varying load conditions, and safely and efficiently optimised oil feed rates in a Wärtsilä 12RT-flex96C engine.

### Situation

ExxonMobil engineers switched a container vessel from a 70 Base Number (BN) cylinder oil to Mobilgard 5100 cylinder oil to address fears of cold corrosion.

At the start of the test, the vessel engine was operating at a 45 per cent load on a heavy fuel oil (HFO) with a 2.97 per cent sulphur level. The vessel was operating at a feed rate of 1.29g/kWh, and any further reduction caused the reserve BN levels to fall below OEM-recommended level, thus allowing the engine to be susceptible to cold corrosion.

### Recommendation

Excellent team work, effective onboard implementation of Mobil Serv Cylinder Condition Monitoring and the introduction of Mobilgard 5100 cylinder oil enabled a feed rate reduction to 0.95 g/kWh while offering superior levels of protection, as demonstrated by the decrease in iron wear levels and sufficient reserve BN to mitigate any effects of cold corrosion and further optimise feed rates.

### Impact

By switching to Mobilgard 5100 cylinder oil and implementing Mobil Serv Cylinder Condition Monitoring, feed rates were reduced by 26 per cent, providing overall savings in lubricant and operational expenditures. The conversion also provided protection against cold corrosion, and the benefits of sustained, enhanced engine performance and reduced deposits.

The vessel operator has implemented the switch to Mobilgard 5100 cylinder oil on seven other vessels to reap its technical and commercial benefits.

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