

# Cold corrosion eliminated. Oil consumption reduced.

APL | MAN Diesel Mark 9.2, Mark 7 and Wärtsilä RTA engines



Energy lives here™

Mobilgard™ 5100 cylinder oil and Mobil Serv™ Cylinder Condition Monitoring ended cold corrosion, reduced piston and liner wear, saved associated maintenance expenses and cut cylinder oil consumption in MAN Mark 9.2, MAN Mark 7 and Wärtsilä RTA engines.

## Situation

APL, a leading provider of global container shipping services, discovered that its MAN Mark 9.2 engines suffered from significant levels of cold corrosion. If this continued, it could have led to substantial downtime and higher operating costs. Its MAN Mark 7 and Wärtsilä RTA engines showed lower levels of cold corrosion when slow steaming, and APL was keen to find the optimal lubrication solution.

## Recommendation

Mobil Serv Cylinder Condition Monitoring was installed across the vessels following engine builder recommendations. Data was used to monitor cold corrosion and assess cylinder oil needs, which optimised feed rates.

MAN Mark 9.2 engines benefited from switching to Mobilgard 5100, a 100 BN cylinder oil. This is a more cost-effective solution for engines suffering from high levels of cold corrosion compared to a lower-BN oil at a higher feed rate. For less-corrosive MAN Mark 7 and Wärtsilä RTA engines, ExxonMobil engineers recommended continued use of Mobilgard™ 570, a 70 BN cylinder oil monitored by Mobil Serv Cylinder Condition Monitoring.

## Impact

Switching the MAN Mark 9.2 engines to Mobilgard 5100 cylinder oil put an end to cold corrosion while also providing an 18.5 per cent reduction in cylinder oil consumption. End-of-trial data suggested that a further 10 per cent optimisation would be possible, depending on operating conditions. Analysis of the Mobil Serv Cylinder Condition Monitoring data resulted in an overall feed rate saving of 7 per cent for the MAN Mark 7 and Wärtsilä RTA engines, which were running Mobilgard 570 oil.

APL reduced cylinder oil consumption in its MAN Mark 9.2 engines by

# 18.5%