

# Princess Cruises reduces oil consumption and saves over US\$100,000

Princess Cruises | Wärtsilä 46



Energy lives here™

By adopting the Mobil Signum<sup>SM</sup> Oil Analysis programme – including a specialized medium-speed engine oil test slate – Princess Cruises was able to extend their oil change intervals across a fleet of seven ships. This saved over 200,000 litres of oil and reduced annual operating costs by over \$100,000.

## Situation

Like many shipping operators, Princess Cruises focuses on balancing operating costs – looking to optimise engine protection while reducing costs by lowering oil consumption. Princess Cruises takes a proactive approach to ship maintenance: it participates in ExxonMobil's Signum<sup>SM</sup> Oil Analysis programme, which features the Detecting Asphaltene Contamination (DAC) oil analysis test slate. It is an advanced method for monitoring medium-speed engine lubricants for residual fuel contamination and the presence of asphaltenes.

Signum Oil Analysis helps to identify the optimum TBN lubricant to ensure that the medium-speed engine is protected from corrosive wear and money is saved by avoiding over-lubrication. To emphasise TBN stabilisation, Princess Cruises switched from normal oil consumption to artificial consumption, where oil is added on a regular basis, but drain intervals are prolonged.

## Recommendation

ExxonMobil recommended an approach based on topping up the oil on a regular basis, which would maintain the TBN and avoid needing to complete a full oil drain – saving time and money. Under normal conditions, the oil's TBN would reach excessive levels after approximately 4,000 hours, requiring a full sump change, but increasing artificial oil consumption by 76 litres a day above normal levels overcame the issue. Princess Cruises uses Mobilgard™ M50 engine oil, which is formulated to provide outstanding residual fuel compatibility characteristics and is especially effective in promoting engine cleanliness.

## Impact

Using artificial consumption to stabilise the TBN of Mobilgard M50 oil on each of its seven ships, Princess Cruises was able to extend the oil change interval, with overall volume savings of over 200,000 litres in the first year. This equates to a reduction in total lubrication costs of more than US\$100,000.