Mobilgard™ M50 Series
For use in the most severe residual-fueled, medium-speed diesel applications

Product features
Mobilgard™ M50 Series high-performance 50 BN engine oils can offer:

- Excellent TBN reserve and retention
- Excellent thermal and oxidation stability
- High residual fuel compatibility
- Low-volatility base stocks

Potential benefits
Mobilgard M50 Series oils can help:

1. Reduce lubricant consumption
2. Reduce deposits in piston undercrown and ring belt areas
3. Minimise sludge formation for longer oil life and cleaner engines
4. Combat fuel/combustion-related corrosion and deposits

Outstanding fuel compatibility
Mobilgard M50 oil is formulated to provide outstanding residual fuel compatibility characteristics, which helps to inhibit sludge formation and reduce piston undercrown deposits — leading to long oil life and extended component life. Low-volatility base stocks allow for reduced lubricant consumption, which further adds to potential savings.

The oil is also recommended for topping-up existing oil with a low BN value, raising this to the required value.

Product overview
Mobilgard M50 is a high-performance 50 BN engine oil recommended for vessels operating on heavy fuel oil (HFO). Formulated using the latest detergent additive technology, its outstanding residual fuel compatibility helps ensure excellent engine cleanliness.

Princess Cruises was able to extend oil change intervals and save over 200,000 litres of oil, reducing operating costs across seven ships powered by Wärtsilä 46 engines.*

*Based on the experience of a single customer. Actual results can vary depending upon the type of equipment used and its maintenance, operating conditions and environment, and any prior lubricant used.
Mobilgard™ M50 Series

Excellent engine cleanliness
Mobilgard™ M50 oil helps engines stay clean by cutting fuel- and combustion-related corrosion and deposit buildup. It has excellent BN retention and resistance to viscosity increase, ensuring the oil reaches critical components. This helps to enhance component life and overhaul intervals while minimising filter changes and purifier maintenance.

Corrosion protection
Mobilgard M50 oil is especially beneficial in engines with low crankcase oil consumption. Its high alkalinity reserve provides superior protection in neutralising the strong acids resulting from the use of high-sulphur fuels, reducing ring, cylinder and bearing corrosion.

Typical properties

<table>
<thead>
<tr>
<th>Mobilgard M50 Series</th>
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<tbody>
<tr>
<td>SAE Grade</td>
<td>40</td>
</tr>
<tr>
<td>Specific Gravity at 15°C</td>
<td>0.922</td>
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<tr>
<td>Flash Point, ºC, ASTM D 92</td>
<td>228</td>
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<tr>
<td>Pour Point, ºC, ASTM D 97</td>
<td>-6</td>
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<tr>
<td>Viscosity, ASTM D 445</td>
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<tr>
<td>cSt, at 100°C</td>
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<tr>
<td>TBN, mg KOH/g, ASTM D 2896</td>
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<tr>
<td>Sulphated Ash, wt%, ASTM D 874</td>
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