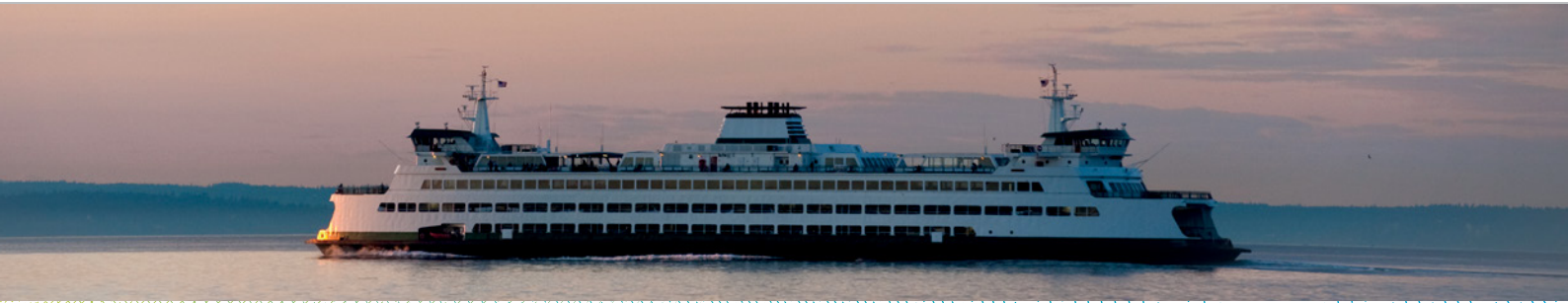


# Mobilgard™ M20 Series

Premium lubricant designed for medium-speed diesel engines using low sulphur fuel and LNG



Energy lives here™

## Product features

Mobilgard™ M20 Series is a 20BN engine oil that provides excellent engine cleanliness, especially in crankcases, camshafts, piston ring-packs and piston undercrowns when operating with a variety of fuels. It can offer:

- Excellent thermal and oxidation stability
- Low volatility
- High load-carrying properties
- Suitable for use with liquefied natural gas (LNG)

Mobilgard M20 Series is specifically formulated for use in medium speed engines using

**0.50%** and **0.10%**

sulphur fuels and liquefied natural gas (LNG) due to its low BN formulation.<sup>1</sup>

## Potential benefits

Mobilgard M20 Series engine oils help:

- 1** Provide excellent lube-fuel compatibility
- 2** Maximise engine cleanliness
- 3** Offer outstanding corrosion protection
- 4** Enhance the life of critical wear surfaces
- 5** Minimise lubricant consumption

## Excellent lube-fuel compatibility and proven LNG operation

The Mobilgard™ M Series, including Mobilgard M20 Series, provides outstanding fuel compatibility characteristics, which help to reduce sludge formation, leading to longer oil life and excellent engine cleanliness. The excellent capability for handling raw fuel dilution means that the oil keeps the critical piston under-crown area free of deposits. It is also suitable for use with LNG due to its low BN formulation.

## Maintaining engine cleanliness

Mobilgard M20 Series helps engines stay cleaner for longer, which enables reduced fuel- and combustion-related corrosion and deposit build-up. The oil offers excellent BN retention and resistance to viscosity increase, ensuring that the oil reaches critical engine components. This helps to maximise component life and cleaning intervals, and minimise filter changes and purifier maintenance.

<sup>1</sup>ExxonMobil recommends that you follow OEM guidance at all times.

# Mobilgard™ M20 Series

## Excellent piston deposit control

Mobilgard™ M20 Series possess excellent thermal and oxidation stability, which help to retain cleanliness and prevent deposit build-up in critical areas, such as piston under-crowns and piston ring- packs. This helps to reduce the risk of premature piston failure due to overheating, and reduces liner and ring wear compared to conventional mineral products.



## Helps reduce engine wear and helps with cost savings

Mobilgard M20 Series has outstanding rust and corrosion properties, which help them to protect critical wear surfaces from wear and acidic corrosion, helping keep maintenance and repair costs down. To maximise potential cost savings ExxonMobil recommends that vessel operators implement Mobil Serv™ Lubricant Analysis. The used oil analysis service for four-stroke engines includes the company's patented DAC test, which checks lubricant samples for asphaltene contamination. Left undetected this could lead to piston damage and avoidable repairs and excessive oil consumption.

Mobilgard™ M20 Series  
has received  
**No Objection Letters**  
from both MAN ES and  
Wärtsilä

## Typical properties

| Mobilgard M20 Series                   | M420  | M320  |
|--|-------|-------|
| SAE Grade                              | 40    | 30    |
| Specific Gravity at 15°C               | 0.902 | 0.902 |
| Flash Point, °C, ASTM D 92             | 271   | 255   |
| Pour Point, °C, ASTM D 97              | -15   | -12   |
| Viscosity, ASTM D 445<br>cSt, at 100°C | 14    | 10.8  |
| TBN, mg KOH/g, ASTM D 2896             | 20    | 20    |
| Sulphated Ash, wt%, ASTM D 874         | 2.5   | 2.5   |