ExxonMobil Marine Lubricants

# Mobilgard L540

## Diesel Engine Cylinder Oil

### Product Description

Mobilgard L540 by ExxonMobil is a superior quality, extra high performance marine diesel engine cylinder oil. This unique formulation has been specifically developed for engines running in a low sulphur heavy fuel oil (HFO) environment. This cylinder lubricant provides maximum protection from adhesive and corrosive wear at the higher operating temperatures and pressures of today's modern crosshead engines, for maximum reliability. It employs additives with greater therrmal stability and superior acid-corrosion protection. It has an optimum viscosity of over 20 cSt. at 100ºC and low volatility for best lubricant distribution and film retention. Through the use of unique formulation technology, the higher viscosity is attained with little or no use of thermally less stable, deposit-producing bright stock. Advanced technology at the 40 TBN alkalinity level in Mobilgard L540 has demonstrated excellent ring and liner wear protection and cleanliness under sustained operation with fuel sulphur levels from less than 0.3% up to 1.5%.

### Features and Benefits

Mobilgard L540 cylinder oil offers the following features and potential benefits:

| Features | Advantages and Potential Benefits |
|---|---|
| Excellent thermal and oxidation stability | Reduced deposits and sludge formation<br>Extended oil life<br>Cleaner engine reduces lay-up time required for overhauls |
| Exceptional antiwear properties | Reduced liner and ring wear<br>Excellent anti-scuffing control |
| Outstanding detergency capability | Superior piston and liner cleanliness increases combustion efficiency and extends periods between piston overhauls |
| High Viscosity Index and stable basestocks | Reduced cylinder oil consumption |

### Applications

Mobilgard L540 has been developed for marine crosshead engines with increased power and fuel efficiency. Such engines exhibit higher temperatures and pressures in the cylinder, which reduce the lubricant's viscosity and increase the loads which it must withstand. Longer piston strokes have greatly increased the amount of surface to be protected and the amount of time the lubricant must withstand the severe cylinder temperatures and corrosive sulphur acids. Mobilgard L540 has also demonstrated superior performance in earlier engine designs.

To ensure achieving the maximum equipment life possible, particular attention should be paid to the manufacturer's special recommendations regarding the running-in of new rings and liners.

Mobilgard L540 was specially formulated for use in applications with fuel sulphur levels ranging from less than 0.3% up to 1.5%. Applications where the sulphur level is above 1.5% require special consideration and should be discussed with your ExxonMobil representative.

Appropriate feed rates should be verified in all cases by through-the-ports inspection of liners to ensure adequate oil film.

### Typical Properties

| SAE Grade | 50 |
|---|---|
| Specific Gravity at 15ºC | 0.917 |
| Flash Point, ºC, ASTM D 92 | 264 |
| Pour Point, ºC, ASTM D 97 | -6 |
| Viscosity, ASTM D 445 | |
| cSt. at 40ºC | 236 |

| | |
|---|---|
| cSt, at 40°C | 236 |
| cSt, at 100ºC | 21 |
| Viscosity Index, ASTM D 2270 | 105 |
| TBN, mg KOH/g, ASTM D 2896 | 40 |

### Health and Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application, following the recommendations provided in the Material Safety Data Sheet (MSDS). MSDSs are available upon request through your sales contract office, or via the Internet on http://www.exxonmobil.com. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.



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Due to continual product research and development, the information contained herein is subject to change without notification. Typical Properties may vary slightly.