Shell Marine

SHELL SIRIUS 15W-40
High-performance, high-speed diesel engine oil
Whether you operate coastal vessels, fishing trawlers, rescue boats or lifeboats, your profitability is heavily influenced by your ability to control maintenance and fuel costs. It is critical, therefore, that you select a diesel engine oil that protects your engine and keeps it clean.

Shell Sirius 15W-40 is a high-performance diesel engine lubricant for modern high-speed engines. With a special new formulation designed to help improve the efficiency and life of your machinery, it can help to lower your maintenance and fuel costs and increase your vessels’ reliability. It is suitable for most heavy-duty high-speed engines, non-turbocharged and turbocharged alike, and has a wide array of engine manufacturers’ approvals.

**PERFORMANCE BENEFITS**

- Up to 50% more cleanliness control
- Up to 50% more protection against corrosion
- Up to 30% better cylinder liner wear performance
- Up to 50% better valve train wear performance

Compared with previous-generation oils (API CH-4 products) in Mercedes-Benz, Cummins and Mack engine tests, laboratory specification tests and field trials

**LONGER OIL LIFE**

Shell Sirius 15W-40’s additive formulation enables it to fight the combined effects of combustion acids and increased heat for longer than its predecessors could. This performance reserve ensures that the oil continues to protect against wear and corrosion right to the end of the oil-drain interval.

**ADAPTIVE TECHNOLOGY**

All Shell Sirius engine oils are formulated with Shell’s adaptive technology. This helps to provide protection in three key areas:
- acid control
- deposit control
- wear control.

**ACID CONTROL**

The acids formed when diesel fuel is burned can escape into the engine oil, where they will corrode engine parts such as bearings pictured (Figure 1). However, Shell Sirius oils contain powerful neutralising agents that protect the engine from attack (Figure 2).

**DEPOSIT CONTROL**

The buildup of excessive piston deposits can result in ring sticking and abrasion, and cylinder wear (Figure 3). This shortens engine life and increases oil consumption. However, Shell Sirius oils contain active molecules that block or carry away the particles that can cause deposits (Figure 4).

**WEAR CONTROL**

Keeping moving metal surfaces separated is a vital function of oil. Failure to do this can result in hot spots and wear (Figure 5). However, Shell Sirius oils contain molecules that transform into protective films that keep metal surfaces apart, thereby preventing wear (Figure 6).
WITH A WIDE ARRAY OF ENGINE MANUFACTURERS' APPROVALS, SHELL SIRIUS 15W-40 IS DESIGNED TO HELP REDUCE YOUR MAINTENANCE AND FUEL COSTS.

TYPICAL PHYSICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>SPECIFICATION</th>
<th>SHELL SIRIUS 15W-40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinematic viscosity at 40°C, mm²/s</td>
<td>105.1</td>
</tr>
<tr>
<td>Kinematic viscosity at 100°C, mm²/s</td>
<td>14.3</td>
</tr>
<tr>
<td>Viscosity index (ASTM D2270)</td>
<td>139</td>
</tr>
<tr>
<td>Density at 15°C (ASTM D4052), kg/m³</td>
<td>886</td>
</tr>
<tr>
<td>Flash point, closed cup, °C</td>
<td>205</td>
</tr>
<tr>
<td>Total base number, mg KOH/g</td>
<td>10.8</td>
</tr>
</tbody>
</table>

APPLICATIONS

- High-speed propulsion engines such as coastal vessels, fishing trawlers, rescue boats and lifeboats
- High-speed engine generators

HEALTH, SAFETY AND ENVIRONMENT

Shell Sirius 15W-40 is unlikely to present any significant health or safety hazards when used properly in the recommended application and good standards of personal hygiene are maintained. Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water. Guidance on health and safety is available on the appropriate material safety data sheet, which is available from www.epc.shell.com.

SPECIFICATIONS, APPROVALS AND RECOMMENDATIONS

- Caterpillar ECF-1a, ECF-2
- Cummins CES 200-71, 72, 76
- Cummins (B&C series) CES 200-75
- MTU MTL 5044 Category 1/2
- Mercedes-Benz 228.3
- MAN 3275
- Volvo VDS 2
- API CI-4, CH-4, SL
- ACEA E7, E5, E3
- Global DHD-1

For a full list of equipment approvals and recommendations, please consult your local Shell technical help desk.

DISPOSE OF USED OIL CORRECTLY. DO NOT DISCHARGE IT INTO THE OCEAN, DRAINS OR SOIL.
To find out more about our products and services, please contact your local Shell Marine account manager or email shellmarine-info@shell.com.

Visit www.shell.com/marine

Issued August 2018