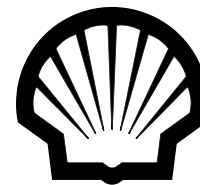


Shell Sirius FB Oils

Medium-speed trunk-piston diesel engine oil



Shell Sirius FB Oils are premium quality marine diesel engine oils for use in medium-speed trunk-piston engines operating on distillate fuels.

They are specially designed to control oil consumption, in modern highly rated distillate fuelled diesel engines where liner lacquering can be a problem.

Applications

Highly rated medium-speed diesel engines operating on distillate fuels, especially :

- in high load or overload operation (e.g. fishing trawlers)
- where low sulphur (< 0.5% wt.) fuels are in use

Cylinder Liner Lacquering

The medium-speed diesel engine is becoming more demanding to lubricate. Higher engine efficiencies are being achieved through engine designs which incorporate higher cylinder pressures, higher combustion temperatures, and the use of very high pressure fuel injection. In some modern distillate fuelled engines, these conditions may lead to the formation of a layer of brown or black lacquer on the cylinder liner surfaces. This can fill in the honing pattern, resulting in a loss of oil control and runaway oil consumption. The condition is particularly common in severe operation (e.g. overload or high torque conditions). There is also evidence that it is more common where low sulphur (< 0.5% wt.) distillate fuels are in use.

Performance Features

Shell Sirius FB has been formulated to provide:

- Reduced levels of liner lacquer, thereby maintaining lubricating oil consumption at its normal level. Unlike many other oils used to control liner lacquer, this is achieved without compromising other aspects of performance in any way.
- A high level of protection against bore polishing, which is another cause of high oil consumption.
- Excellent piston and crankcase cleanliness.
- Ability to release water and contaminants in centrifugal separators.
- Load carrying properties required for use in reduction gears.
- API performance level CD.

Field Experience and Approvals

The performance of Shell Sirius FB has been demonstrated by extensive trials in Stork Wartsila Diesel, MWM Deutz, MAN B&W Alpha Diesel, MaK and Wartsila engines and the relevant approvals have been obtained from these manufacturers.

Typical Physical Characteristics

Shell Sirius FB Oil	30	40
SAE Viscosity Grade	30	40
Kinematic Viscosity		
@ 40°C cSt	94.5	138.7
100°C cSt	11.4	14.4
Density @ 15°C, kg/l	0.893	0.898
Flash Point (PMCC), °C	202	210
Pour Point, °C	-18	-18
TBN-E, mgKOH/g (ASTM D 2896)	13	13
FZG Load Carrying Capacity A/8, 3/90, Failure Load Stage	11	11

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

Health & Safety

Shell Sirius FB Oils are unlikely to present any significant health or safety hazard when properly used in the recommended application, and good standards of industrial and personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

For further guidance on Product Health & Safety refer to the appropriate Shell Product Safety Data Sheet.

Protect the environment

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.