

SHELL ARGINA X 40

MEDIUM-SPEED TRUNK-PISTON DIESEL ENGINE OIL

DESIGNED TO MEET CHALLENGES

Shell Argina X 40 is a multi-functional crankcase lubricant for highly rated medium-speed diesel engines operating on residual fuel. Shell Argina X 40 is designed for conditions of high oil stress and has been formulated to help improve deposit control.

PERFORMANCE FEATURES

ENGINE CLEANLINESS

- Shell Argina X 40 has built a reputation over many years for very good engine cleanliness. The product has been formulated to help reduce deposits in critical areas (e.g. piston undercrown).

RAPID NEUTRALISATION OF ACIDIC COMBUSTION PRODUCTS

- Gives long-term protection against corrosion of ferrous and non-ferrous metals.

THERMAL STABILITY AND RESISTANCE TO OXIDATION

- Provides excellent high temperature deposit control and contributes to long oil life.

SUITABILITY FOR CENTRIFUGAL SEPARATORS

- High detergency/low dispersancy formulation releases contaminants and water readily in centrifugal separators.

APPLICATIONS

Medium-speed industrial or marine propulsion and auxiliary engines, burning residual fuel oils, which create conditions of high oil stress. These conditions usually occur:

- in newer engine designs, less than 10 years old and/or fitted with flame rings
- where oil consumption is 0.5 – 1g/kWh
- where load factors are >85% or
- where fuels with sulphur >3% are in use.
- Marine engine reduction gears (SAE 40 only) and certain other ship-board applications, where specialist lubricants are not required.
- Medium-speed engines burning residual fuel need very specialised lubricants. Heavy fuels contaminate the oil with asphaltenes, requiring special types of detergency to avoid sludges. The combustion of high sulphur fuels produces sulphur acids, which cause high wear rates of piston rings and cylinder liners unless neutralised by a high basicity reserve in the oil. The oil is in service for very long periods, so centrifugal separators are used to remove water and combustion contaminants from the oil.

SPECIFICATIONS, APPROVALS AND RECOMMENDATIONS

MEETS THE ENGINE TEST CRITERIA FOR:

- API CF.

TYPICAL PHYSICAL CHARACTERISTICS

CHARACTERISTICS	40
Kinematic Viscosity (ASTM D 445, IP 226) @ 40°C mm ² /s	135
@ 100°C mm ² /s	14
Viscosity Index (ASTM D 2270, IP 226)	100
Density @ 15°C kg/m ³ (ASTM D 4052, IP 365)	921
Flash Point °C (PMCC) (ASTM D 93, IP 34)	205
Pour Point °C (ASTM D 97, IP 15)	-18
Total Base Number mg KOH/g (ASTM D 2896, IP 276)	50
Sulphated Ash % wt (ASTM D 874, IP 163)	6.1
Load Carrying Capacity (FZG Gear Machine) Failure load stage	10