



# MARINE NAUTILUS HEAVY



## DESCRIPTION

NAUTILUS HEAVY is a premium quality cylinder oil of high alkalinity levels, designed for low speed crosshead diesel engines that use residual fuel with sulfur content up to 3.5% weight. It has been developed for highly rated marine crosshead engines, operating under higher pressures and elevated temperatures. It provides superior ring and liner wear protection and excellent piston cleanliness helping the engine's life prolongation.

## APPLICATIONS

It is suitable for the cylinder lubrication of highly rated lo

w speed crosshead marine diesel engines operating under high pressure and high temperature conditions, burning residual fuel of sulphur content 1.0-3.5%. Suitable for all 2-stroke engines, modern engines, but also to cater for existing older models. Applications where the sulphur level is below 1.0% require special consideration and the manufacturers' recommendations should be followed. Please follow all OEM's guidelines for feed rates.

## CHARACTERISTICS-BENEFITS

CHARACTERISTICS	BENEFITS
Outstanding neutralisation of acids resulting from fuel combustion.	Maximum protection from adhesive and corrosive wear, prolongation of engine's life, reduced maintenance costs.
Exceptional detergent properties, protects oil system from the case of accidental combustion of residue leakage.	Exceptionally engine cleanliness, minimal deposits on piston, piston rings, ring grooves and cylinder ports.
Enhanced boundary lubrication properties, protection against wear.	A lubricant protecting film is permanently retained on engine parts, allowing extended periods between piston overhauls.
Perfect homogeneity.	No separation in extended storage.

## PHYSICAL-CHEMICAL CHARACTERISTICS

NAUTILUS HEAVY	METHOD	
SAE		50
Density at 15°C, g/cm <sup>3</sup>	ASTM D1298	0,929
Viscosity, Kinematic (cSt) 40 <sup>0</sup> C	ASTM D445	216
Viscosity, Kinematic (cSt) 100 <sup>0</sup> C	ASTM D445	19,5
Viscosity index	ASTM D2270	101
Pour point, °C	ASTM D97	-12
TBN, mgKOH/g	ASTM D2896	70
Flash point, COC, °C	ASTM D92	249

The above mentioned characteristics represent mean values.

## SPECIFICATIONS

Wartsila, Mitsubishi

## Approvals

Man Diesel Turbo (NOL) , Wartsila