

MANNOL TS-3 UHPD EXTRA
7103

Innovative all-weather semi-synthetic (esters + HC-synthes) motor oil for modern heavy duty and high-speed diesel engines with and without turbocharging, operated in difficult conditions. The oil complies with the Global Specification GLOBAL-DHD-1, which takes into account all the requirements of European, American and Japanese manufacturers for heavy diesel engines manufactured since 1998, operating in the most difficult conditions with increased mileage between oil changes that comply with current standards for the content of toxic substances in exhaust gases and installed on heavy vehicles (more than 3.9 tons).

Product properties:
- Ester components in combination with the highest quality semi-synthetic base that meets GLOBAL DHD-1 requirements, featuring optimal viscosity in a wide temperature range, provide excellent anti-friction, anti-wear and anti-scuffing properties, which significantly extend the life of equipment in all, even the most extreme, operating modes in a wide range of ambient temperatures and provides significant fuel savings;
- The ester components in combination with natural antioxidants provide increased thermal oxidative stability to the oil, which, in combination with excellent detergent-dispersant properties (TBN> 10) and low ash content, effectively reduces the formation of scaling and varnish, prevents deposits of all kinds and maintains engine parts exceptionally clean throughout the service between replacements;
- A unique ester-containing formulation provides oil resistance to aging, and due to the reduced evaporation and high flash point, it reduces oil scaling "waste", which enables it to be used in engines with a long like interval and conventional motors;
- Due to the ester-containing base, the optimal viscosity has excellent low-temperature properties, including a low pour point, along with good oil pumpability and crankability of engine components at low temperatures, easy “cold start” (up to -30 °C) and reduced startup wear;
- Compatible with exhaust gas recirculation (EGR) systems. Reduces soot formation;
- Effectively protects engine parts from all types of corrosion;
- lower foam formation;
- Effectively deals with the increase in shear stress during operation caused by elevated viscosity due to soot dispersion;
- Can be used in combination with few all with higher sulphur content.

Designed for all types of heavy duty diesel motors (long distance trucks, buses, etc.), off-road machinery (construction, mining, agricultural) and special equipment from European, American and Asian manufacturers that meet the requirements of Euro I, II, III, IV where a performance level of CI-4 Plus or lower is required.

Can be used in gasoline engines where API SL or lower performance is required.

Specifications
SAE 10W-40
API CI-4 Plus
API CI-4/CH-4
ACEA E7
ACEA A3/B4
JASO DH-1
GLOBAL DHD-1
Recommendation
CATERPILLAR ECF-2
CATERPILLAR ECF-1-a
CUMMINS CES 20076
CUMMINS CES 20077
CUMMINS CES 20078
DETROIT DIESEL 93K215
MACK EO-N
MACK EO-M Plus
MAN M 3275-1
MB 228.1
MB 228.3
MTU Type 2
RENAULT RLD-2
VOLVO VDS-3

PACKAGING