


# MANNOL TS-3 SHPD 10W-40

## 7103

All-year-round mineral engine oil for modern heavy-duty and high-speed diesel engines with and without turbocharging operated in difficult conditions. Designed specifically to protect machinery and benefit most out of it regardless of operating conditions.

Product properties:
- Modern additives in combination with a mineral base of the highest quality, featuring optimal viscosity in a wide temperature range, provide excellent anti-friction and anti-wear 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;
- Synthetic components in combination with natural antioxidants provide increased thermal oxidative stability to the oil, which, in combination with excellent detergent-dispersant properties (TBN> 10) effectively reduces the formation of scaling and varnish, prevents deposits of all kinds and maintains engine parts very clean throughout the service between replacements;
- A unique formulation provides oil resistance to ageing, meanwhile, by reducing evaporation it reduces operating consumption, which enables it to be used in engines with long life intervals up to 45.000 km and conventional engines;
- Due to the base with optimal viscosity, it has excellent low-temperature properties, a low pour point, along with good oil pumpability and turnability of engine components at low temperatures, easy “cold starts” (down to -30 °C) and reduced startup wear;

Designed for all types of heavy-duty diesel engines (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 CH-4 or lower is required.

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

**Specifications**
SAE 10W-40
API CH-4/SL
ACEA E7
ACEA A3/B4
**Recommendation**
MAN M 3275-1
MB 228.3
MB 229.1
MTU Type 2
VOLVO VDS-2

## PACKAGING

| | | | |
|---|---|---|---|
| 10L | MN7103-10 | Plastic | |
| 1000L | MN7103-IBC | Pallet tank | |
| 208L | MN7103-DR | Drum | |
| 60L | MN7103-60 | Drum | |
| 20L | MN7103-20 | Plastic | |
| | MN7103-5 | | |