



## MANNOL TS-20 SHPD 7120

All-weather synthetic motor oil for heavy-duty and high-speed diesel engines with and without turbocharger, operating in difficult conditions. The oil has successfully passed road and laboratory tests at VOLVO, MACK and RENAULT centres and has their written approvals.

Product properties:

- An innovative additive package in combination with the highest quality synthetic base, featuring optimal viscosity within the required temperature range, provides excellent anti-friction, anti-wear and anti-scuffing properties, significantly extending the life of the scenery at all operating modes in a fairly wide range of ambient temperatures along with significant fuel savings;
- Phenol and amine antioxidants in combination with a synthetic base provide increased thermal oxidative stability to the oil, which, in combination with excellent detergent-dispersant properties and low ash content, effectively reduces scaling and varnish formation, prevents deposits of all kinds and maintains engine parts in perfectly clean condition throughout the entire interval between replacements;
- A unique formulation provides increased 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 synthetic 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 all exhaust gas after-treatment systems: - DPF, TWC, EGR and SCR thanks to the use of Low SAPS technology;
- 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;
- Suitable for engines using fuelled by natural gas (LNG) and petroleum (LPG) gas.

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 – V where a performance level of CG-4 or lower is required.

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

SAE 10W-30  
 API CJ-4/CK-4  
 ACEA E6  
 ACEA E7  
 ACEA E9  
 JASO DH-2  
 MB 228.31  
 MB 228.51  
 MB 235.28  
 SCANIA Low Ash  
 MAN M 3677  
 MAN M 3477  
 VOLVO VDS-4 Approval  
 RENAULT Truck RLD-3 Approval  
 MACK EO-O Premium Plus Approval  
 MACK EO-O Premium Plus -07  
 MTU Type 3.1  
 DEUTZ DQC IV-10 LA  
 CATERPILLAR ECF-2  
 CATERPILLAR ECF-3  
 CUMMINS CES 20081  
 DETROIT DIESEL DDC 93K218  
 VOITH Retarder Class B

## PACKAGING

10L	MN7120-10	Plastic	
1000L	MN7120-IBC	Pallet tank	
208L	MN7120-DR	Drum	
60L	MN7120-60	Drum	
20L	MN7120-20	Plastic	