MOTUL TEKMA MEGA-X OTR 15W-40 ES

Heavy-Duty Diesel Engine oil for OTR machinery
SHPD – Super High Performance Diesel / Full SAPS / Extended Service
Technosynthese® – *NGEN* Core®

TYPE OF USE

TEKMA MEGA-X OTR 15W-40 ES is a high-performance, Technosynthese® diesel engine oil developed for OTR (off-the-road) applications such as bulldozers, quarry and construction machinery, road-building equipment, and stationary engines.

This lubricant is compatible with both modern low-emission diesel engines (Euro II–V, EGR, SCR) and older generations and thus delivers reliable protection under severe operating conditions.
It can serve as a single lubricant solution for mixed fleets, offering versatility and convenience.

The high-performance semi-synthetic ***NGEN* Core®** formulation combines re-refined and virgin base oils with exclusive **Technosynthese®** technology, delivering consistent protection and dependable performance for modern heavy-duty engines.

PERFORMANCES

STANDARDS	ACEA E7
	API CI-4/SL
APPROVALS	Cummins CES 20078
	DAIMLER DTFR 15B110 (former MB 228.3)
	DEUTZ DQC III-18
	MACK EO-N
	MTU Type 2
	RENAULT TRUCKS RLD-2
	VOLVO VDS-3
PERFORMANCES	Cummins CES 20076
	Cummins CES 20077
	DETROIT DIESEL DFS93K215
	MAN M 3275-1
	CATERPILLAR ECF-1a
	CATERPILLAR ECF-2

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Product specifications are definitive from the order which is subject to our general conditions of sale and warranty.

MOTUL - 119 Bd Félix Faure - 93303 - Aubervilliers Cedex - BP 94 - FRANCE - Tel: 33 1 48 11 70 00 - Fax: 33 1 48 33 28 79 - www.motul.com

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ACEA E7-24 oils are Super High Performance Diesel (SHPD) lubricants providing effective control with respect to piston cleanliness and bore polishing. It is recommended for highly-rated diesel engines running under severe conditions e.g. extended drain intervals.
It is suitable for engines without particulate filters and most engines equipped with EGR.

API CI-4 oils are formulated to sustain engine durability where exhaust gas recirculation (EGR) is used and are intended for use with diesel fuels ranging in sulfur content up to 0.5% weight to meet 2004 exhaust emission standards.
API SL meets requirements for 2004 and older gasoline engines.

Caterpillar ECF-1a / ECF-2 is a lubricant specification designed for use in medium- and heavy-duty diesel engines where advanced aftertreatment systems such as Diesel Particulate Filters (DPFs) are not fitted.

Cummins CES 20076 describes the performance level of a premium oil for heavy duty and high horse-power engines without EGR in North America. It is based on API CH-4 and adds the requirement of a 300 hour Cummins M11 test.

Cummins CES 20077 describes the performance level of a premium oil for heavy duty and high horse-power engines without EGR outside North America. It was developed to provide adequate protection against wear, deposits, and oil thickening due to soot buildup, especially for engines without Exhaust Gas Recirculation (EGR) systems. This standard aligns with the API CH-4 category and adds the requirement of a 300 hour test to the ACEA E5 classification.

Cummins CES 20078 is a lubricant specification designed for heavy duty and midrange engines with EGR. The API classification which most closely satisfies CES 20078 Standard is API CI-4. It demands a HT/HS viscosity of min. 3.5 cSt, its focus is on improved protection against wear, oxidation, and soot-related viscosity increase in engines.

Daimler DTFR 15B110 is a lubricant specification designed for use in high performance medium and heavy-duty diesel engines where advanced aftertreatment systems such as Diesel Particulate Filters (DPFs) are not fitted. These vehicles would typically align with Euro IV emissions standard and prior.

Detroit Diesel DFS93K215 is a performance specification for heavy-duty diesel engine oils. It ensures proper lubrication and performance in Detroit Diesel engines, focusing on durability and performance in severe conditions.

Deutz DQC III-18 is a lubricant specification designed for use in medium and heavy-duty diesel engines with closed crankcase ventilation and high thermal loads. This specification is intended to be used in engines where advanced aftertreat-

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ment systems such as Diesel Particulate Filters (DPFs) are not fitted. These vehicles would typically align with the Stage IIIA emissions standard and prior.

MAN M3275-1 is a specification for oils used in Euro 2 engines in medium- and heavy-duty applications, requiring robust protection against wear, oxidation, and deposits.

MTU Type 2 specifies oils for MTU diesel engines with TBN: >8 mg KOH/g, focusing on high thermal stability and protection against wear and deposits in heavy-duty applications.

Volvo VDS-3 is a lubricant specification designed for use in medium and heavy-duty diesel engines where advanced after-treatment systems such as Diesel Particulate Filters (DPFs) are not fitted. The Volvo trucks, buses and construction equipment that require this type of lubricant would typically align with Euro IV or Stage IIIA emissions standard and prior.
Equals the **Mack EO-N** and **Renault Trucks RLD-2** specification.

RECOMMENDATIONS

Can be mixed with synthetic or mineral oils.

Oil changes should be performed according to the manufacturer's recommendations. Consult your vehicle's owner's manual or contact a dealer for specific guidelines, as they vary.

We also recommend the use of an oil monitoring program to optimize oil change intervals and maximize equipment protection.

PROPERTIES

Color	ASTM D1500	Amber
Viscosity grade	SAE J 300	15W-40
Density at 20°C (68°F)	ASTM D1298	0.871
Viscosity at 40°C (104°F)	ASTM D445	103.0 mm²/s
Viscosity at 100°C (212°F)	ASTM D445	15.1 mm²/s

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Viscosity Index	ASTM D2270	152
Pour point	ASTM D97	-38.0 °C / -36.0 °F
TBN	ASTM D2896	10.2 mg KOH/g
Flash point	ASTM D92	228 °C / 442 °F

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