MOTUL TEKMA MEGA-X 10W-30 LS

Heavy Duty Diesel Engine Oil
Technosynthese®
Low SAPS

TYPE OF USE

TEKMA MEGA-X 10W-30 LS is a high-performance, low-SAPS engine oil formulated with synthetic base oils to provide excellent wear protection, soot control, and fuel economy benefits. Designed for heavy-duty diesel engines, it meets the stringent requirements of Euro IV, V, and VI emissions standards, ensuring compatibility with advanced aftertreatment systems such as diesel particulate filters (DPFs) and selective catalytic reduction (SCR) systems.

Ideal for both on-road and off-road applications, this oil supports extended drain intervals, reducing maintenance costs and improving operational efficiency. Its low-SAPS formulation minimizes the impact on emission control systems, meeting the ACEA E11 standard with reduced levels of sulfated ash, phosphorus, and sulfur. This makes **TEKMA MEGA-X 10W-30 LS** a reliable choice for modern diesel engines requiring superior protection and compliance with strict environmental regulations.

PERFORMANCES

STANDARDS	ACEA E11 / E7
	API CK-4
	JASO DH-2
APPROVALS	CATERPILLAR ECF-3
	DAIMLER DTFR 15C100 (former MB 228.31)
	DEUTZ DQC III-18 LA
	MACK EOS-4.5
	MAN M 3775
	MTU Type 2.1
	RENAULT TRUCKS RLD-3
	VOLVO VDS-4.5
PERFORMANCES	CUMMINS CES 20086
	CUMMINS CES 20100
	DETROIT DIESEL DFS93K222
	FORD WSS-M2C171-F1

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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.

ACEA E11-24 oils are mid SAPS Super High Performance (SHPD) lubricants for use in mid drain applications. **ACEA E11** represents an advancement over ACEA E7. Oils conforming to this specification are suitable for use in vehicles fitted with advanced exhaust aftertreatment systems for the reduction of particulate matter (DPFs) and the oxides of nitrogen (EGR and/or SCR) in combination with low sulfur diesel fuel.

API CK-4 oils are for use in high-speed four-stroke cycle diesel engines designed to meet 2017 model year on-highway and Tier 4 non-road exhaust emission standards, as well as for previous model year diesel engines.
These oils are formulated for use in all applications with diesel fuels ranging in sulfur content up to 500 ppm. However, the use of these oils with greater than 15 ppm sulfur fuel may impact exhaust after-treatment system durability and/or oil drain interval. **API CK-4** oils are especially effective at sustaining emission control system durability where particulate filters and other advanced after-treatment systems are used.

JASO DH-2 describes a low sulphated ash oil designed for the lubrication of Heavy Duty Diesel Engines, particularly when equipped with exhaust after treatment devices.

Cummins CES 20086 is a low SAPS engine lubricant specification designed for use in high performance medium- and heavy-duty diesel engines. This specification can be used in applications where Exhaust Gas Recirculation and advanced aftertreatment systems such as Diesel Particulate Filters are fitted and ultra-low sulfur diesel is available.
Cummins engines that require this lubricant specification would typically align with Stage IIIB, IV and V European off-highway emissions standards and the Tier 4 Final North American emissions standard.

Cummins launched the **CES 20100** specification for the heavy-duty diesel markets in China and India. It supports extended oil drain intervals for non-EGR diesel engines with exhaust aftertreatment devices and is recommended for Cummins NS6 engine platforms, including Z14, X13, X12, L9, and B6.7.
This specification is based on CES 20086 and can be used where CES 20086 is recommended.

Caterpillar ECF-3 is a low SAPS lubricant specification designed for use in high performance medium- and heavy-duty diesel engines where advanced aftertreatment systems such as Diesel Particulate Filters are fitted. Caterpillar off-highway

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engines that require this lubricant specification would typically align with Stage IIIB, IV and V European off-highway emissions standards and the Tier 4 Final North American emissions standard.

Daimler DTFR 15C100 (formerly MB 228.31) is a lower SAPS lubricant specification designed for use in high performance medium and heavy-duty diesel engines where a standard oil drain is suitable alongside the use of advanced aftertreatment systems such as Diesel Particulate Filters.

Detroit Diesel DFS93K222 is a performance specification for heavy-duty diesel engine oils. It ensures proper lubrication and performance in modern Detroit Diesel engines, focusing on wear protection, oxidation resistance, deposit control, and compatibility with advanced aftertreatment systems.

Deutz DQC III-18 LA is a lower SAPS lubricant specification designed for use in high performance medium and heavy-duty diesel and gas engines with closed crankcase ventilation and high thermal loads. This specification can be used in applications where advanced aftertreatment systems such as Diesel Particulate Filters (DPFs) are fitted.
Deutz engines which require this lubricant specification would typically align with Stage IIIB and higher emissions standards.

Ford has included additional requirements beyond CK-4 in **WSS-M2C171-F1** to provide additional wear protection and overall engine durability.

The **MAN M 3775** specification ensures oils meet rigorous requirements for use in modern MAN engines, including excellent wear protection, deposit control, and compatibility with advanced aftertreatment systems like diesel particulate filters (DPFs) and selective catalytic reduction (SCR).

MTU Type 2.1 signifies a higher level of performance compared to their previous Type 2 specification, emphasizing enhanced wear protection, improved fuel economy, and optimized compatibility with advanced aftertreatment systems.

Volvo VDS-4.5 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 are fitted. Volvo trucks, buses and construction equipment that require this lubricant specification would typically align with Euro VI and Stage V emissions standards in Europe and EPA GHG 2016 and U.S. Tier 4 Final emissions standards in the USA.
Equals the **Mack EOS-4.5** and **Renault Trucks RLD-3** specification.

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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	10W-30
Density at 20°C (68°F)	ASTM D1298	0.865
Viscosity at 40°C (104°F)	ASTM D445	82.0 mm²/s
Viscosity at 100°C (212°F)	ASTM D445	12.0 mm²/s
Viscosity Index	ASTM D2270	140
Pour point	ASTM D97	-42.0 °C / -44.0 °F
TBN	ASTM D2896	9.0 mg KOH/g
Flash point	ASTM D92	242 °C / 468 °F

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