

Heavy Duty Diesel Engine Oil
Fully synthetic
Low SAPS

TYPE OF USE

TEKMA ULTIMA 5W-30 LS is a high-performance synthetic Low SAPS diesel engine oil designed for fuel economy and extended oil life. Developed with advanced additive technology and premium base oils, it is formulated for heavy-duty diesel engines operating under tough conditions. The lubricant is suitable for Euro IV, Euro V, and Euro VI engines, particularly those using low-sulfur diesel fuel. Its SAE 5W-30 viscosity ensures reliable cold starts and optimal lubrication at high temperatures, while shear-stable additives maintain oil integrity throughout extended drain intervals.

TEKMA ULTIMA 5W-30 LS meets the requirements of modern low-emission engines, including those equipped with DPFs, EGR, and SCR systems. It provides excellent wear protection, reduced oil consumption, and compatibility with a wide range of commercial vehicles, including trucks, buses, agricultural, and construction machinery. With its "Low SAPS" formulation, it helps protect emission control systems by limiting sulphated ash, phosphorus, and sulfur levels. Additionally, it is backward-compatible with older Euro III and earlier engines, making it an ideal single-lubricant solution for mixed fleets.

PERFORMANCES

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 E8-24 oils are low SAPS1 Ultra High Performance Diesel (UHPD) lubricants designed for use in severe duty, long drain applications. ACEA recommends their use in vehicles fitted with aftertreatment systems for the reduction of particulate matter (DPFs) and oxides of nitrogen (EGR and/or SCR), in combination with low sulfur diesel fuel.

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.

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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.

Oils meeting **API SN** are designed to provide improved performance across a wide range of areas including high temperature deposit protection for pistons and improved protection against the formation of engine sludge.

Oils that satisfy **API** Service Category **SN** are superior in performance to those meeting API SM and earlier and can effectively lubricate engines calling for those Service Categories.

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.

DAF's PSQL 2.1 E-LD is an engine oil standard developed to optimize the performance and efficiency of their latest commercial vehicles. The "LD" suffix stands for Long Drain, indicating that oils meeting this specification are formulated for extended service intervals, thereby reducing maintenance frequency and operational costs.

The use of **PSQL 2.1 E-LD** with the new PACCAR MX-11 and MX-13 engines delivers unprecedented vehicle efficiency and demonstrably lower fuel consumption. Additionally, these oils are compatible with a wide range of vehicles, including older models, and are suitable for both diesel and gas applications.

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.

Daimler DTFR 15C110 (formerly MB 228.51) is a Top Tier low SAPS lubricant specification designed for use in medium and heavy-duty diesel engines where advanced aftertreatment systems such as Diesel Particulate Filters (DPFs) are fitted. This specification sets high requirements for cleanliness and wear protection, alongside the ability to prolong the life after-treatment systems and is hence widely recommended in Daimler Euro VI vehicles.

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Daimler DTFR 15C120 (formerly MB 228.52) is a Top Tier low SAPS lubricant specification designed for use in select Euro VI / US Tier 4 engines used in buses and industrial/off road applications where advanced aftertreatment systems such as Diesel Particulate Filters (DPFs) are fitted.

Daimler DTFR 15C120 shares many common characteristics with DTFR 15C110. The major difference between the two specifications is that **DTFR 15C120** has a restriction on the level of calcium allowed in the lubricant and is designed for use in select applications/engines mentioned above.

Detroit Diesel DFS 93K222 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 IV-18LA is a lower SAPS lubricant specification designed for use in high performance diesel and gas engines, offering extended oil drain intervals. These engines may have closed crankcase ventilation, steel pistons (TTCD) and the need for extended oil drain intervals. Most commonly this lubricant specification is used in the latest off-highway equipment meeting Stage V European emissions and US Tier 4 Final where advanced aftertreatment systems such as Diesel Particulate Filters (DPFs) are fitted.

Oils meeting the **Ford WSS-M2C213-A1** specification are designed to offer enhanced fuel efficiency, superior wear protection, and compatibility with modern emission control systems. They are particularly suitable for Ford's Euro VI engines, including those equipped with advanced after-treatment systems such as Diesel Particulate Filters (DPFs), Exhaust Gas Recirculation (EGR), and Selective Catalytic Reduction (SCR). These oils help maintain engine cleanliness, reduce oil consumption, and support extended oil drain intervals, contributing to overall engine longevity and performance.

The **MAN M 3477** specification is a performance standard for super high-performance diesel (SHPD) engine oils. Oils meeting this specification are typically low SAPS (Sulfated Ash, Phosphorus, and Sulfur) formulations, designed to provide exceptional protection and performance for modern diesel engines equipped with advanced emission control systems.

The **MAN M 3677** specification is a Ultra High Performance Diesel (UHPD) engine oil performance standard formulated to provide enhanced fuel efficiency, superior engine protection, and compatibility with advanced emission control systems. These oils can be used for extended oil drain intervals for Euro VI engines..

The **MAN 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 DPFs.

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MTU Type 3.1 approved oils are suitable for use in MTU diesel engines, particularly those equipped with DPFs and operating under severe conditions. It's important to note that these oils are recommended for use with diesel fuels conforming to EN 590 standards, which specify a maximum sulfur content of 50 mg/kg.

Scania Low Ash is an engine oils specification specially for Euro V engines and EEVs (Enhanced environmentally friendly vehicles). The oils may only contain a low proportion of ash-forming additives.

The **Scania LDF-4** (Long Drain Field Test) specification is an advanced engine oil standard developed to optimize the performance and efficiency of their Euro VI engines. This low-SAPS (Sulfated Ash, Phosphorus, and Sulfur) specification emphasizes extended oil drain intervals, improved fuel economy, and enhanced protection for after-treatment systems like Diesel Particulate Filters (DPFs). Notably, **Scania LDF-4** oils can double the service life of DPFs compared to the previous LDF-3 standard.

Scania LDF-4 oils are also suitable for use in Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG) engines. However, it's important to note that LDF-4 oils are not recommended for Scania V8 engines up to engine code DC 16 107, which should continue using oils meeting the LDF-3 or LA specifications.

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.

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.



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PROPERTIES

Color		Amber
Viscosity grade	SAE J 300	5W-30
Density at 20°C (68°F)	ASTM D1298	0.854
Viscosity at 40°C (104°F)	ASTM D445	72.8 mm ² /s
Viscosity at 100°C (212°F)	ASTM D445	12.1 mm ² /s
Viscosity Index	ASTM D2270	163
Pour point	ASTM D97	-42.0 °C / -44.0 °F
TBN	ASTM D2896	9.8 mg KOH/g
Flash point	ASTM D92	226 °C / 439 °F

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STANDARDS	
ACEA	E7/E8/E11
API	CK-4/SN
CATERPILLAR	ECF-3
DAF	PSQL 2.1 E-LD
DAIMLER	DTFR 15C100 (former MB 228.31), DTFR 15C110 (former MB 228.51), DTFR 15C120 (former MB 228.52)
DEUTZ	DQC IV-18 LA
JASO	DH-2
MACK	EOS-4.5
MAN	M 3677, M 3691, M 3775
MTU	Type 3.1
RENAULT TRUCKS	RLD-3
SCANIA	LDF-4
VOLVO	VDS-4.5
OEM PERFORMANCES	
CUMMINS	CES 20086
DETROIT DIESEL	DFS93K222
FORD	WSS-2MC213-A1
MAN	M 3477
SCANIA	Low Ash

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