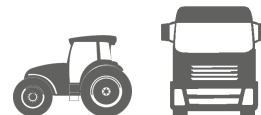


Eni i-Sigma top MS 5W-30



APPLICATIONS

Eni i-Sigma top MS 5W-30 is a latest generation high-performance synthetic technology oil suitable for lubrication of diesel engines of commercial vehicles equipped with exhaust gas aftertreatment systems and previous engines, operating under severe conditions.

It allows the maximum oil change intervals foreseen by the manufacturers, it has very high fuel economy characteristics and facilitates engine startup in cold weather.

CUSTOMER ADVANTAGES

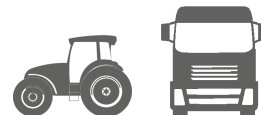
- It is an engine oil that responds to the most severe performance levels required for heavy traction, the result of a combination of a special synthetic formulation and new 'low SAPS' additive technology.
- To ensure the effectiveness and durability of post-treatment systems, the lubricant formulation must not contain products which may have a negative impact and therefore the content of certain components (Sulphated Ashes, Phosphorus, Sulfur) must be controlled. From this point of view, it adopts an innovative formulation technology precisely in compliance with the chemical limits imposed by international specifications and manufacturers.
- 'Fuel efficiency' allows greater fuel savings than conventional lubricants. Engine life and efficiency are ensured by the high wear protection (bore-polishing), high detergency and low evaporation losses.
- The very high technological quality of the synthetic bases used and its particularly innovative formulation guarantee excellent cold starts.
- It has demonstrated excellent anti-wear properties in the tests required by the manufacturers and by ACEA, in particular minimizing wear on the cylinders (bore polishing), elastic bands, valves, etc. All metallic surfaces are effectively protected against wear and corrosion by ensuring and maintaining the maximum engine efficiency over time, allowing extended change and maintenance intervals.

SPECIFICATIONS

- ACEA E4, E6, E7, E9
- API CK-4, CJ-4



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- Caterpillar ECF-3
- Cummins CES 20081, 20086
- JASO DH-1-17, DH-2-17, DL-0-17
- MAN M 3271-1, M 3477, M 3575
- MTU type 2.1, type 3.1
- Detroit Diesel 93K222 (Approved)
- Deutz DQC IV-18 LA (Approved)
- MACK EO-S-4.5 (Approved)
- MAN M 3677, M 3777 (Approved)
- MAN M 3775 (Approved)
- MB-Approval 228.51
- MB-Approval 228.52
- Renault VI RLD-3 (Approved)
- Scania LDF-4 (Feedback)
- Volvo VDS-4.5 (Approved)

CHARACTERISTICS

Properties	Method	Unit	Typical
Density at 15°C	ASTM D 4052	kg/m ³	859
Viscosity at 100°C	ASTM D 445	mm ² /s	12.1
Viscosity at 40°C	ASTM D 445	mm ² /s	71
Viscosity Index	ASTM D 2270	-	169
Viscosity at -30°C	ASTM D 5293	mPa·s	6000
Pour point	ASTM D 5950	°C	-39
Flash point COC	ASTM D 92	°C	226
B. N.	ASTM D 2896	mg KOH/g	13.4

