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GoldenStar LA Plus

SAE 5W-30

LOW SAPS technology fully synthetic lubricant for all on/off road HD Diesel engines.

Description

Advanced fully synthetic lubricant developed for all on/off road Heavy Duty Diesel engines. It satisfies at the same time all International (API, ACEA and JASO) and main OEMs Specifications. This allows to lubricate HD diesel engines also with completely different requirements.

Advantages

- LOW S.A.P.S. (low content of Sulphated Ash, Phosphorus and Sulphur): it satisfies also MID S.A.P.S. technology requirements;
- suitable for long drain intervals: the product can be adopted to extend oil drain intervals (Extended Service Interval), with respect of Constructors' Recommendations and combined with a complete monitoring of oil in service through specific oil analyses;
- excellent low temperature properties: easy start-ups at very low temperatures to guarantee the lubricant action for all engine moving parts right from the first working periods and to reduce to the minimum the hazards of wear especially when comparing the product with SAE 10W-40 / 15W/40 Viscosity Grade lubricants;
- very high thermal-oxidative stability at high temperatures also thanks to the synthetic base stocks used to formulate the product;
- HT-HS (High Temperature, High Shear) value optimized for severe and specific needs of modern Heavy Duty Diesel engines;
- low formation of lacquers and varnishes at low temperatures and in particular during stop-and-go service;
- low volatility of the product results into a very significant reduction of oil losses due to evaporation;
- very high detergent properties that guarantee cleanness performance and long drain intervals;
- Fuel Economy performance compared to higher viscosity grade lubricants.

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Application fields

PAKELO GOLDENSTAR PLUS SAE 5W/30 is a very high performance lubricant recommended for all on/off-road Heavy Duty Diesel engines also working under severe conditions.

Furthermore, thanks to synthetic base stocks used and to the low ash content, the product can also be used for CNG (Compressed Natural Gas) engines.

Performance level

ACEA E9 / E7 / E6 / E4 (2016), **API** CK-4 / CJ-4 / CI-4 plus / CI-4 / CH-4, **JASO** DH-2 / DH-1 / DL-0 (2017), **MB** 228.51 / 228.31 / 235.28, **MAN** M3677 / M3775, **Volvo** VDS-4.5, **Renault** RLD-4 / RLD-3, **MTU** Type 3.1 / Type 2.1, **Mack** EO-S 4.5, **Caterpillar** ECF-3, **Cummins** CES 20.086 / 20.081, **Deutz** DQC IV-18LA, **Detroit Diesel** 93K222 / 93K218, **Scania** LDF-4.

Approvals

MAN M3677 / M3775, **MB-Approval** 228.51, **Scania** LDF-4.

Chemical-Physical Characteristics

GoldenStar LA Plus	Method analysis	Unit measure	Value SAE 5W-30
Density at 15°C	ASTM D1298	kg/l	0,853
Kinematic Viscosity at 40°C	ASTM D445	cSt	68,9
Kinematic Viscosity at 100°C	ASTM D445	cSt	11,8
Viscosity Index	ASTM D2270	-	168
C.C.S. Viscosity at -30°C	ASTM D5293	cP	5900
HT-HS Viscosity at 150°C / 10 ⁶ s ⁻¹	ASTM D4683	cP	3,6
T.B.N. (Total Base Number)	ASTM D2896	mg(KOH)/g	13,0
Sulphated Ash	ASTM D874	% (w/w)	< 1,00
Typical phosphorus content	ASTM D5185	ppm	< 800
Typical sulphur content	ASTM D5185	ppm	< 3000
Flash Point (C.O.C.)	ASTM D92	°C	210
Pour Point	ASTM D97	°C	-39
Noack evaporability test	ASTM D5800	% (w/w)	10,6

The data just above refer to average values and must not be understood as guaranteed characteristics.

This Technical Data Sheet has been carefully checked to guarantee complete and precise information. However, we do not take any responsibility in case of damages caused by any mistakes or omissions. Due to continual product research and development, the information contained herein is subject to change without notification.