

EngineMaxxLA

A balanced Group II hydrocracked engine oil formula designed for diesel engine oils with API CJ-4 and high mileage gasoline engine oils with API SM/SN and ILSAC GF-5 specifications.

EngineMaxxLA is designed to blend with engine oils to complement and enhance the protection of equipment under difficult performance requirements where the oil alone proves inadequate. Can also be used to extend the service life of oils.

EngineMaxxLA helps to increase service life by improving the ability of the oil to neutralize contaminants and acidic byproducts.

Enhances sheer stability and oxidation resistance and improving wear protection through the use of proprietary lubrication chemistry and premium additive technology.

EngineMaxxLA is compatible with mineral based Group II + III) and synthetic-based polyalphaolefin and diester (Group IV) engine oils bearing API service categories CJ-4, SM, SN and ILSAC GF-5 specifications.

EngineMaxxLA contains no solid particles or heavy metals and is compatible with manufacturer specifications requiring low-ash (SAPS) oil content.

EngineMaxxLA: Use with API CJ-4 diesel oils or high mileage oils with API SM/SN. Intended for internal combustion engines. Also compatible with API service categories before SM / CJ-4.

PART #	3101-1-12 (1L X 12)	3101-20-1 (20L Pail)
	3101-4-4 (4L X 4)	3101-205-1 (205L Drum)

Over the life of a fluid the additive package depletes. EngineMaxxLA can extend fluid life and slow the process of oil degradation. Friction reduction specifically in boundary or mixed lubrication conditions lowers operating temperature, limiting the effects of oil oxidation. EngineMaxxLA can also be used to re-additize oil that has lost crucial additives over the service life of the oil.

EngineMaxxLA is intended for use in internal combustion engine crankcases when blended with the appropriate SAE viscosity oil as specified by the OEM. Highly recommended for use in equipment with DPF (diesel particulate filter) systems. Can also be used for 2-Stroke, natural gas and propane engines. Oil Sampling is recommended when extending fluid service life. EngineMaxxLA can be used to enhance existing additive packages or for creating custom oil blends. Always ensure oil blends meet the minimum requirements as outlined by the OEM.

DESIGNED FOR PERFORMANCE

- Extend oil service life.
- Improves energy efficiency and fuel economy.
- Integrates well with synthetic and conventional engine oils.
- Eliminates dry starts.
- Reduces Ultrasonic noise caused by component wear.
- Improves filtration efficiency by reducing the generation of large wear particles.
- Increases equipment availability; extends component life.
- Provides greater protection for engines.
- Enhances film strength and improves shear resistance.

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ADDITIVE PACKAGE OVERVIEW

Viscosity Index Improvers: Enhanced VI maintains lubricant flow and improve shear stability of the oil, especially at extreme temperatures.

Extreme Pressure/Anti Wear additives: Polarized AW, Friction Modifier and EP components provide unequalled protection in high load, high friction conditions. Fluid strength increase allows for significant friction reduction and protection of engine crankcase components. Polarized film protects during startup conditions

Dispersants: Maintains cleanliness and keeps contaminants in suspension. May remove varnish buildup in older engines.

Seal Conditioners: Reduces the long-term effects of heat exposure to elastomer seals, keeping seals pliable.

Oxidation Inhibitors and Acid Neutralizers: Enhanced alkaline reserve prevents oil breakdown during service life. Increased stability and performance of the basic lubricating components of the oil.

Rust and Corrosion Inhibitors: Protects against adverse effects of moisture and oil oxidation caused by free wear metals present in oil.

This carefully balanced formula is designed to complement and enhance the existing API oil formulations. EngineMaxxLA should be mixed with the oil prior to putting in the application. May be added to crankcase directly when needed. Oil analysis is recommended when extending fluid service life. TREAT RATIO 3%-5% oil volume depending on severity of service.

<u>TYPICAL PROPERTIES</u>	<u>ASTM METHOD</u>	<u>EngineMaxx</u>	<u>TYPICAL EFFECT ON API OILS</u>
Appearance		Clear, Light Amber Liquid	No Change
Viscosity @ 40°C (cSt)	D 445	77	No Change
Viscosity @ 100°C (cSt)	D 445	11	No Change
Viscosity Index	D 2270	129	Variable*
Density @ 20° C (g/ml)	D 941	0.96	No Change
Pour Point (°C)	D 97	-36	Slight Decrease
Flash Point COC (°C)	D 92	170	No Change
Fire Point COC (°C)	D 92	175	No Change
Acid Number (TAN)	D 664	1.07	Decrease ~10%
Base Number (TBN)	D 2896	1.4	No Change
Solid Particles (Zinc, Lead, PTFE, Graphite, MoS2)		None	No Change
Calcium (ppm)		0	No Change
Phosphorus (ppm)		1012	Increase ~50ppm
Rust Prevention	D 665	Pass	Pass
Copper Corrosion	D 130	1A	1A

* Viscosity index improvement is based on the % concentration of EngineMaxxLA and the type of Viscosity Index Improver in the stock oil. Additional friction modifiers are not recommended when using EngineMaxxLA as the FM chemistry may interfere with performance.

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