GearMaxx

Extreme pressure gear oils (API GL-3, GL-4, GL-5, SAE J2360) contain specific additive formulas designed to provide long term wear protection.

GearMaxx is a commercial additive package designed to blend with these oils to complement and enhance the protection of equipment under difficult performance requirements where the oil alone proves inadequate.

Conventional EP additives generally require elevated temperatures to initiate their film strength. The enhanced high strength protective film becomes much less temperature dependent when using GearMaxx; providing better protection on start up and in cold weather applications.

GearMaxx is compatible with mineral based (Group II + III) and synthetic-based polyalphaolefin and diester (Group IV) gear oils. GearMaxx is not recommended for use with water based fluids, phosphate esters or polyglycol fluids.

GearMaxx: Use with SAE J2360, API GL-3, GL-4, and GL5 gear oils 5% GearMaxx to oil volume ratio is the recommended concentration for most applications. Oil monitoring is highly recommended when using concentrations greater than 5% Gear Maxx.

PART #	3102-1-12 (1L x 12)	3102-20-1 (20L Pail)
	3102-4-4 (4L x 4)	3102-205-1 (205L Drum)

Over the life of a fluid the additive package depletes. GearMaxx 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 fluid oxidation. GearMaxx can also be used to readditize gear oil that has lost crucial additives over its service life.

GearMaxx is intended for use in gear reducers, bearing housings, positrac and limited slip differentials, cone and jaw crushers, pulverizing equipment, final drives, conveyor gear boxes, manual transmissions, drop boxes, rotary tables, tube and ball mills, chain drives, mud pumps, bull gear and pinion sets, oil bath hubs and other oil lubricated systems which call for extreme pressure (EP) oils.

DESIGNED FOR PERFORMANCE

- Extend Oil service Life
- Improves energy efficiency
- Integrates well with synthetic and conventional gear oils
- Reduces Ultrasonic noise caused by component wear
- Reduces fuel and/or electrical power consumption in many applications
- Improves filtration efficiency by reducing the generation of large wear particles.
- Increases equipment availability; extends component life
- 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 unequaled protection in high load, high friction conditions. Fluid strength increase allows for significant friction reduction and protection of gear and gearbox components. Polarized film protects during startup conditions

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

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 gear oil formulations. GearMaxx should be mixed with the oil prior to being put into service. May be added to component directly when needed. Oil Analysis is recommended when extending fluid service life. TREAT RATIO 5% of oil volume or 3% of oil volume when using high viscosity gear oils (ISO 320 and above)

TYPICAL PROPERTIES	ASTM METHOD	EngineMaxx	TYPICAL EFFECT ON API OILS
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	Minimal 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
Foaming Tendency (using ISO 220)	D 892	None	None
Rust Prevention	D 665	Pass	Pass
Copper Corrosion	D 130	1A	1A

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

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