

TECH DATA

VULTREX™

OPEN GEAR LUBRICANTS

INTRODUCTION

Petro-Canada's VULTREX™ line of grease-based open gear lubricants (OGL) are advanced "Solution Provider" products containing synthetic fluids to provide excellent protection for handling the harshest operating conditions that can be encountered – from severe winter cold to extreme summer heat and from very wet to dusty environments.

VULTREX OGL's ability to extend shovel component life (derived from actual operating data) provides customers with reduced operating costs and savings.

VULTREX OGL greases are designed to lubricate large, heavy duty open gear drives as well as bushings and bearings found on mining and off-highway machinery. VULTREX OGL greases are formulated with aluminum complex soaps, taking advantage of their flow and shear properties to protect and extend equipment life. VULTREX OGLs meet the P&H, Caterpillar (BI) and Komatsu requirements for gear lubricants, and are used in the following industries: Mining, Forestry, Pulp and Paper, Construction and General Manufacturing.

FEATURES AND BENEFITS

Extends Shovel Component Life

- VULTREX OGL has demonstrated an ability to extend the life of related components (hoist pinion, roller pin, bull and swing gears) ranging from 33% to 100% representing thousands of hours of extended component life.
- This means less downtime for maintenance and costly repairs.
- Decades of real world performance data have been collected on various P&H and Caterpillar (BI and Terex) mining shovels.

Meets the CATERPILLAR (formerly Bucyrus International) SD4713 and P&H 464 specification

- VULTREX OGL Synthetic 2200, VULTREX OGL Synthetic 680, and VULTREX OGL Heavy 6200 all meet the SD4713 and P&H 464 open gear lubricant specification. VULTREX OGL Heavy 6200 meets the additional requirements of the SD4713 specification for electric mining shovel hoist drum gear lubrication.

VULTREX OGL products offer outstanding protection against wear and surface damage on gears and slides

- Continuous lubricating film as there is no solvent to flash off
- Good spreadability and coverage
- Surfaces are protected against rust and corrosion
- Helps prevent against scoring and spalling of gear teeth under heavy loads
- Formulated with solid lubricants to protect surfaces and minimize gear wear in boundary to mixed lubrication regimes

Wide range of operating temperatures

- VULTREX OGL Synthetic 680 has a wide operating temperature of -40°C/-40°F to 15°C/59°F
- VULTREX OGL Synthetic 2200 has an operating temperature from -15°C/5°F to 40°C/104°F
- VULTREX OGL Heavy 6200 has an operating temperature range from -5°C/23°F to 60°C/140°F.
- In some climates, VULTREX OGL Synthetic 680 will be the only product required.

Outstanding adhesive properties

- Highly resistant to water wash-off in rain, snow and sleet conditions
- Resists being thrown off from rotating parts
- Adheres tenaciously on surfaces to maintain proper film thickness to lubricate equipment

Free of solvents (including citrus and chlorinated solvents), and heavy metals such as lead

- Reduced lubricant consumption

APPLICATIONS

All VULTREX lubricants are formulated for use in either automated spray systems or by direct application onto gear teeth, slides or other lubricated surfaces. Major applications for VULTREX include:

- Mining and construction shovels
- Draglines
- Ball mill and grinding mill gears
- Kiln drives
- Drills
- Wire ropes
- Large bearings turning at low speeds
- Slides, dipper sticks and racks
- Bushings
- Propel systems

VULTREX OGL SYNTHETIC 2200 is a solvent-free, synthetic open gear lubricant designed to provide excellent open gear lubrication performance. VULTREX OGL Synthetic 2200 provides excellent wash-off resistance from the shovel stick under all weather conditions and has a lower temperature limit of -15°C/5°F. VULTREX OGL Synthetic 2200 meets the P&H 464 specification, and the Caterpillar (formerly BI) SD4713 specification. Approved by Komatsu for lubrication of slew ring gear on Komatsu hydraulic shovels.

VULTREX OGL SYNTHETIC 680 is a solvent-free synthetic open gear lubricant suitable for year round use in many climates, with a minimum operating temperature of -40°C/-40°F. VULTREX OGL Synthetic 680 meets the P&H 464 open gear lubricant specification, and the Caterpillar (formerly BI) SD4713 open gear lubricant specification. Approved by Komatsu for lubrication of slew ring gear on Komatsu hydraulic shovels.

VULTREX OGL HEAVY 6200 (contains synthetic lubricants) is a solvent-free open gear lubricant with a higher viscosity and thicker consistency than other VULTREX OGL lubricants. It is suited for the most demanding open gear lubrication requirements and high temperature conditions where low temperature pumpability is not a requirement. VULTREX OGL Heavy 6200 meets the P&H 464 specification, and the Caterpillar (formerly BI) SD4713 specification, including the special requirements for electric mining shovel hoist gears. VULTREX OGL Heavy 6200 is not intended for the lubrication of bushings or bearings.

OPERATIONAL CONSIDERATIONS

Petro-Canada's VULTREX line of greases provides long service life under normal operating conditions up to their maximum recommended temperature. However, actual grease life is dependent upon system design and operating practices.

TYPICAL PERFORMANCE DATA

Property	Test Method	VULTREX OGL		
		SYNTHETIC 680	SYNTHETIC 2200	HEAVY 6200
NLGI Grade	D217	0/00	0	0
Dropping Point, °C/°F	D2265	208/406	214/417	248/478
Worked Penetration, 60 strokes	D217	374	360	361
Corrosion Protection: Copper Corrosion Bearing Corrosion	D4048 D1743	1a Pass	1b Pass	1a Pass
Flash Point, COC, °C/°F (Base Fluid)	D92	159/318	196/385	333/631
Base Fluid Viscosity cSt @ 40°C/104°F	D445	814*	2181	6489
Mobility, g/s	PCM 533			
@ -5°C/23°F				0.073
@ -20°C/-4°F			0.050	
@ -40°C/-40°F		0.052		
Four Ball Weld Point, kg	D2596	800*	800	800
Four Ball Wear, scar diam, mm	D2266	0.5	0.5	0.6
Lowest Dispensing Temp** in a Centralized System, °C/°F		-40/-40	-15/5	-5/23
Recommended Operating Temp. Range, °C/°F		-40 to 15/-40 to 59	-15 to 40/5 to 104	-5 to 60/23 to 140

The values quoted above are typical of normal production. They do not constitute a specification.

* Measured before the addition of diluent, as per the Bucyrus International SD 4713 specification.

** Based on pumpability test, but is dependent on the design and type of the dispensing systems, length and diameter of the lines, the mode of application and rate of pressurization.

Learn more about us: petrocanadalubricants.com
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Committed to the disciplined operation of our business.



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