

## PETRO-CANADA LUBRICANTS GUIDE TO GREASES

A HOLLYFRONTIER BUSINESS

										SPEC / OEM	MIN. OP. TEMP. °C/°F	TEMP.		APPLICABLE INDUSTRY SEGMENTS									
	PCLI GREASE PRODUCT	GREAS THICKEN		OLOR	NLGI GRADE	BASE OIL VISCOSITY (cSt)	ITY EP	EP V	VASH SPEC / O					GEN. MAN.	MINING	FORESTRY	CONSTRUCTION	STEEL MILL	DRILLING	AGRICULTURE	POWER GEN.	AUTOMOTIVE	SUGGESTED APPLICATIONS
Synthetic Lithium	PRECISION Synthetic EP00				00	507	31	315	27.8		-40 -40	) 170 3	8 x	Х			Х						Truck/trailer wheel-end bearings, slow speed leaky gear boxes
	PRECISION Synthetic				1	130	25	250	8.0 GC-LB	3	-40 -40	170 3	18 x	X	Х	х	Х					Х	Centralized systems on HD mining equipment, high performance wheel bearings, pumpjacks, low temp/viscosity
	PRECISION Synthetic 220	Lithium			2	220	31	315	7.2 GC-LB	3	-35 -3	170 3	18 x	Х	Х	х	Х					Х	Centralized systems on HD mining and forestry equipment, high performance wheel bearings, pumpjacks, higher temp/viscosity
	PRECISION Synthetic Moly	Lithium Complex			1	130	40	400	9.8		-40 -40	170 3	8		Х	х	Х					Х	Formulated for shock loaded mobile equipment in mining, forestry and construction applications
Complex	PRECISION Synthetic Heavy 460	Complex			1	507	31	315	8.5		-30 -22	2 170 3	8	Х		х							Paper machine bearings, heavily loaded, slow speed bearings
	PRECISION Synthetic Heavy 1500				1.5	1495	31	315	4.8		-20 -4	170 3	8		Х	Χ	Х						Plain and rolling element bearings, low speed, heavy load, high temps
	PRECISION Synthetic EMB			•	2	114					-40 -40			Х	Х	Х	Х	Х	Х	Х	Х	Х	Electric motor bearings, high speed antifriction bearings, fans, generators, non EP product
Multi- Purpose Lithium and Lithium Complex	PRECISION XL EP000	Lithium			000	325	25				-25 -13				Х	Х	Х			Х			Low speed, leaky gear boxes, chain cases, bearings in centralized grease systems
	PRECISION XL EP00			•	00	112	25	250			-35 -3	100 2	2 x										Centralized, on-board, truck chassis lubrication systems, gear drive lubricant for high visc., low temp mobility
	PRECISION XL EP1			•	1	220	31	315	8.5 GC-LB	3	-25 -13	3 160 3	0 x	Х	Х	Х	Х			Х		Х	Heavy-duty and general-purpose bearings, low and high speed, wheel bearings, chassis points, steering linkages.  Use EP1 for centralized lubrication systems serving both heavy-duty and general-purpose bearings and for colder temperatures
	PRECISION XL EP2	Lithium Complex		•	2	220	31	315	3.8 GC-LB	3	-20 -4	160 3	'0 x	Х	Х	х	Х			Х		Х	Heavy-duty and general-purpose bearings, low and high speed, wheel bearings, chassis points, steering linkages.  Use EP1 for centralized lubrication systems serving both heavy-duty and general-purpose bearings and for colder temperatures
	PRECISION XL EMB				2	112					-25 -13	160 3	10	X	Х	х	Х						Electric motor bearings, high speed antifriction bearings, fans, generators, non EP product
	PRECISION XL Heavy Duty				2	420	31	315	6.2		-10 14	160 3	10	X		Х		Х					Bearings subject to high load, shock loading, rolling mills
	PRECISION XL 3 Moly EP1				1	210	80	300	5.0 Bucyrus Int. SD 471	'11, 3% Moly	-25 -13	3 135 2	5		Х								Heavy duty mining and construction analications including hall miles
	PRECISION XL 3 Moly EP2			2	403	80	300	1.0 Bucyrus Int. SD 47	'11, 3% Moly	-15 5				Х	Х	Х						Heavy-duty mining and construction applications including ball mills, conveyor and crusher bearings, off-highway operations	
Lithium	PRECISION XL 3 Moly Arctic				1	34			10.3		-45 -49				Х	Х	Х						
Moly	PRECISION XL 5 Moly EP0				0	133			13.5 Bucyrus Int. SD 47						Х								Designed for protection against vibration and shock loading, suitable for the lubrication requirements of Caterpillar lubricant
	PRECISION XL 5 Moly EP1	1.902		1	159		620 3.3			-30 -22			X	Х	Х	Х						specifications for 5130 (7TJ & 5ZL), 5230 (7LL) mining excavators and 994 (9YF) wheel loaders	
Lithium General Purpose	PRECISION XL 5 Moly EP2	Lithium	tnium	•	2	204			3.5 5% Mol	ly	-25 -13			Х	Х	Х	Х						
	PRECISION GP EP1			•	1	159			9.25		-30 -22			Х	Х	Х	Х						Centralized greasing systems, heavily loaded conveyor bearings, mobile equipment, high speed industrial bearings
	PRECISION GP EP2				2	159			3.8 LB		-25 -13			X	Х	Х	Х						Low to moderate speed bearings at moderate temperatures
	PRECISION GP Moly EP2 PRECISION XL Rail Curve			•	1	159 24			1.8 1.5% solid lub 2.8	Dricants	-25 -13 -50 -58				x	X	Х						Heavy-duty applications in industrial machinery or off-highway equipment where shock loading is encountered (graphite and moly)  Track-side mechanical lubrication systems (Portec & Lincoln), on-board lubrication systems (Clicomatic), switches, switch plates, fish plates, joint bars, and other railway applications where graphite greases are recommended
Polyurea	PEERLESS Poly EMB	Polyurea		•	2	110			GE D6A2C23, AS >750 hrs		-30 -22	2 163 3	!5 x	Х	х	Х	Х	Х	х	Х	х	Х	High-temp, long-life electric motor bearings, non EP product, high speed bearings
Calcium Sulfonate Greases	PEERLESS LLG			•	2	100	50	500	1.5 GC-LB		-20 -4	200 3	12 x	Х		Х		Х			Х	Х	High temp, long life applications. Wheel bearings and automotive chassis, CV joints, ovens and kilns
	PEERLESS 0G0				0	38	31	315			-35 -3	163 3	5	Х		Х							Central Lubricating systems, low temp applications, wet conditions
	PEERLESS 0G1				1	53	40	400	2.8 GC-LB	3	-30 -22	2 163 3	!5 x	Х							Х	Х	Central Lubricating systems, automotive chassis, low temp applications, wet conditions
	PEERLESS OG2	Calcium			2	73	40	400	2.2 GC-LB	3	-25 -13	3 163 3	15	Х	х	х	Х				х	Х	Wheel bearings, automotive chassis, forklift mast slides, power shovel bucket pins, mining scoop trams, rock crushers, farming equipment, pulp press roller bearings, wet conditions
	PEERLESS OG2 Red	Sulfonate Complex		•	2	73	50	500	2.8 GC-LB	3	-25 -13	163 3	5	х	х	х	х				х	х	Wheel bearings, automotive chassis, forklift mast slides, power shovel bucket pins, mining scoop trams, rock crushers, farming equipment, pulp press roller bearings, wet conditions
	PEERLESS OG Plus				2.5	78	50	500	0.1		-20 -4	163 3	15			Х							Wet bearings for paper mills, pulp press roller bearings
	PEERLESS SVG102				1	80	62	620	1.5		-35 -3	163 3	5	Х									Protection of valves against corrosion and deleterious effects of hydrogen sulphide, sour gas distribution, LPG and water injection s
	PEERLESS 3 MOLY 322				2	320	62	620	0.5		-15 5	170 3	8		Х	Х	Х						Off-highway heavy-duty chassis, construction and mining equipment and industrial heavily loaded and low speed industrial bearing
	PEERLESS XCG-FLEX			•	1	329			1.5 AGMA CG-1 8	& CG-2	-20 -4			Х	Х		Х						High-speed flexible couplings where severe centrifugal forces are generated, industrial couplings of the gear and flexible steel type
	VULTREX MPG EP 2				2	493		400			-20 -4		.0 x	Х	Х	Х	X	Х		Х			Off-highway vehicle chassis, wheel bearings. Ball mill conveyor and crusher bearings. Low speed gear couplings. Slab caster bearings.
Multi-	VULTREX MPG EP 1			•	1	473	40	400			-25 -13	3 160 3	.0 x	Х	Х	Х	Х	Х		Х			Same as EP2 but designed for pumpability and centralized lubrication systems
Purpose Aluminum	VULTREX MPG Synthetic Arctic	Aluminum Complex		•	0	151	40	400			-40 -40	120 2	8		х	х	х			х			Cold weather usage for forestry and logging shovels, draglines, excavators, blasthole drills and tracked equipment, forestry and logging equipment
Complex	VULTREX G-123				1	220		315			-25 -13				Х	Х	Х						Heavy-duty truck components, wheel bearings, bushings, king pins, chassis
Drilling  Open Gear Lubricants	VULTREX G-124				2	220	31	315			-20 -4	160 3	.0 x		Х	Х	Х						Heavy-duty truck components, wheel bearings, bushings, king pins, chassis
	VULTREX Rock Drill EP000	Lithium		•	000	129		200	Ingersoll-Rand, Parts Headqu		-30 -22				Х		Х						Air operated rock drills and similar mining equipment
	VULTREX Drill Rod Heavy	Barium			3	163	31	315				135 2							Х				Recommended for use on diamond drill rods to reduce friction between rods and rock strata
	VULTREX API Modified Thread Compoun	nd Lithium		•					API RP 5/		-18 0	149 3	10						Х				Protects the threads on casing, tubing connections and line pipe against galling during makeup and breakout
	VULTREX Synthetic All Season 680	Aluminum		•	0/00	760		520	CAT SD4713, P&F Komatsu Slew R CAT SD4713, P&F	Ring Gear	-40 -40				Х		Х						All season performance to lubricate gears, open gears, bearings, rollers and sliding surfaces on large mining shovels
	VULTREX Synthetic 2200	Complex		•	0	2181		520	Komatsu Slew R	Ring Gear	-15 5				X		X						Moderate temperature performance to lubricate gears, open gears, bearings, rollers and sliding surfaces on large mining shovels
	VULTREX Heavy 6200				U	0489		300	CAT SD4713, P&F		-5 23	60 1	·U		Х		Х						Electric mining shovel hoist gear lubrication, high temp lubrication for sliding surfaces on large mining shovels
	VULTREX Gear Shield® NC			•		4765	40	400	Metso, FLS, C						Х		Х	Х		х			Open gear applications, mill gears, ball mills, rod and sag mills, kilns, dryers
Extreme High Temp	THERMEX™	Silica Gel		•	2	227	16	160				260+ 50	0+	х				Х					Bearings in conveyor chain carriers of enameling ovens, in glass manufacture and very high temperature fan bearings. Product is designed to vaporize slowly, leaving little or no deposit

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