



LUBRICANTS

A HOLLYFRONTIER BUSINESS

# TECH DATA

## PRECISION™ SYNTHETIC

## INTRODUCTION

Petro-Canada Lubricants' PRECISION™ greases are premium performance, long life multi-application greases formulated to reduce operating costs and provide long service protection over a wide range of operating temperatures.

PRECISION Synthetic greases are formulated with synthetic fluids and performance additives for applications over a wider temperature range. The resulting products outperform leading competitive greases by offering longer life at high operating temperatures, better adhesion and excellent load carrying capacity. The outstanding performance of PRECISION Synthetic results in lower operating costs by reducing the re-greasing frequency, providing longer equipment protection and reducing maintenance costs to the customer.

## FEATURES AND BENEFITS

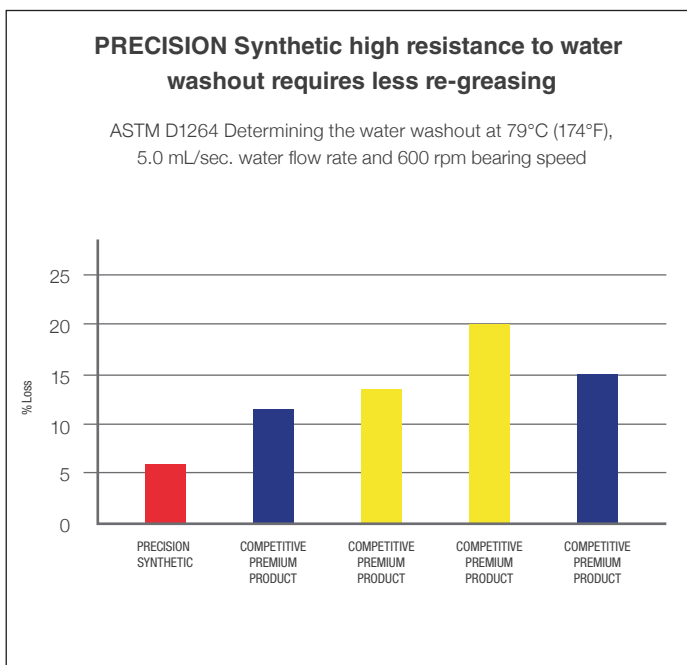
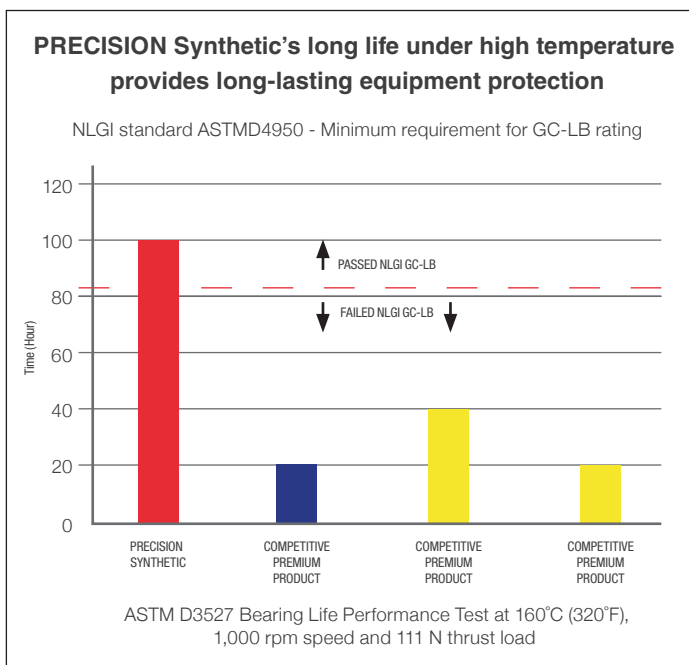
### PROTECTION ADVANTAGE

**Long life under high temperature provides long-lasting equipment protection.**

- PRECISION Synthetic performs better than many of the leading competitive premium multi-application products by lasting 2-3 times longer in the ASTM D3527 Life Performance Test.

**Low water washout requiring less re-greasing and maintenance.**

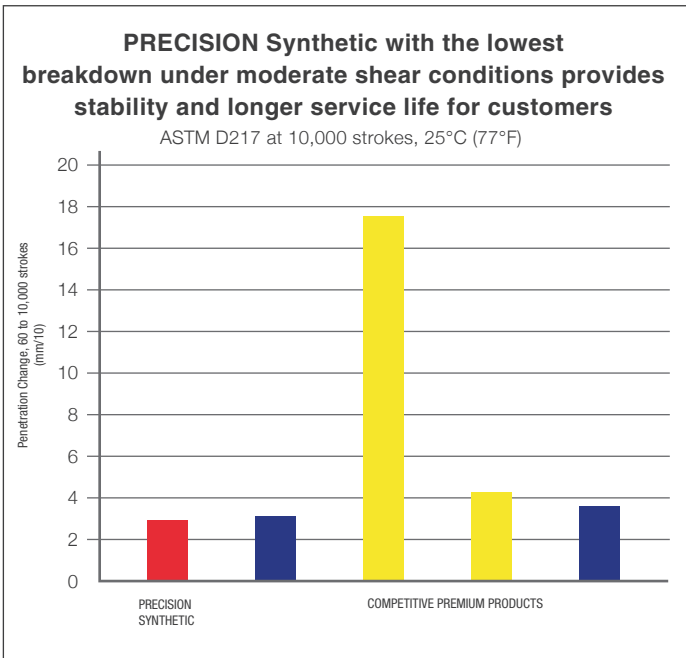
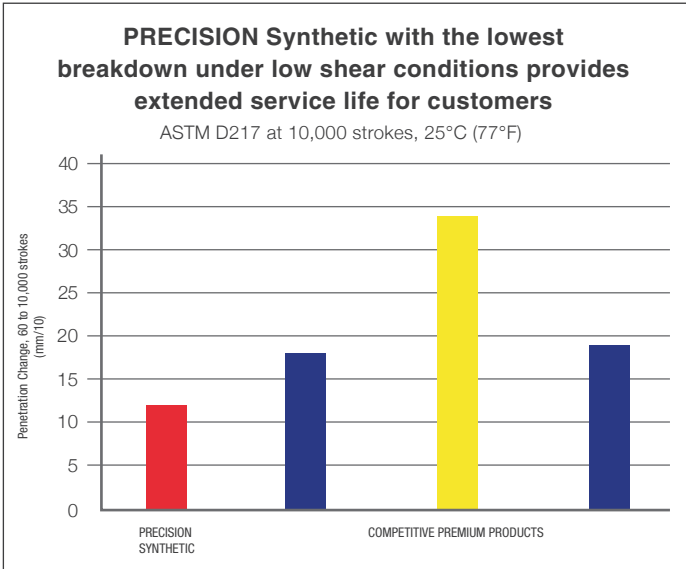
- PRECISION Synthetic's effective water washout resistance can reduce maintenance costs in humid or wet environments.



PRECISION Synthetic meets NLGI Automotive Service Classification GC-LB for wheel bearing and chassis lubrication.

**High mechanical stability in severe operating conditions.**

- PRECISION Synthetic can also lower maintenance costs as a result of reduced product breakdowns under low to moderately high shear conditions.



**STATE OF THE ART FORMULATIONS**

- Excellent protection against rust and corrosion
- Prevents scoring or spalling under high loads
- Reduces friction and wear
- Provides corrosion protection
- Seals bearings from water and contaminants
- Resists leakage, dripping and throw-off
- Resists change in consistency during service
- Maintains mobility under various conditions

**APPLICATIONS**

Petro-Canada Lubricants' PRECISION Synthetic greases are formulated to provide protection covering a wide range of applications especially where severe operating conditions exist. PRECISION Synthetic greases are recommended for a full range of automotive and industrial applications, including:

- Fleet
- Mining
- General Manufacturing
- Forestry
- Construction
- Pulp & Paper
- Agriculture
- Marine
- Power Generation
- Automotive
- Steel Mills

## PRECISION SYNTHETIC

### PRECISION SYNTHETIC

PRECISION Synthetic is developed to lubricate equipment in arctic environments. It delivers excellent cold weather protection with no compromise on high temperature performance. It has an operating range of -40°C to 170°C (-40°F to 338°F). PRECISION Synthetic meets NLGI's stringent standard GC-LB for automotive wheel bearing (GC) and chassis (LB) lubrication. Specific applications include:

- Centralized systems on heavily loaded mining machinery such as dragline booms
- Wheel bearings on high performance racing cars
- Forestry, construction, and mining mobile equipment
- Conveyors and equipment in refrigerated areas
- Pumpjacks
- Lubrication of wheel bearings and chassis components on trucks operating in wide extremes of temperature

### PRECISION SYNTHETIC MOLY

PRECISION Synthetic Moly contains 3% molybdenum disulphide for protection against vibration and shock loading. It is recommended for use in equipment operating in rough severe conditions such as shock loaded mobile equipment used in mining, forestry or construction industries, as well as heavy mining equipment. Operating range is -40°C to 170°C (-40°F to 338°F).

### PRECISION SYNTHETIC 220

PRECISION Synthetic 220 is formulated to lubricate equipment in extreme cold environments. It is intended for applications requiring a stiffer consistency or a higher viscosity than PRECISION Synthetic. It delivers excellent cold weather protection and high temperature performance. It has an operating range of -35°C to 170°C (-31°F to 338°F).

### PRECISION SYNTHETIC HEAVY 460

PRECISION Synthetic Heavy 460 is formulated with a medium high viscosity base oil and unique additive package, and is designed primarily for the lubrication for dryer felt-roll bearings in paper machines where an extended life at high temperatures is required and frequent grease replenishment is not possible. Operating range is -30°C to 170°C (-22°F to 338°F).

### PRECISION SYNTHETIC HEAVY 1500

PRECISION Synthetic Heavy 1500 is formulated with a very high viscosity base oil and unique additive package, and is designed for service in plain as well as rolling element bearings operating at low speeds, heavy loads and high temperatures; conditions encountered in mining, construction and forestry applications. It features excellent wear protection, load-carrying and high temperature performance. Operating range is -20°C to 170°C (-4°F to 338°F).

### PRECISION SYNTHETIC EP00

PRECISION Synthetic EP00 is semi-fluid synthetic grease that is designed primarily for the lubrication of truck/trailer wheel-end bearings. It is also recommended for leaky gearcases. It has an operating range of -40°C to 170°C (-40°F to 338°F).

### PRECISION SYNTHETIC EMB

PRECISION Synthetic EMB is formulated for long service life and excellent high and low temperature performance. It is designed to lubricate bearings over a wide temperature range in applications where shock loading is absent and an extreme pressure (EP) grease is not required. It meets CGE specification 6298 for Class B or F insulation. Applications for use include electric motors where no EP additives are allowed, high speed and anti-friction bearings found on fans, and bearings on electric motors and generators including high temperature units. Operating range is -40°C to 170°C (-40°F to 338°F).

## OPERATIONAL CONSIDERATIONS

PRECISION Greases with high thermal stability provide long service life under normal operating conditions up to its maximum recommended temperature. However, actual grease life is dependent upon system design and operating practices. No Nonsense Lubricants Warranty applies.

## TYPICAL PERFORMANCE DATA

Property	Test Method	PRECISION						
		SYNTHETIC EP00	SYNTHETIC	SYNTHETIC MOLY	SYNTHETIC 220	SYNTHETIC HEAVY 460	SYNTHETIC HEAVY 1500	SYNTHETIC EMB
NLGI Grade	D217	00	1	1	2	1-1/2	1-1/2	2
Colour	PCM 264	Gold	Gold	Grey	Gold	Gold	Gold	Tan
Texture	PCM 264	Stringy	Buttery	Buttery	Buttery	Stringy	Stringy	Buttery
Dropping Point, °C/°F	D2265	286/547	292/558	289/552	>304/>579	301/574	277/531	>304/>579
Worked Penetration, 60 strokes	D217A	404	314	319	288	315	305	293
Oxidation Stability 100 hrs, psi drop	D942	3	2	4	1.5	3	6	2
Base Oil Viscosity, cSt @ 40°C/SUS @ 100°F cSt @ 100°C/SUS @ 210°F	D445	507/2660	130/674	130/674	220/1168	507/2660	1495/7895	114/586
	D445	45.4/218	15.6/82	15.6/82	23.5/114	45.4/218	112/535	15.6/81
Timken OK Load, Kg/lb	D2509	25/55	27/60	27/60	27/60	27/60	30/65	-
Four Ball Weld Point, kg	D2596	315	315	400	315	315	315	-
Four Ball Wear scar diam, mm	D2266	0.52	0.51	0.43	0.52	0.55	0.50	0.56
Copper Corrosion	D4048	1A	1A	1A	1B	1B	1B	1B
Water Washout % @ 79°C/174°F	D1264	-	8.0	9.8	7.2	8.5	4.8	-
Recommended Operating Temperature Range, °C Temperature Range, °F		-40 to 170	-40 to 170	-40 to 170	-35 to 170	-30 to 170	-20 to 170	-40 to 17
		-40 to 338	-40 to 338	-40 to 338	-31 to 338	-22 to 338	-4 to 338	-40 to 338

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

To order product or to learn more about how Petro-Canada Lubricants can help your business visit: [lubricants.petro-canada.com](http://lubricants.petro-canada.com)  
or contact us at: [lubecsr@petrocanadalsp.com](mailto:lubecsr@petrocanadalsp.com)

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