PETRO-CANADA LUBRICANTS

AN HF SINCLAIR BRAND

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.

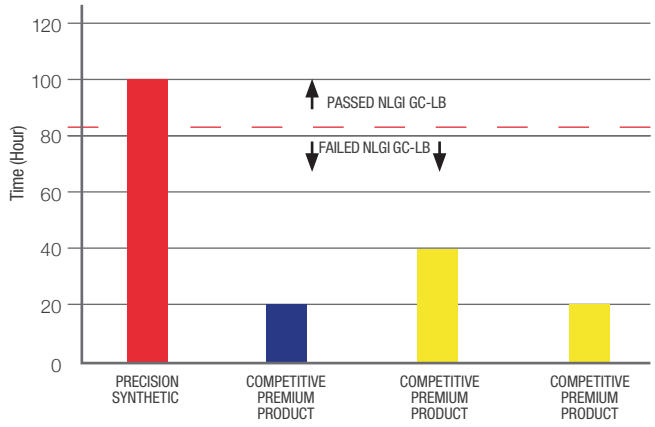
- PRECISION Synthetic performs better than many of the leading competitive premium multi-application products by lasting 2-3 times longer in the ASTM D3527 Life Performance Test.

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's long life under high temperature provides long-lasting equipment protection

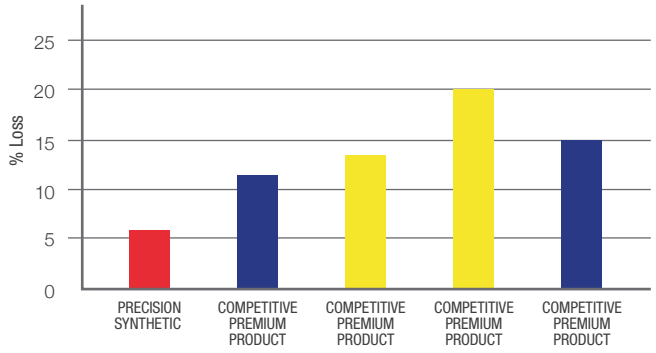
NLGI standard ASTMD4950 - Minimum requirement for GC-LB rating



ASTM D3527 Bearing Life Performance Test at 160˚C (320˚F), 1,000 rpm speed and 111 N thrust load

PRECISION Synthetic high resistance to water washout requires less re-greasing

ASTM D1264 Determining the water washout at 79°C (174°F), 5.0 mL/sec. water flow rate and 600 rpm bearing speed

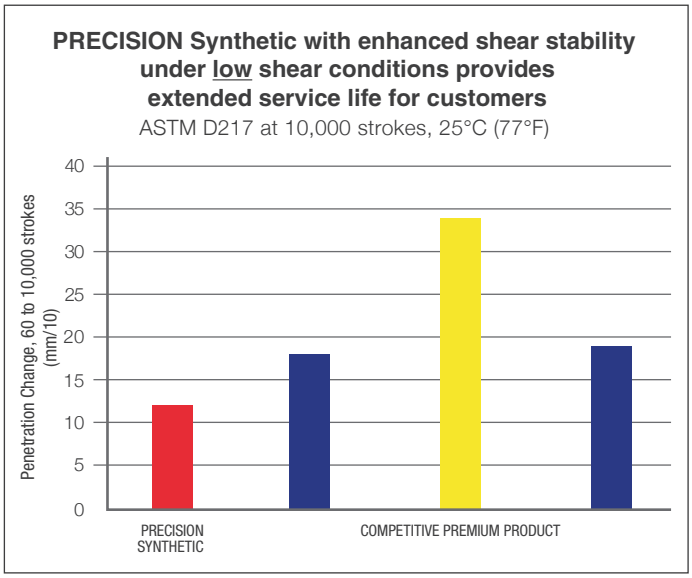


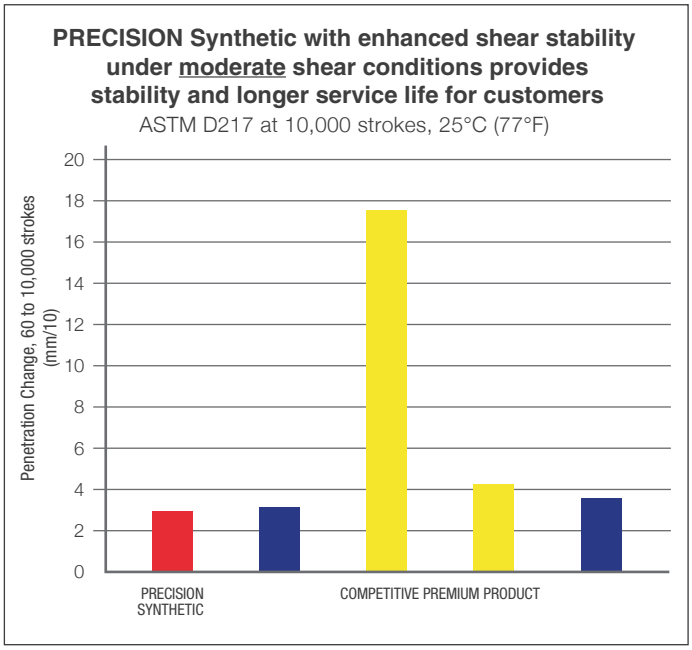
NLGI AUTOMOTIVE WHEEL BEARING & CHASSIS LUBRICANT GC-LB

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 enhanced shear stability 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 harsh 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 over a wide ambient temperature range. 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) and has NLGI GC-LB.

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 of 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 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 EMB
NLGI Grade	D217	00	1	1	2	1-1/2	2
Colour	PCM 264	Gold	Gold	Grey	Gold	Gold	Tan
Texture	PCM 264	Buttery	Buttery	Buttery	Buttery	Stringy	Buttery
Dropping Point, °C/°F	D2265	282/540	292/558	289/552	305/581	>308/>586	>308/>579
Worked Penetration, 60 strokes	D217A	407	314	319	288	304	293
Oxidation Stability 100 hrs, psi drop	D942	7	2	4	1.5	8.5	2
Base Oil Viscosity, cSt @ 40°C/SUS @ 100°F cSt @ 100°C/SUS @ 210°F	D445 D445	456/2390 42.9/208	130/674 15.6/82	130/674 15.6/82	220/1168 23.5/114	456/2390 42.9/208	114/586 15.6/81
Four Ball Weld Point, kg	D2596	315	315	400	315	315	-
Four Ball Wear scar diam, mm	D2266	0.46	0.51	0.43	0.52	0.51	0.56
Copper Corrosion	D4048	1B	1A	1A	1B	1B	1B
Water Washout % @ 79°C/174°F	D1264	-	8.0	9.8	8.0	5.7	-
Recommended Operating Temperature Range, °C Temperature Range, °F		-40 to 170 -40 to 338	-40 to 170 -40 to 338	-40 to 170 -40 to 338	-35 to 170 -31 to 338	-30 to 170 -22 to 338	-40 to 170 -40 to 338

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

Learn more about us: **lubricants.petro-canada.com**
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Committed to the disciplined operation of our business.

CERTIFIED
ISO 9001: 2015
ISO 14001: 2015
IATF 16949: 2016

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