Tech Data

PETRO-CANADA LUBRICANTS

COMPRO™ XL-S COMPRESSOR FLUID

Introduction

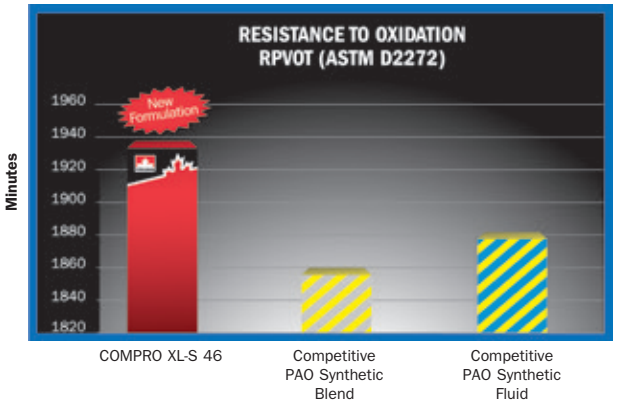
Petro-Canada's COMPRO™ XL-S Compressor Fluids are premium quality lubricants specifically designed to provide effective lubrication in rotary screw air compressors.

COMPRO XL-S fluids are formulated to include Petro-Canada's own pure hydrotreated base oils from the HT purity process, and / or Petro-Canada's own highly refined and severely processed hydroisomerized and catalytically dewaxed base oils for lubricant performance. Utilizing more than 25 years of formulating experience, Petro-Canada fortifies these thermally stable fluids with a specially selected additive combination to ensure high performance synergy in the finished lubricant.

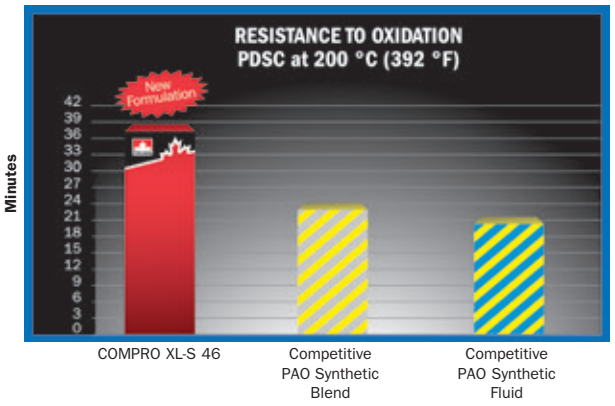
With excellent oxidation stability, corrosion, deposit control and low volatility, COMPRO XL-S provides up to 8,000 hours of continuous worry-free service for lubrication, sealing and effective heat removal for efficient compressor performance.

Features and Benefits

- **Excellent resistance to oxidative breakdown caused by exposure to air at high discharge temperatures**
  - Reduces oil thickening, maintaining good fluidity through pumps, lines, filters and actuators.
  - Controls build-up of acidic by-products that can accelerate oil deterioration and promote corrosion
  - Controls build-up of sludge and varnish to ensure smooth operation through fine tolerances



New and Improved COMPRO XL-S provides stronger resistance to oxidative breakdown than the competitive products tested.



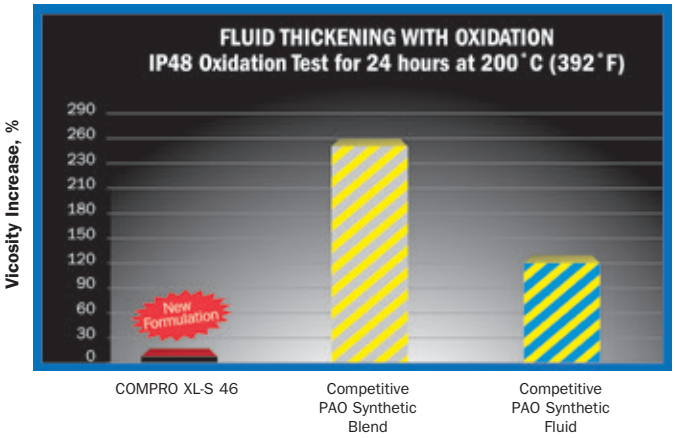
New and Improved COMPRO XL-S provides excellent resistance to oxidative breakdown caused by exposure to air at high temperatures.

What is the HT difference?

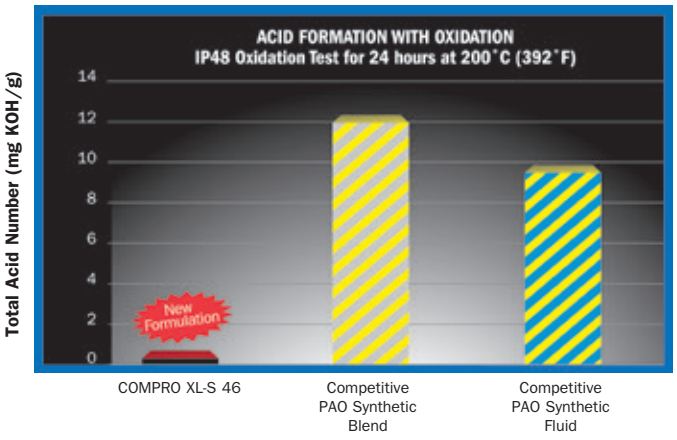
Petro-Canada Lubricants starts with the HT purity process to produce water-white, 99.9% pure base oils. The result is a range of lubricants, specialty fluids and greases that deliver maximum performance for our customers.

MAXIMUM PERFORMANCE • PERFORMANCE MAXIMALE • HT TM/MC

- **Higher thermal stability reduces carbon deposit formation**
  - Improves compressor operating efficiency
  - Reduces valve sticking and maintains heat transfer efficiency of intercoolers



New and Improved COMPRO XL-S shows strong resistance to oil thickening, which can improve compressor efficiency and lower energy consumption.



Tests show COMPRO XL-S can control build-up of acidic by-products due to oil oxidation.

- **Improved viscosity index and good low temperature properties**
  - Improves film thickness at elevated temperatures
  - Better cold temperature fluidity for low temperature start-up.
- **Good protection against wear**
  - Prolongs the service life of working components such as rotor bearings, vane tips, piston rings and liners
- **Protects against rust and corrosion**
  - Helps to extend component life, especially when running intermittent service in high humidity conditions
  - Good water separation for water removal and to minimize emulsions
- **Low volatility reduces oil carry-over into the air system**
  - May reduce fluid consumption for reservoir top-up
- **Reduces fluid consumption**

Applications

While COMPRO XL-S Compressor Fluid may be used to lubricate and cool all types of rotary vane, reciprocating, centrifugal and lobe air compressors, it is specifically designed to significantly extend service life in rotary screw compressors. It is available in five ISO viscosity grades: 32, 46, 68, 100 and 150 to cover most compressor applications.

COMPRO XL-S is suitable for use in compressors that handle air, and inert gases such as nitrogen, argon, hydrogen, neon, helium, carbon dioxide, carbon monoxide and blast furnace gas.

COMPRO XL-S is suitable for use in all makes of compressors, including:

ABAC
Allis Chalmers
Atlas-Copco
Ceccato
Champion Pacific
Chicago Pneumatic Tool
Compair Canada
Copper-Bressemer
Copper Industries
Cooper-Penjax
Davey Compressors
Dresser Industries
Elliot Company
Fuller Company
Gardner-Denver
GrimmerSchmidt
Ingersoll-Rand
Joy Manufacturing
Kaeser Compressors
Kellogg-American
Le Roi
M&D Pneumatics
MAHLE
Mark
Quincy Compressors
Schramm Inc.
Sullair Compressors
Sundstrand Corp.
Worthington Compressors

COMPRO XL-S is compatible with standard seal and hose materials used in most compressors.

COMPRO XL-S Compressor Fluid is also suitable for use in industrial vacuum pumps operating with a vacuum of >0.005 mBar.

NOTE: COMPRO XL-S should not be used in systems compressing wet or sour hydrocarbon gases. For these applications, Petro-Canada's Compressor Oil RP, SPX Fluid or NGS Fluid is recommended.

NOTE: COMPRO XL-S must not be used in the compression of oxygen, or other chemically active gases such as chlorine or hydrogen chloride.

NOTE: DO NOT USE in breathing air apparatus or medical equipment.

Operational Considerations

The full benefits of a change to COMPRO XL-S Compressor Fluid will only be realized by minimizing contamination with the previously used oil. Certain makes of compressors do not permit complete draining, so if the drained oil is heavily oxidized (shown by significant increase in the oil's total acid number and viscosity), recharging with COMPRO XL-S may not result in optimum performance and fluid service life.

While COMPRO XL-S is fully compatible with most mineral and synthetic compressor fluids, it should not be mixed or contaminated with fluids containing polyalkylene glycols or silicones.

For complete instructions on cleaning varnished compressors, or flushing and recharging your compressor with COMPRO XL-S Compressor Fluid, consult with a Petro-Canada Technical Services Advisor.

Compressor Fluid Grade Selection & Service Life

Compressor Type	Recommended Viscosity Grades	Fluid Service Life at Maximum Air Discharge Temperature		
Rotary Screw	COMPRO XL-S 32, 46	8,000 Hours	85ºC	(185ºF)
Rotary Vane	COMPRO XL-S 100, 150	1,000 Hours	85ºC	(185ºF)
Reciprocating	COMPRO XL-S 68, 100, 150	500 Hours	150ºC	(302ºF)
Centrifugal / Lobe	COMPRO XL-S 32	>16,000 Hours	50ºC	(122ºF)

Note: The above are general guidelines only. Consult your OEM service manual for specific make/model recommendations.

Petro-Canada Technical Service team can help to refine these recommendations for your facility.

Typical Performance Data

PROPERTY	TEST METHOD	COMPRO XL-S COMPRESSOR FLUID				
		32	46	68	100	150
Viscosity, cSt @ 40ºC (SUS @ 100ºF) cSt @ 100ºC (SUS @ 210ºF)	 ASTM D445 ASTM D445	 36.6 (188.2) 6.0 (45.9)	 47.2 (242.6) 7.2 (50.2)	 71.3 (363.4) 11.6 (65.6)	 100.7 (517.2) 14.1 (75.3)	 146.5 (763.4) 16.1 (83.6)
Viscosity Index	ASTM D2270	107	114	157	143	115
Flash Point, ºC (ºF)	ASTM D92	243 (469)	241 (466)	271 (520)	263 (505)	287 (549)
Low temperature fluidity: Pour Point, ºC (ºF)	 ASTM D5950	 -42 (-44)	 -42 (-44)	 -36 (-33)	 -27 (-17)	 -24 (-11)
Total Acid Number (TAN), mL KOH/g	ASTM D664	0.15	0.14	0.13	0.11	0.14
Water Separability: mL at 54ºC (129ºF), minutes mL at 82ºC (180ºF), minutes	 ASTM D1401	 40-40-0 (5) -	 40-40-0 (15) -	 41-39-0 (15) -	 - 41-39-0 (10)	 - 40-40-0 (10)
Corrosion Protection: Copper Corrosion, 3h @ 100ºC Rust B – Synthetic Sea Water	 ASTM D130 ASTM D665B	 1b Pass	 1b Pass	 1a Pass	 1a Pass	 1a Pass
Residue & Ash: Ramsbottom Carbon Residue, mass %	 ASTM D524	 0.04	 0.03	 0.02	 0.05	 0.09
Foam Sequence I Foam Sequence II Foam Sequence III	ASTM D892	10/0 20/0 0/0	0/0 0/0 0/0	5/0 20/0 0/0	10/0 0/0 0/0	0/0 10/0 0/0
Noack % (250°C, 1hr)	DIN 51581	8.42	6.46	3.26	2.54	1.32
PDSC, 200°C, minutes	ASTM D6186	34	36	36	35	38
RPVOT, minutes	ASTM D2272	1786	1695	1541	1763	1851

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

NSF
Nonfood Compounds
Program Listed H2

To order product or to learn more about how Petro-Canada Lubricants can help your business visit: **lubricants.petro-canada.com**
or contact us at: **lubecsr@petrocanadalsp.com**

CERTIFIED
ISO 9001
ISO 14001
ISO/TS 16949

IM-7842E (2015.01)

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