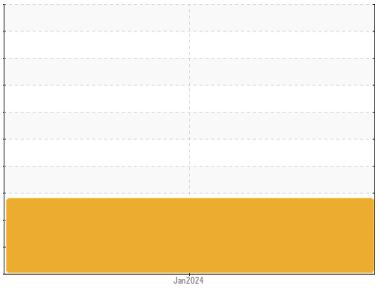
OIL ANALYSIS REPORT

Sample Rating Trend



OFF SPEC

Machine Id
K604
Component
Natural Gas Engine - Hydraulic Actuator
Fluid
PETRO CANADA PRODURO TO-4+ XL SYN BLEND LOTEMP (--- LTR)

DIAGNOSIS

▲ Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as PETRO CANADA PRODURO TO-4+ XL SYN BLEND LOTEMP, however, a fluid match indicates that this fluid is Petro-Canada Sentron LD 3000. Please confirm the oil type and grade on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

▲ Fluid Condition

Viscosity of sample indicates oil is within SAE 40 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PC0085492**	---	---
Sample Date		Client Info		**17 Jan 2024**	---	---
Machine Age	hrs	Client Info		**6606**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**Not Changd**	---	---
Sample Status				**ABNORMAL**	---	---

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**0**	---	---
Iron	ppm	ASTM D5185(m)	>20	**<1**	---	---
Chromium	ppm	ASTM D5185(m)	>20	**0**	---	---
Nickel	ppm	ASTM D5185(m)	>20	**<1**	---	---
Titanium	ppm	ASTM D5185(m)		**0**	---	---
Silver	ppm	ASTM D5185(m)		**0**	---	---
Aluminum	ppm	ASTM D5185(m)	>20	**1**	---	---
Lead	ppm	ASTM D5185(m)	>20	**<1**	---	---
Copper	ppm	ASTM D5185(m)	>20	**6**	---	---
Tin	ppm	ASTM D5185(m)	>20	**0**	---	---
Antimony	ppm	ASTM D5185(m)		**0**	---	---
Vanadium	ppm	ASTM D5185(m)		**0**	---	---
Beryllium	ppm	ASTM D5185(m)		**0**	---	---
Cadmium	ppm	ASTM D5185(m)		**0**	---	---

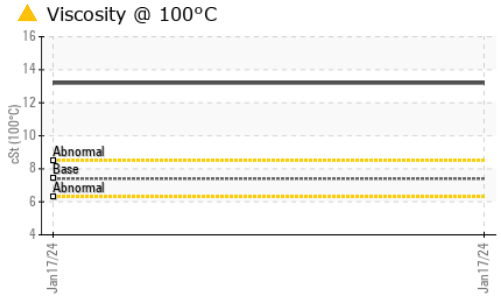
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**2**	---	---
Barium	ppm	ASTM D5185(m)	0	**0**	---	---
Molybdenum	ppm	ASTM D5185(m)	1	**0**	---	---
Manganese	ppm	ASTM D5185(m)	1	**0**	---	---
Magnesium	ppm	ASTM D5185(m)	9	**7**	---	---
Calcium	ppm	ASTM D5185(m)	3080	▲ **1225**	---	---
Phosphorus	ppm	ASTM D5185(m)	1136	▲ **264**	---	---
Zinc	ppm	ASTM D5185(m)	1269	▲ **298**	---	---
Sulfur	ppm	ASTM D5185(m)	3614	▲ **2102**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**2**	---	---
Sodium	ppm	ASTM D5185(m)		**<1**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**<1**	---	---
Water	%	ASTM D6304*	>0.05	**0.003**	---	---
ppm Water	ppm	ASTM D6304*	>500	**27**	---	---

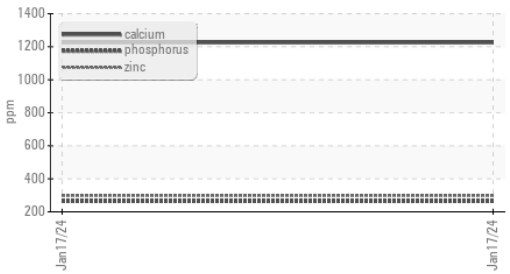
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	**129**	---	---
Particles >6µm	ASTM D7647	>1300	**46**	---	---
Particles >14µm	ASTM D7647	>160	**6**	---	---
Particles >21µm	ASTM D7647	>40	**3**	---	---
Particles >38µm	ASTM D7647	>10	**1**	---	---
Particles >71µm	ASTM D7647	>3	**1**	---	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	**14/13/10**	---	---

OIL ANALYSIS REPORT

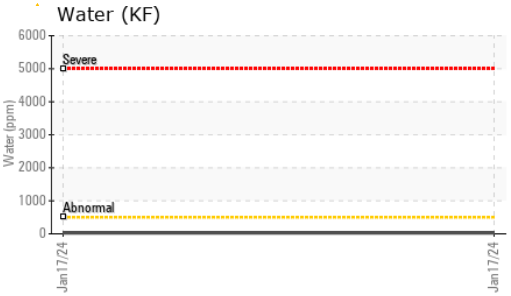
Viscosity @ 100°C



Additives



Water (KF)



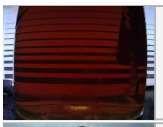
PQ

Particle Trend

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	3.95	**0.25**	---	---

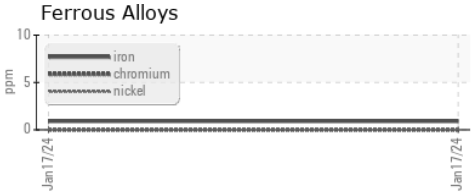
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	---	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	---
Precipitate	scalar	Visual*	NONE	**NONE**	---	---
Silt	scalar	Visual*	NONE	**NONE**	---	---
Debris	scalar	Visual*	NONE	**NONE**	---	---
Sand/Dirt	scalar	Visual*	NONE	**NONE**	---	---
Appearance	scalar	Visual*	NORML	**NORML**	---	---
Odor	scalar	Visual*	NORML	**NORML**	---	---
Emulsified Water	scalar	Visual*	>0.05	**NEG**	---	---
Free Water	scalar	Visual*		**NEG**	---	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	35.1	▲ **119**	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	7.4	▲ **13.2**	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	184	▲ **105**	---	---

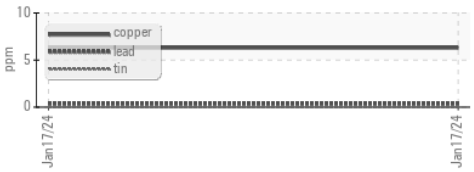
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				*no image*	*no image*
Bottom				*no image*	*no image*

GRAPHS

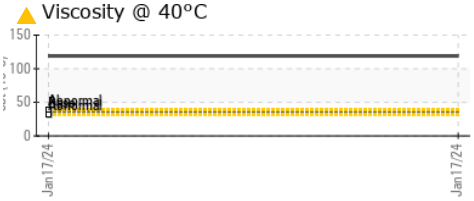
Ferrous Alloys



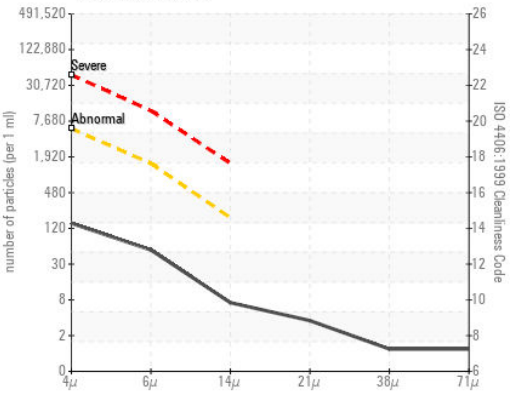
Non-ferrous Metals



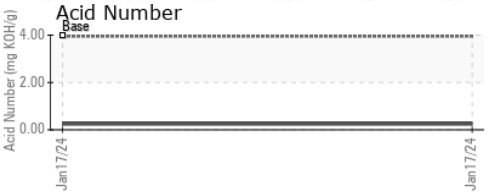
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0085492 **Recieved** : 02 Feb 2024
Lab Number : 02613129 **Diagnosed** : 05 Feb 2024
Unique Number : 5722224 **Diagnostician** : Bill Quesnel
Test Package : PLANT (Additional Tests: FT-IR(Diff), KV100, VI)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

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