



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Area
Loader
Machine Id
SRF0110

Component
Hydraulic System
Fluid

PETRO CANADA PRODURO TO-4 SAE 30 (280 LTR)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill.
Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

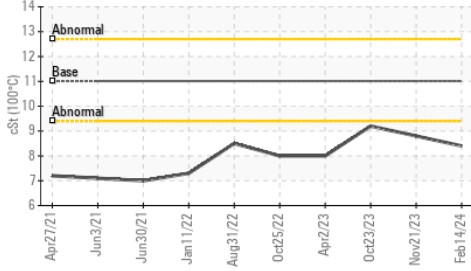
There is no indication of any contamination in the oil.

FLUID CONDITION

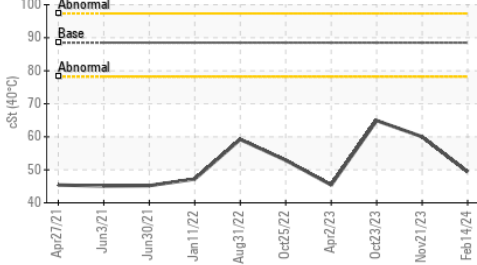
Viscosity of sample indicates oil is within SAE 5W20 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0074930	PC0074865	PC0051385
Sample Date		Client Info		14 Feb 2024	21 Nov 2023	23 Oct 2023
Machine Age	hrs	Client Info		30232	28756	28318
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185(m)	>20	11	4	3
Chromium	ppm	ASTM D5185(m)	>10	<1	0	0
Nickel	ppm	ASTM D5185(m)	>10	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>10	6	3	2
Lead	ppm	ASTM D5185(m)	>10	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>75	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>10	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185(m)	>20	15	9	7
Potassium	ppm	ASTM D5185(m)	>20	2	<1	2
Water		WC Method	>0.1	NEG	NEG	NEG
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	.2%
Sodium	ppm	ASTM D5185(m)		6	2	7
Boron	ppm	ASTM D5185(m)	2	19	33	15
Barium	ppm	ASTM D5185(m)	0	0	<1	<1
Molybdenum	ppm	ASTM D5185(m)	0	33	3	4
Manganese	ppm	ASTM D5185(m)	9	0	0	0
Magnesium	ppm	ASTM D5185(m)	1	525	32	36
Calcium	ppm	ASTM D5185(m)	3131	2112	3171	2952
Phosphorus	ppm	ASTM D5185(m)	1194	1021	938	910
Zinc	ppm	ASTM D5185(m)	1281	1182	1142	1087
Sulfur	ppm	ASTM D5185(m)	3811	2927	2729	2734
Visc @ 40°C	cSt	ASTM D7279(m)	88.5	▲ 49.4	60.0	64.9
Visc @ 100°C	cSt	ASTM D7279(m)	11.01	▲ 8.4	8.8	9.2
Viscosity Index (VI)	Scale	ASTM D2270*	110	▲ 145	121	119

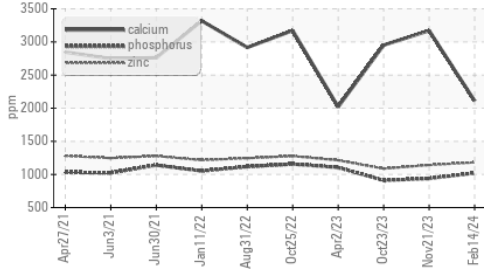
▲ Viscosity @ 100°C



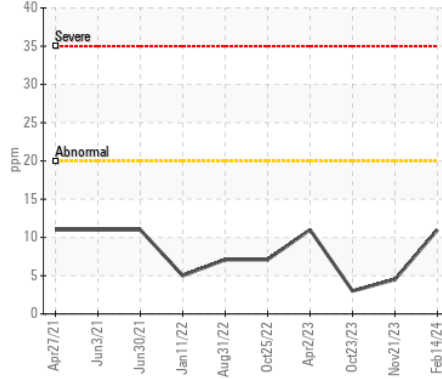
▲ Viscosity @ 40°C



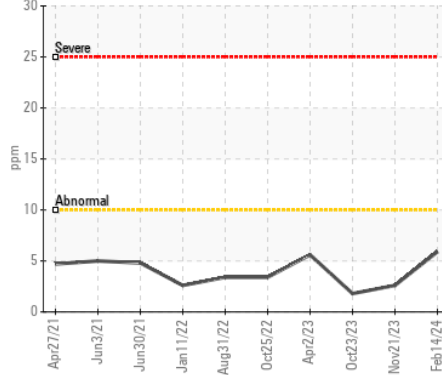
Additives



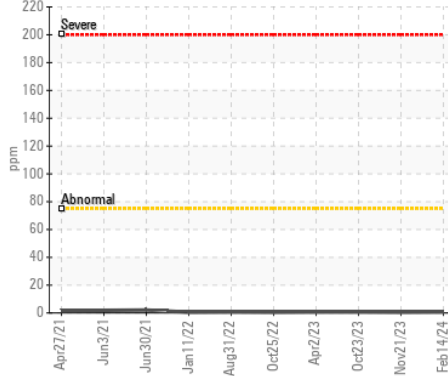
Iron (ppm)



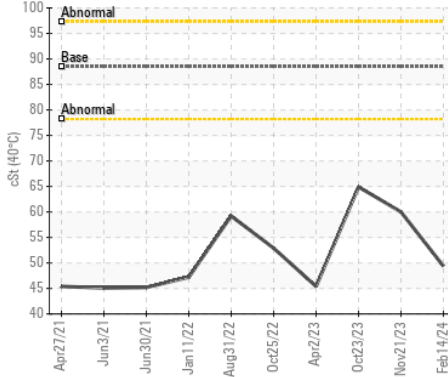
Aluminum (ppm)



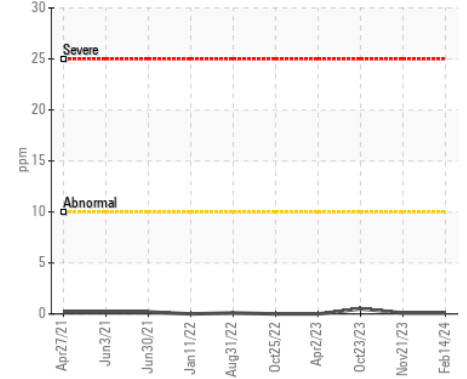
Copper (ppm)



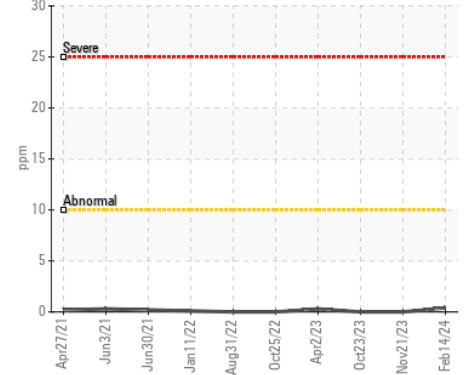
▲ Viscosity @ 40°C



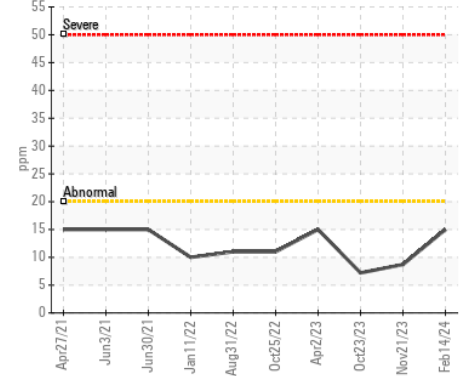
Lead (ppm)



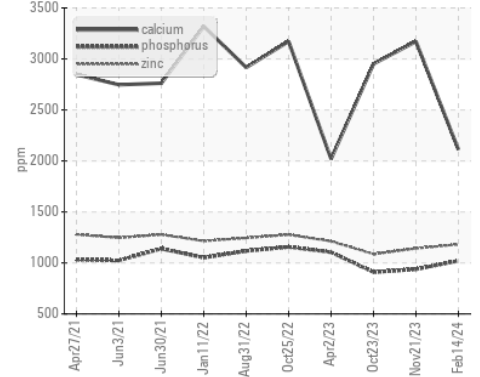
Chromium (ppm)



Silicon (ppm)



Additives



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9

Sample No. : PC0074930

Lab Number : 02619586

Unique Number : 5736696

Test Package : MOB 1 (Additional Tests: KV100, VI)

Received : 04 Mar 2024

Tested : 04 Mar 2024

Diagnosed : 04 Mar 2024 - Kevin Marson

Lakeshore Gold Timmins West

Timmins, ON
CA

Contact: Dale Arseneau
darseneau@ca.panamericansilver.com

T: (705)269-4344

F:

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.