



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 930K 2211602
 Component
Front Axle
 Fluid
PETRO CANADA PRODURO TO-4 SAE 30 (--- GAL)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0088746	PC0071084	---
Sample Date		Client Info		10 Apr 2024	12 Jan 2023	---
Machine Age	hrs	Client Info		8620	7756	---
Oil Age	hrs	Client Info		1000	1000	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Not Chngd	Changed	---
Filter Changed		Client Info		Not Chngd	N/A	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>500	7	10	---
Chromium	ppm	ASTM D5185(m)	>10	0	0	---
Nickel	ppm	ASTM D5185(m)	>10	0	0	---
Titanium	ppm	ASTM D5185(m)		0	<1	---
Silver	ppm	ASTM D5185(m)		0	0	---
Aluminum	ppm	ASTM D5185(m)	>25	<1	1	---
Lead	ppm	ASTM D5185(m)	>25	0	<1	---
Copper	ppm	ASTM D5185(m)	>50	2	3	---
Tin	ppm	ASTM D5185(m)	>10	0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

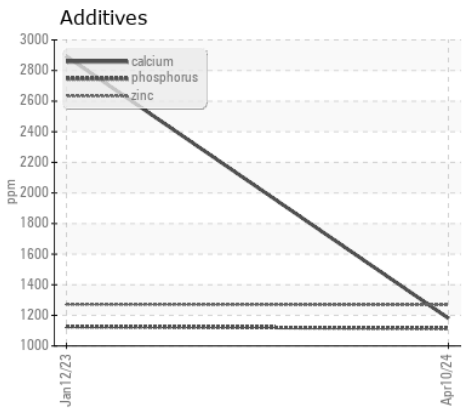
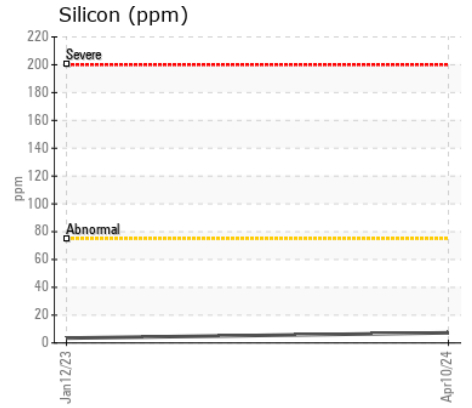
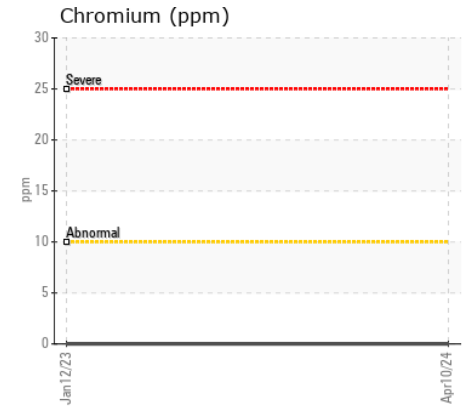
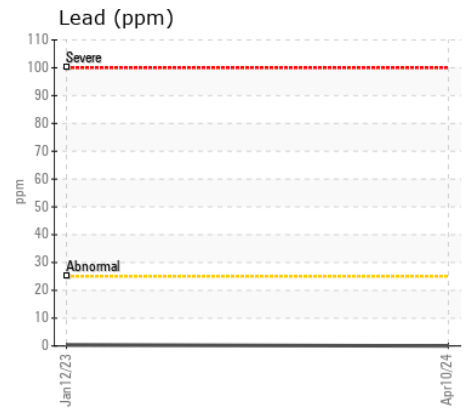
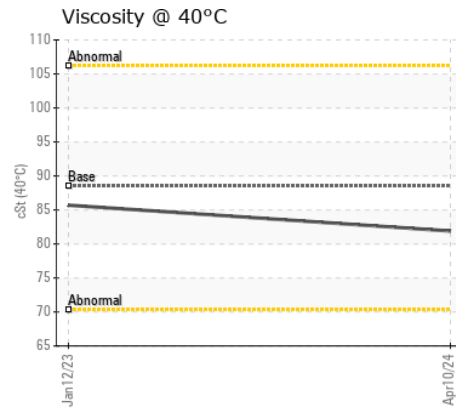
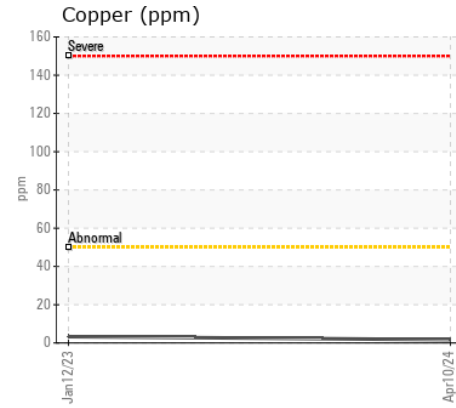
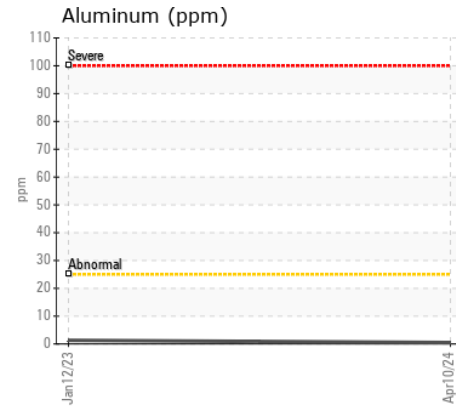
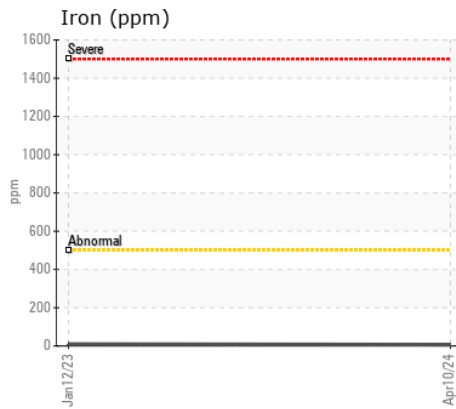
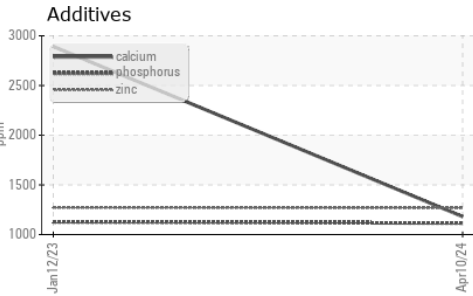
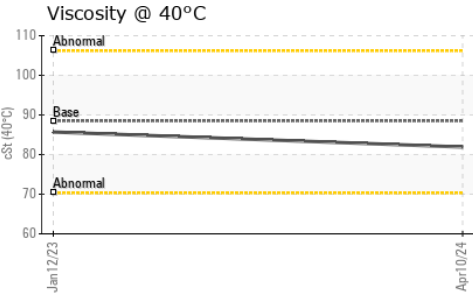
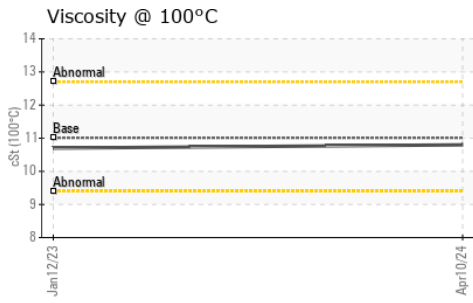
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>75	7	4	---
Potassium	ppm	ASTM D5185(m)	>20	0	<1	---
Water		WC Method	>0.2	NEG	NEG	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	VLITE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	---

FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil.
 The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		0	1	---
Boron	ppm	ASTM D5185(m)	2	2	4	---
Barium	ppm	ASTM D5185(m)	0	0	0	---
Molybdenum	ppm	ASTM D5185(m)	0	0	<1	---
Manganese	ppm	ASTM D5185(m)	9	0	<1	---
Magnesium	ppm	ASTM D5185(m)	1	890	111	---
Calcium	ppm	ASTM D5185(m)	3131	1181	2893	---
Phosphorus	ppm	ASTM D5185(m)	1194	1115	1127	---
Zinc	ppm	ASTM D5185(m)	1281	1268	1272	---
Sulfur	ppm	ASTM D5185(m)	3811	3139	3638	---
Visc @ 40°C	cSt	ASTM D7279(m)	88.5	81.9	85.7	---
Visc @ 100°C	cSt	ASTM D7279(m)	11.01	10.8	10.7	---
Viscosity Index (VI)	Scale	ASTM D2270*	110	117	109	---



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0088746
Lab Number : 02630317
Unique Number : 5763449
Test Package : MOB 1 (Additional Tests: KV100, VI)

Received : 19 Apr 2024
Tested : 19 Apr 2024
Diagnosed : 22 Apr 2024 - Kevin Marson

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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