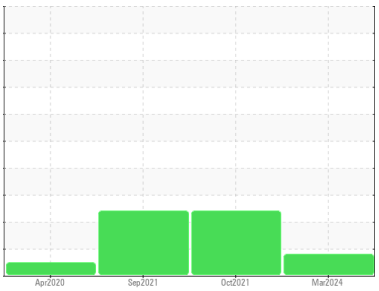
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
CATERPILLAR 980M L56
Component
Front Right Final Drive
Fluid
PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)

DIAGNOSIS

▲ Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

▲ Wear
Gear wear is indicated.

Contamination
There is no indication of any contamination in the oil.

Fluid Condition
The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0118513**	PCA0016895	PCA0016887
Sample Date		Client Info		**11 Mar 2024**	06 Oct 2021	27 Sep 2021
Machine Age	hrs	Client Info		**16346**	96111	9611
Oil Age	hrs	Client Info		**2183**	0	0
Oil Changed		Client Info		**Changed**	Not Changd	Not Changd
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>800	▲ **1265**	▲ 1404	▲ 1432
Chromium	ppm	ASTM D5185m	>10	**4**	6	6
Nickel	ppm	ASTM D5185m	>5	**2**	2	2
Titanium	ppm	ASTM D5185m	>15	**<1**	<1	<1
Silver	ppm	ASTM D5185m	>2	**0**	<1	<1
Aluminum	ppm	ASTM D5185m	>75	**30**	▲ 35	▲ 36
Lead	ppm	ASTM D5185m	>10	**2**	2	2
Copper	ppm	ASTM D5185m	>75	**42**	▲ 57	▲ 58
Tin	ppm	ASTM D5185m	>8	**<1**	1	1
Antimony	ppm	ASTM D5185m	>50	**---**	0	<1
Vanadium	ppm	ASTM D5185m		**<1**	<1	<1
Cadmium	ppm	ASTM D5185m		**<1**	<1	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	**16**	2	2
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0	**<1**	2	2
Manganese	ppm	ASTM D5185m	0	**19**	19	19
Magnesium	ppm	ASTM D5185m	9	**48**	57	58
Calcium	ppm	ASTM D5185m	3114	**3302**	3393	3485
Phosphorus	ppm	ASTM D5185m	1099	**903**	1051	1063
Zinc	ppm	ASTM D5185m	1245	**968**	1256	1282
Sulfur	ppm	ASTM D5185m	7086	**6285**	6204	6276

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>400	**32**	44	44
Sodium	ppm	ASTM D5185m		**<1**	2	2
Potassium	ppm	ASTM D5185m	>20	**0**	0	0

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	3.27	**0.520**	0.816	0.809

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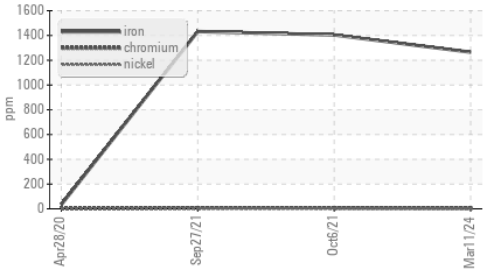
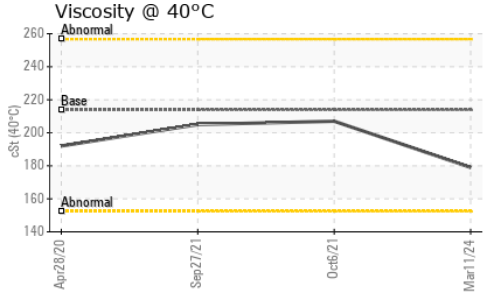
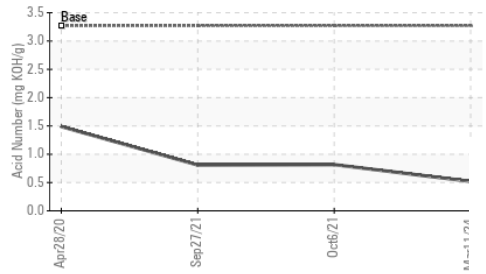
Ferrous Alloys



Viscosity @ 40°C



Acid Number



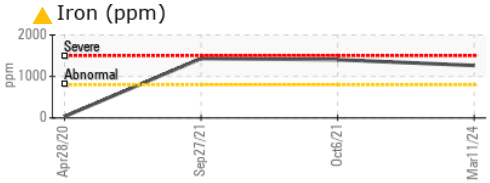
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	213.9	**179**	207	205

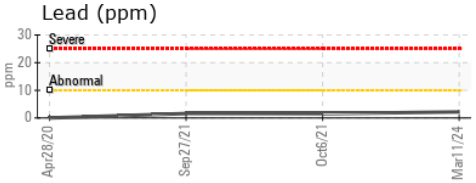
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			*no image*	*no image*	*no image*
Bottom			*no image*	*no image*	*no image*

GRAPHS

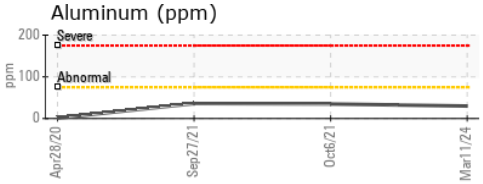
Iron (ppm)



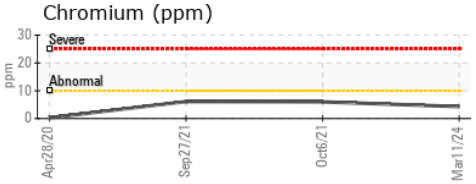
Lead (ppm)



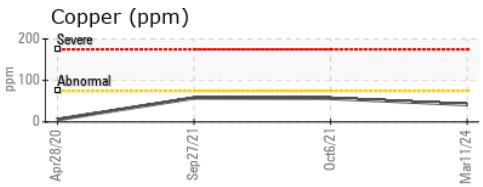
Aluminum (ppm)



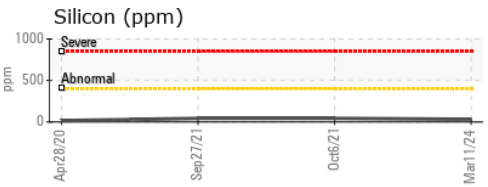
Chromium (ppm)



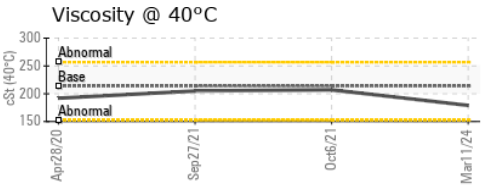
Copper (ppm)



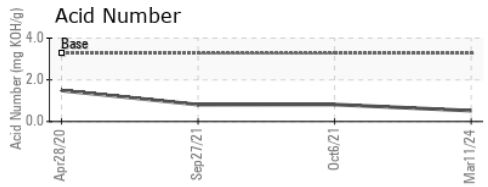
Silicon (ppm)



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0118513
Lab Number : 06121004
Unique Number : 10929837
Test Package : MOB 2

Received : 18 Mar 2024
Tested : 19 Mar 2024
Diagnosed : 20 Mar 2024 - Don Baldridge

To discuss this sample report, contact Customer Service at 1-800-237-1369.
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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