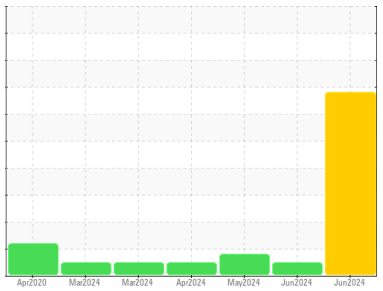
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
L-56
Component
Rear Differential
Fluid
PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)

DIAGNOSIS

▲ Recommendation
We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

▲ Wear
A sharp increase in the iron level is noted. 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 oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0128746**	PCA0123794	PCA0123765
Sample Date		Client Info		**27 Jun 2024**	05 Jun 2024	31 May 2024
Machine Age	hrs	Client Info		**17836**	17415	17374
Oil Age	hrs	Client Info		**500**	34	250
Oil Changed		Client Info		**Not Changd**	Changed	Changed
Sample Status				**SEVERE**	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	▲ **1559**	236	353
Chromium	ppm	ASTM D5185m	>3	▲ **4**	1	<1
Nickel	ppm	ASTM D5185m	>3	**3**	<1	<1
Titanium	ppm	ASTM D5185m	>2	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>30	**12**	11	16
Lead	ppm	ASTM D5185m	>13	**0**	0	<1
Copper	ppm	ASTM D5185m	>103	**50**	40	▲ 148
Tin	ppm	ASTM D5185m	>5	**<1**	0	0
Vanadium	ppm	ASTM D5185m		**<1**	0	<1
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	**16**	12	191
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0	**2**	6	0
Manganese	ppm	ASTM D5185m	0	**14**	2	3
Magnesium	ppm	ASTM D5185m	9	**25**	37	<1
Calcium	ppm	ASTM D5185m	3114	**3066**	2336	397
Phosphorus	ppm	ASTM D5185m	1099	**917**	829	896
Zinc	ppm	ASTM D5185m	1245	**1028**	981	128
Sulfur	ppm	ASTM D5185m	7086	**5339**	4476	28112

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>100	**19**	10	22
Sodium	ppm	ASTM D5185m		**1**	<1	2
Potassium	ppm	ASTM D5185m	>20	**<1**	1	<1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	3.27	**0.99**	1.32	1.73

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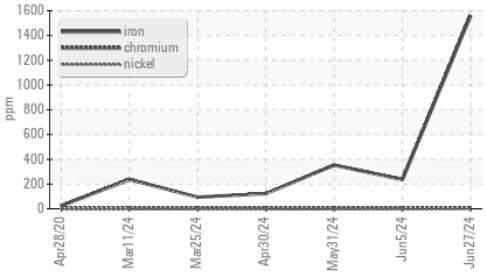
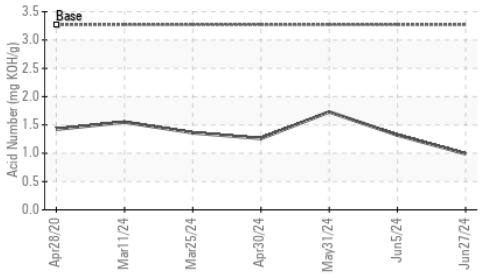
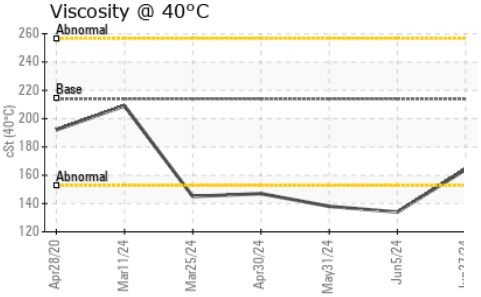
Ferrous Alloys



Acid Number



Viscosity @ 40°C



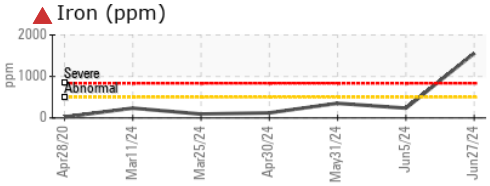
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	MODER	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**MODER**	MODER	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>.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	**164**	134	138

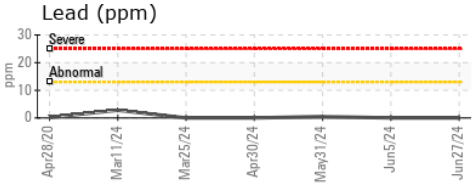
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			*no image*	*no image*	*no image*
Bottom			*no image*	*no image*	*no image*

GRAPHS

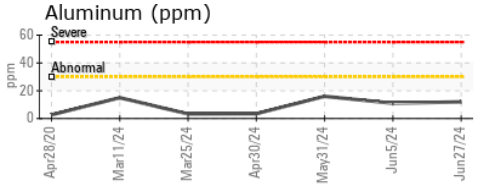
Iron (ppm)



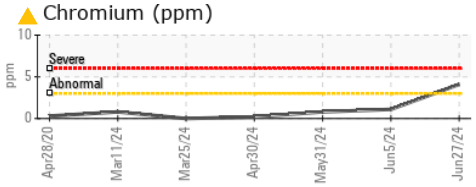
Lead (ppm)



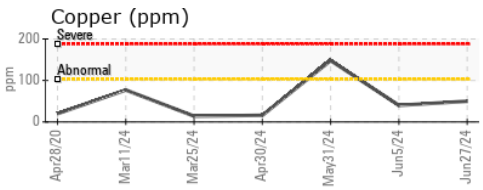
Aluminum (ppm)



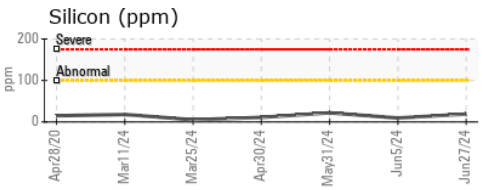
Chromium (ppm)



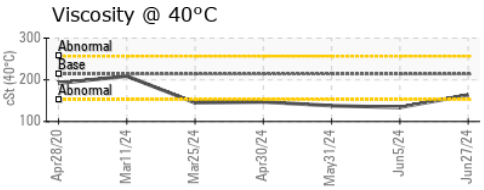
Copper (ppm)



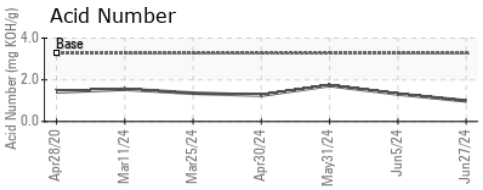
Silicon (ppm)



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0128746
Lab Number : 06226415
Unique Number : 11109908
Test Package : MOB 2

Received : 02 Jul 2024
Tested : 03 Jul 2024
Diagnosed : 05 Jul 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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US 43938
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fnally@scrapmetalservices.com
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F:

Report Id: SCRMIN [WUSCAR] 06226415 (Generated: 07/09/2024 18:42:17) Rev: 1

Submitted By: TIM RANDOLPH