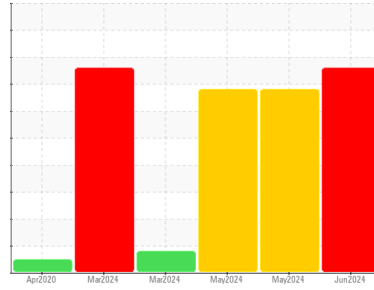


# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Machine Id  
**L-56**  
 Component  
**Front 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

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		<b>PCA0128793</b>	PCA0123775	PCA0118475
Sample Date	Client Info		<b>27 Jun 2024</b>	08 May 2024	02 May 2024
Machine Age	hrs	Client Info	<b>17836</b>	16959	16917
Oil Age	hrs	Client Info	<b>500</b>	0	500
Oil Changed	Client Info		<b>Not Chngd</b>	Changed	Not Chngd
Sample Status			<b>SEVERE</b>	SEVERE	SEVERE

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >500	<b>▲ 1629</b>	▲ 1198	▲ 1374
Chromium	ppm	ASTM D5185m >3	<b>▲ 4</b>	▲ 3	▲ 4
Nickel	ppm	ASTM D5185m >3	<b>2</b>	1	<1
Titanium	ppm	ASTM D5185m >2	<b>1</b>	1	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >30	<b>▲ 31</b>	21	23
Lead	ppm	ASTM D5185m >13	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m >103	<b>15</b>	13	12
Tin	ppm	ASTM D5185m >5	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2	<b>205</b>	261	232
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 0	<b>0</b>	<1	0
Manganese	ppm	ASTM D5185m 0	<b>24</b>	17	19
Magnesium	ppm	ASTM D5185m 9	<b>45</b>	28	36
Calcium	ppm	ASTM D5185m 3114	<b>286</b>	385	404
Phosphorus	ppm	ASTM D5185m 1099	<b>1037</b>	1065	981
Zinc	ppm	ASTM D5185m 1245	<b>54</b>	111	113
Sulfur	ppm	ASTM D5185m 7086	<b>22147</b>	20583	20368

## CONTAMINANTS

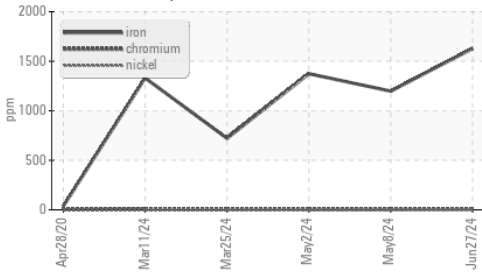
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >100	<b>43</b>	26	29
Sodium	ppm	ASTM D5185m	<b>2</b>	0	<1
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	2	<1

## FLUID DEGRADATION

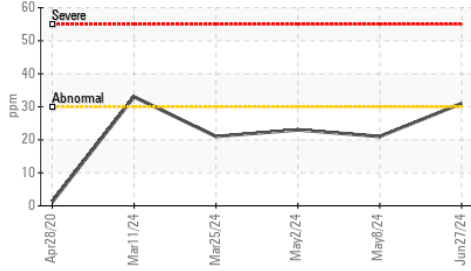
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 3.27	<b>1.26</b>	1.02	1.07

# OIL ANALYSIS REPORT

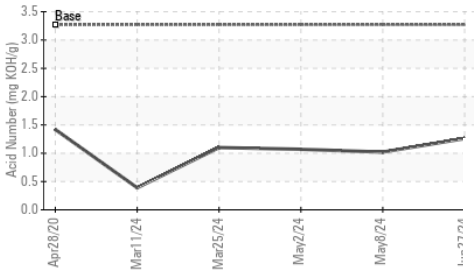
**▲ Ferrous Alloys**



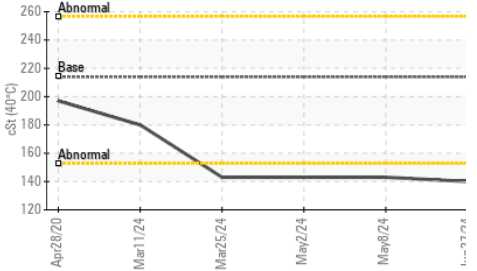
**▲ Aluminum (ppm)**



**Acid Number**



**Viscosity @ 40°C**



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

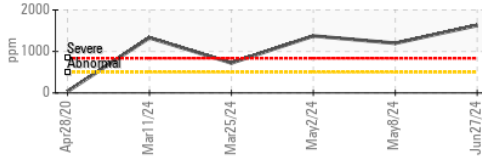
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	213.9	140	143

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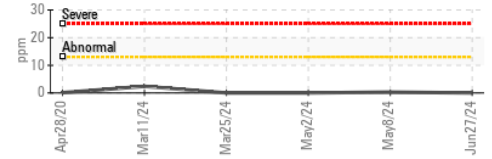
Color	no image	no image	no image
Bottom	no image	no image	no image

## GRAPHS

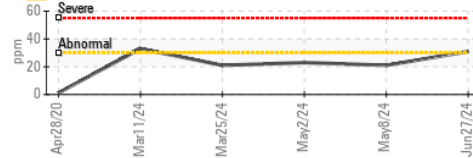
**▲ Iron (ppm)**



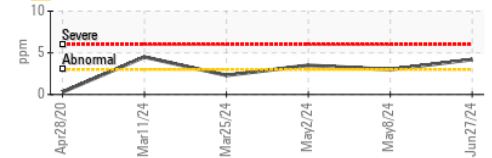
**Lead (ppm)**



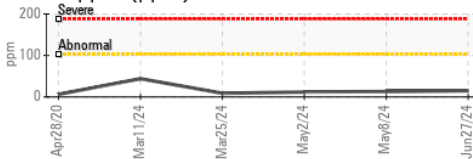
**▲ Aluminum (ppm)**



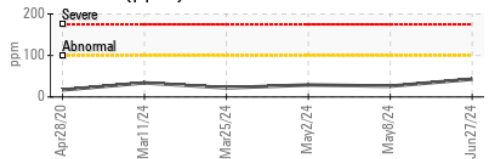
**▲ Chromium (ppm)**



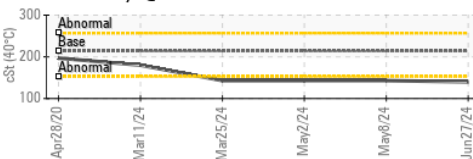
**Copper (ppm)**



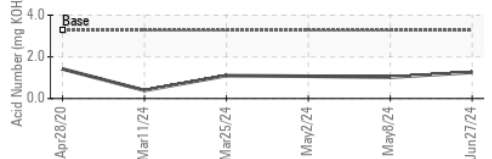
**Silicon (ppm)**



**Viscosity @ 40°C**



**Acid Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0128793  
**Lab Number** : 06226417  
**Unique Number** : 11109910  
**Test Package** : MOB 2

**Received** : 02 Jul 2024  
**Tested** : 03 Jul 2024  
**Diagnosed** : 05 Jul 2024 - Don Baldrige

**SCRAP METAL SERVICES (SMS Mill Services LLC)**  
 1500 COMMERCIAL AVE  
 MINGO JUNCTION, OH  
 US 43938

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)

Contact: FRANK NALLY  
 fnally@scrapmetalservices.com

T:  
 F: