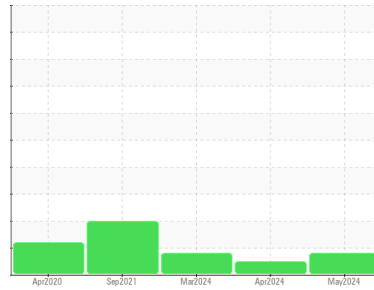


# OIL ANALYSIS REPORT



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

### Sample Rating Trend



## DIAGNOSIS

**Recommendation**  
 COMPONENT FAILURE. ( Customer Sample  
 Comment: Left rear final drive failed )

**Wear**  
 The copper level is abnormal. No visible metal detected.

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

**Fluid Condition**  
 The AN level is acceptable for this fluid.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PCA0123766</b>	PCA0123771	PCA0118450
Sample Date	Client Info		<b>31 May 2024</b>	30 Apr 2024	11 Mar 2024
Machine Age	hrs	Client Info	<b>17374</b>	16917	16346
Oil Age	hrs	Client Info	<b>250</b>	500	2183
Oil Changed	Client Info		<b>Changed</b>	Not Changd	Changed
Sample Status			<b>ABNORMAL</b>	NORMAL	ABNORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >800	<b>326</b>	116	218
Chromium	ppm	ASTM D5185m >10	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m >15	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >75	<b>17</b>	4	15
Lead	ppm	ASTM D5185m >10	<b>&lt;1</b>	0	2
Copper	ppm	ASTM D5185m >75	<b>▲ 153</b>	17	▲ 77
Tin	ppm	ASTM D5185m >8	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185m >50	<b>---</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2	<b>194</b>	233	5
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>3</b>	2	4
Magnesium	ppm	ASTM D5185m 9	<b>0</b>	16	23
Calcium	ppm	ASTM D5185m 3114	<b>397</b>	362	3003
Phosphorus	ppm	ASTM D5185m 1099	<b>901</b>	1019	1076
Zinc	ppm	ASTM D5185m 1245	<b>126</b>	159	1219
Sulfur	ppm	ASTM D5185m 7086	<b>29426</b>	19626	6252

## CONTAMINANTS

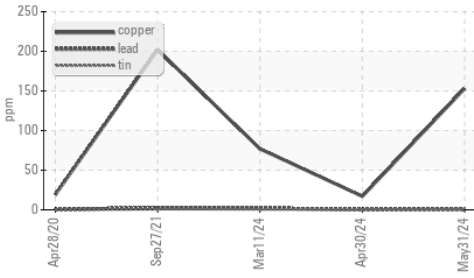
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >400	<b>22</b>	6	17
Sodium	ppm	ASTM D5185m	<b>2</b>	<1	1
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	1	0

## FLUID DEGRADATION

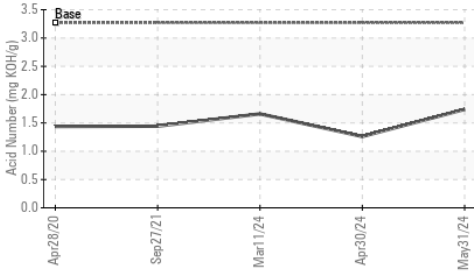
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 3.27	<b>1.74</b>	1.26	1.66

# OIL ANALYSIS REPORT

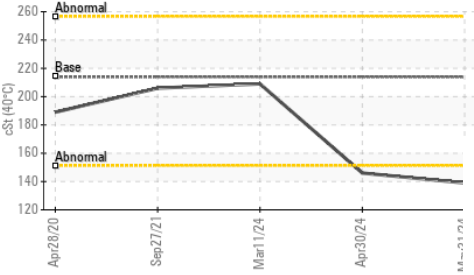
### ▲ Non-ferrous Metals



### Acid Number



### Viscosity @ 40°C



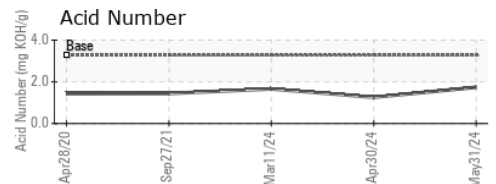
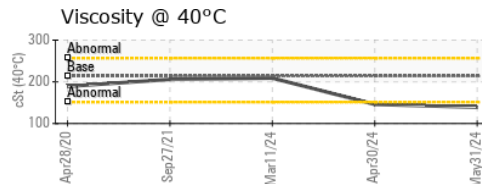
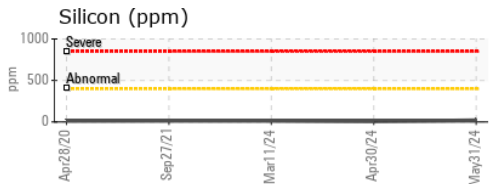
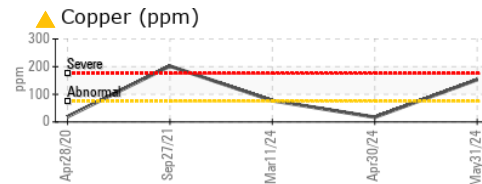
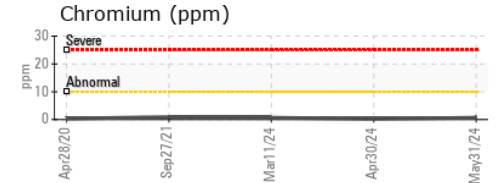
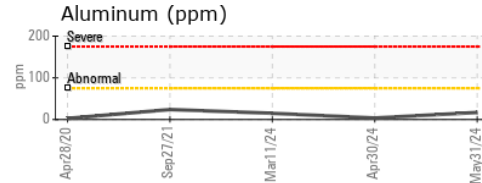
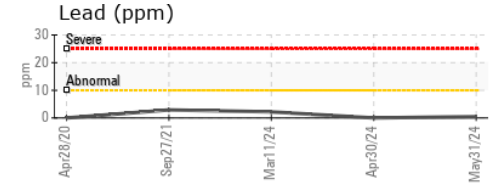
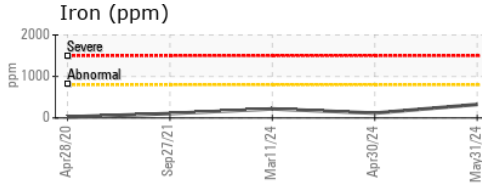
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	213.9	139	146

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



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0123766  
**Lab Number** : 06201620  
**Unique Number** : 11063743  
**Test Package** : MOB 2

**Received** : 06 Jun 2024  
**Tested** : 07 Jun 2024  
**Diagnosed** : 09 Jun 2024 - Don Baldrige

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

Contact: FRANK NALLY  
 fnally@scrapmetalservices.com

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)