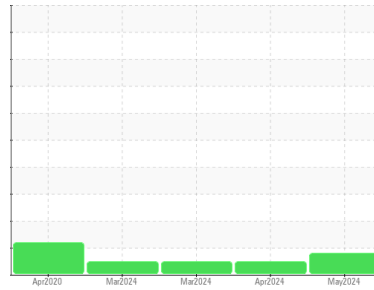


OIL ANALYSIS REPORT



Machine Id
CATERPILLAR 980M L56
 Component
Rear Differential
 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		PCA0123765	PCA0123769	PCA0118491
Sample Date	Client Info		31 May 2024	30 Apr 2024	25 Mar 2024
Machine Age	hrs	Client Info	17374	16917	16640
Oil Age	hrs	Client Info	250	500	294
Oil Changed	Client Info		Changed	Not Changd	Not Changd
Sample Status			ABNORMAL	NORMAL	NORMAL

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	353	123	94
Chromium	ppm	ASTM D5185m >3	<1	<1	0
Nickel	ppm	ASTM D5185m >3	<1	0	0
Titanium	ppm	ASTM D5185m >2	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >30	16	4	3
Lead	ppm	ASTM D5185m >13	<1	0	0
Copper	ppm	ASTM D5185m >103	▲ 148	16	14
Tin	ppm	ASTM D5185m >5	0	0	0
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2	191	238	213
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 0	0	0	<1
Manganese	ppm	ASTM D5185m 0	3	2	1
Magnesium	ppm	ASTM D5185m 9	<1	7	6
Calcium	ppm	ASTM D5185m 3114	397	331	329
Phosphorus	ppm	ASTM D5185m 1099	896	1004	831
Zinc	ppm	ASTM D5185m 1245	128	145	134
Sulfur	ppm	ASTM D5185m 7086	28112	19655	17646

CONTAMINANTS

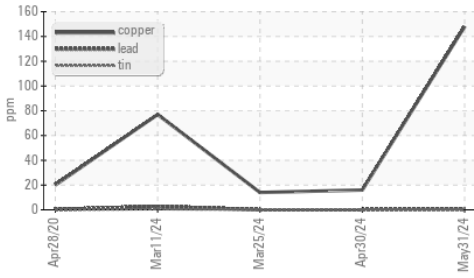
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >100	22	11	5
Sodium	ppm	ASTM D5185m	2	<1	2
Potassium	ppm	ASTM D5185m >20	<1	0	0

FLUID DEGRADATION

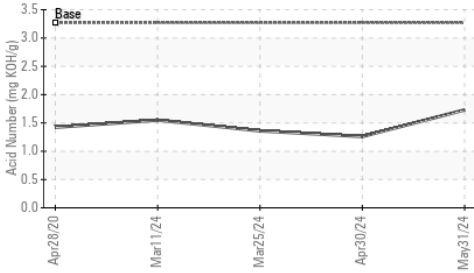
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 3.27	1.73	1.26	1.36

OIL ANALYSIS REPORT

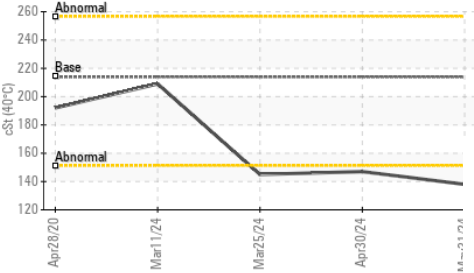
▲ **Non-ferrous Metals**



Acid Number



Viscosity @ 40°C



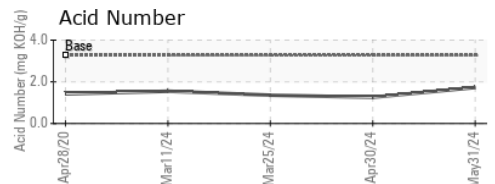
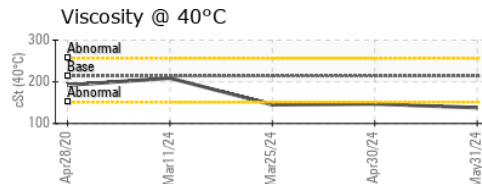
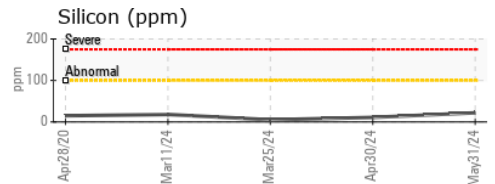
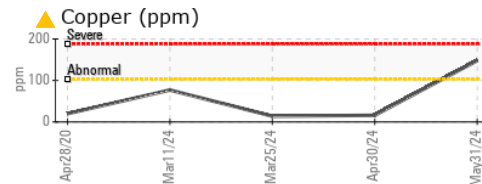
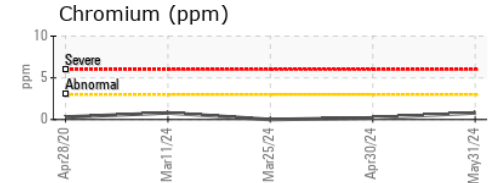
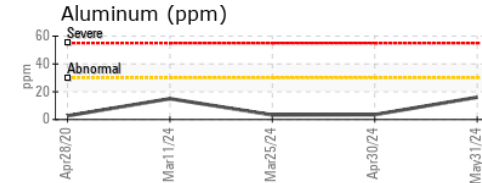
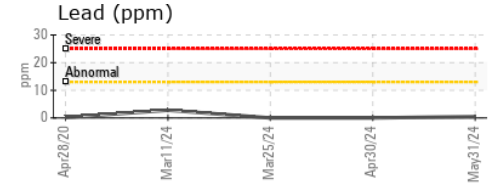
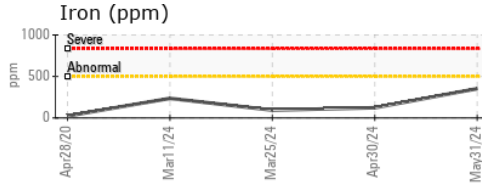
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	138	147

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------

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. : PCA0123765
Lab Number : 06201619
Unique Number : 11063742
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

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: