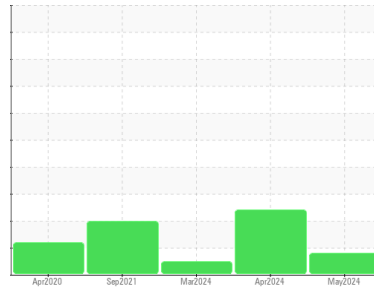


OIL ANALYSIS REPORT



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

Sample Rating Trend



DIAGNOSIS

Recommendation
 COMPONENT FAILURE. (Customer Sample
 Comment: Component failure)

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		PCA0123764	PCA0123770	PCA0118511
Sample Date	Client Info		31 May 2024	30 Apr 2024	11 Mar 2024
Machine Age	hrs	Client Info	17374	16917	16346
Oil Age	hrs	Client Info	19617	500	2183
Oil Changed	Client Info		Changed	Not Changd	Changed
Sample Status			ABNORMAL	ATTENTION	NORMAL

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	427	272	206
Chromium	ppm	ASTM D5185m >10	1	1	<1
Nickel	ppm	ASTM D5185m >5	<1	0	0
Titanium	ppm	ASTM D5185m >15	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >75	16	8	14
Lead	ppm	ASTM D5185m >10	<1	0	2
Copper	ppm	ASTM D5185m >75	▲ 148	3	73
Tin	ppm	ASTM D5185m >8	0	0	<1
Antimony	ppm	ASTM D5185m >50	---	---	---
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	195	● 189	5
Barium	ppm	ASTM D5185m 0	0	3	0
Molybdenum	ppm	ASTM D5185m 0	0	0	0
Manganese	ppm	ASTM D5185m 0	4	13	4
Magnesium	ppm	ASTM D5185m 9	<1	6	21
Calcium	ppm	ASTM D5185m 3114	394	● 44	2826
Phosphorus	ppm	ASTM D5185m 1099	920	● 1408	1029
Zinc	ppm	ASTM D5185m 1245	129	● 13	1168
Sulfur	ppm	ASTM D5185m 7086	25547	● 25132	6116

CONTAMINANTS

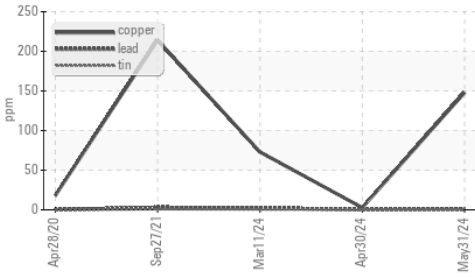
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >400	22	81	17
Sodium	ppm	ASTM D5185m	2	6	1
Potassium	ppm	ASTM D5185m >20	<1	2	0

FLUID DEGRADATION

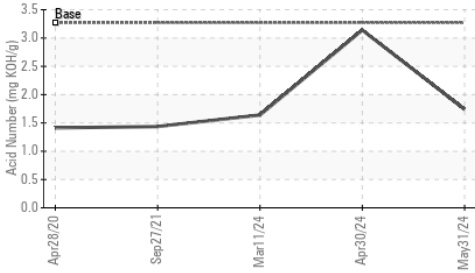
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 3.27	1.74	3.14	1.64

OIL ANALYSIS REPORT

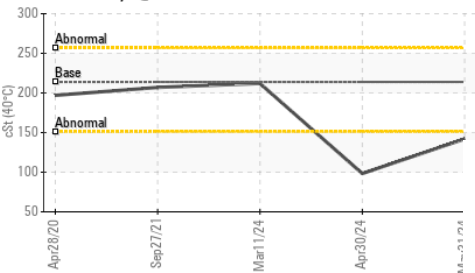
▲ Non-ferrous Metals



Acid Number



Viscosity @ 40°C



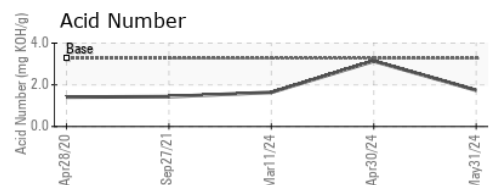
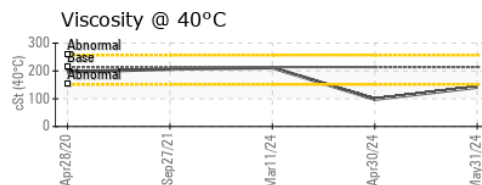
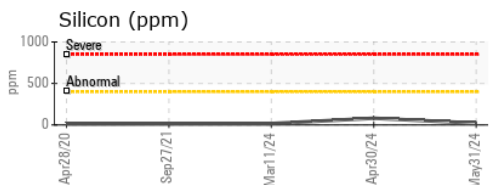
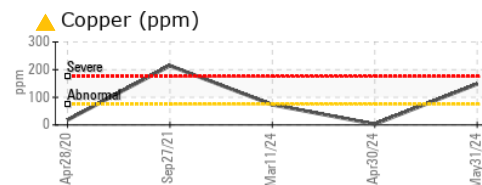
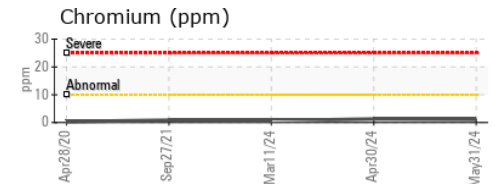
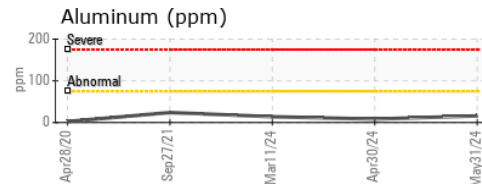
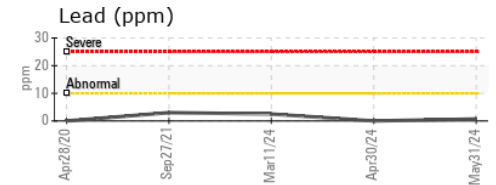
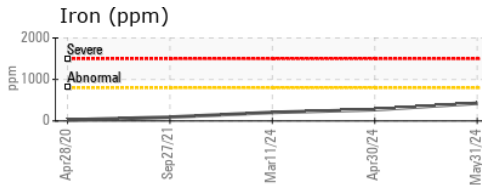
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	142	98.3

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. : PCA0123764
Lab Number : 06201618
Unique Number : 11063741
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: STAN MANN
 smann@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)