



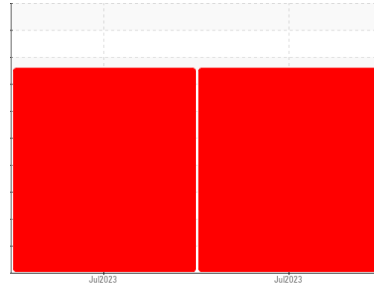
OIL ANALYSIS REPORT

Sample Rating Trend

WEAR



Machine Id
CATERPILLAR R1600 SCP219
 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 recommend an early resample to monitor this condition.

Wear

Copper ppm levels are severe. Lead and tin ppm levels are abnormal. Thrust washer and/or bearing/bushing wear is indicated.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

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		WC0726877	WC0749529	---
Sample Date	Client Info		28 Jul 2023	08 Jul 2023	---
Machine Age	hrs	Client Info	913	765	---
Oil Age	hrs	Client Info	0	0	---
Oil Changed	Client Info		N/A	Not Changd	---
Sample Status			SEVERE	SEVERE	---

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>500	61	56	---
Chromium	ppm	ASTM D5185(m)	>3	<1	<1	---
Nickel	ppm	ASTM D5185(m)	>3	1	<1	---
Titanium	ppm	ASTM D5185(m)	>2	<1	<1	---
Silver	ppm	ASTM D5185(m)	>2	<1	0	---
Aluminum	ppm	ASTM D5185(m)	>30	4	4	---
Lead	ppm	ASTM D5185(m)	>13	21	22	---
Copper	ppm	ASTM D5185(m)	>103	235	215	---
Tin	ppm	ASTM D5185(m)	>5	9	9	---
Antimony	ppm	ASTM D5185(m)	>5	<1	<1	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
Beryllium	ppm	ASTM D5185(m)		0	0	---
Cadmium	ppm	ASTM D5185(m)		0	0	---

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	2	2	2	---
Barium	ppm	ASTM D5185(m)	0	3	3	---
Molybdenum	ppm	ASTM D5185(m)	0	<1	<1	---
Manganese	ppm	ASTM D5185(m)	0	1	1	---
Magnesium	ppm	ASTM D5185(m)	9	12	13	---
Calcium	ppm	ASTM D5185(m)	3114	3477	3529	---
Phosphorus	ppm	ASTM D5185(m)	1099	974	1026	---
Zinc	ppm	ASTM D5185(m)	1245	1090	1164	---
Sulfur	ppm	ASTM D5185(m)	7086	8370	8684	---
Lithium	ppm	ASTM D5185(m)		<1	<1	---

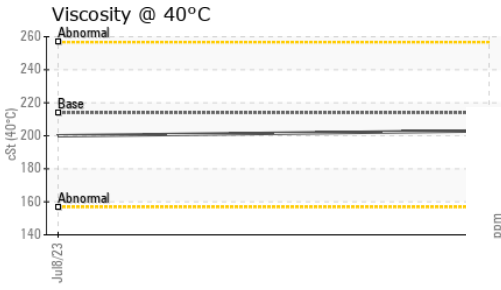
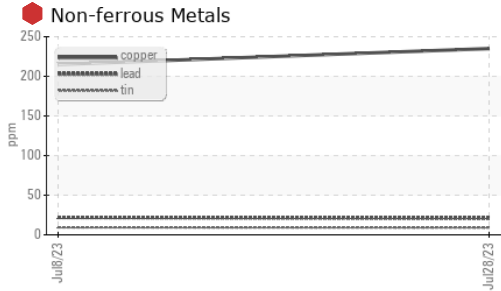
CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>100	7	6	---
Sodium	ppm	ASTM D5185(m)		<1	1	---
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	---

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	---

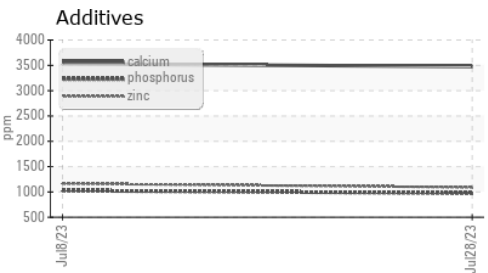
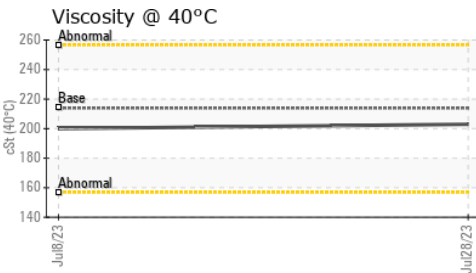
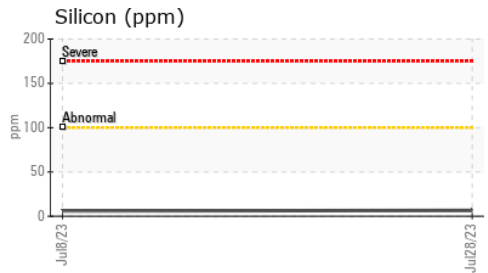
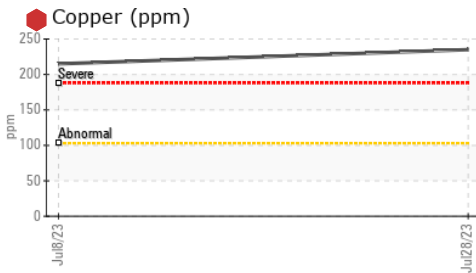
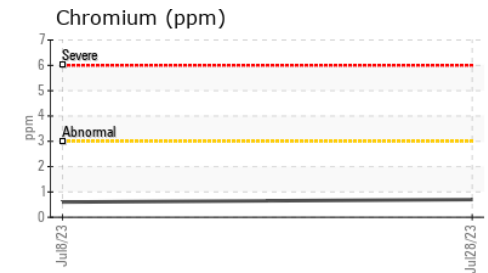
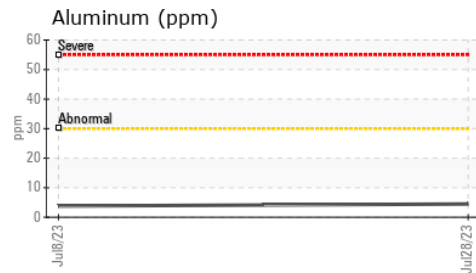
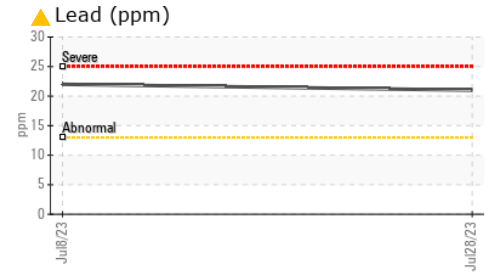
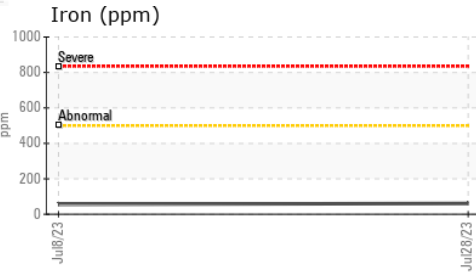
OIL ANALYSIS REPORT



FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	213.9	203	200

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

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0726877
Lab Number : 02575447
Unique Number : 5620498
Test Package : MOB 1

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To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.