



WEAR	ABNORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 95-94

Component
Hydraulic System

Fluid
PETRO CANADA PRODURO TO-4 SAE 10W (80 LTR)

RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0076097	PC0061431	PC0030458
Sample Date		Client Info		29 Mar 2024	27 Jun 2023	10 Aug 2022
Machine Age	hrs	Client Info		26409	25920	25291
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changed	Not Changed	Not Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	SEVERE

WEAR

Copper and iron ppm levels are abnormal. Bearing and/or bushing wear is indicated. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

PQ		ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m)	>20	▲ 31	▲ 38	▲ 83
Chromium	ppm	ASTM D5185(m)	>10	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>10	0	0	0
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)		<1	<1	0
Aluminum	ppm	ASTM D5185(m)	>10	<1	1	1
Lead	ppm	ASTM D5185(m)	>10	4	4	2
Copper	ppm	ASTM D5185(m)	>75	▲ 177	▲ 114	● 37
Tin	ppm	ASTM D5185(m)	>10	<1	1	1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	▲ VLITE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

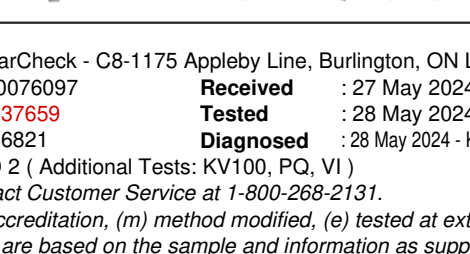
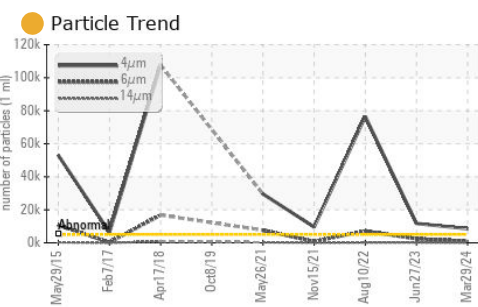
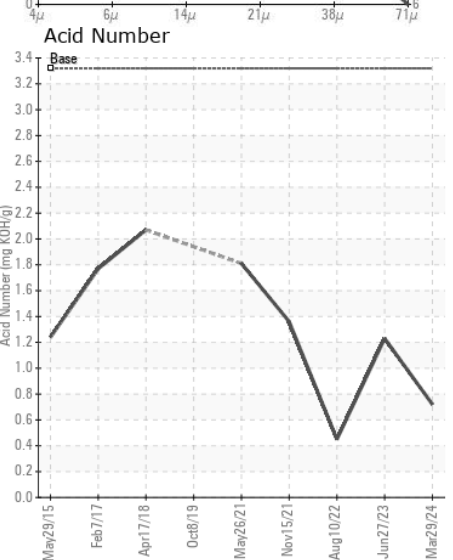
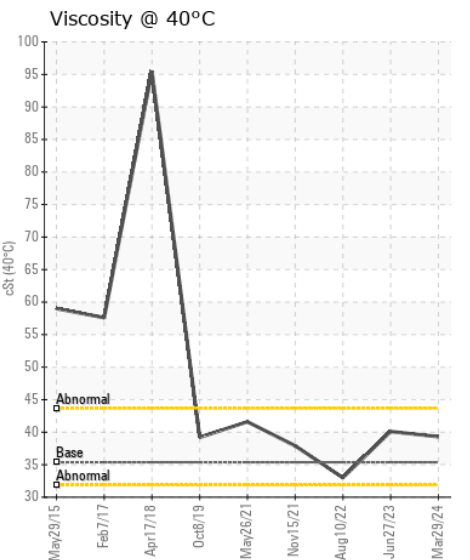
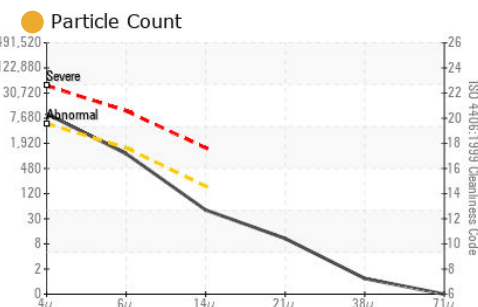
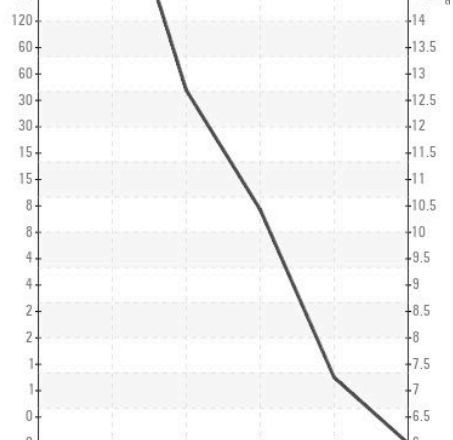
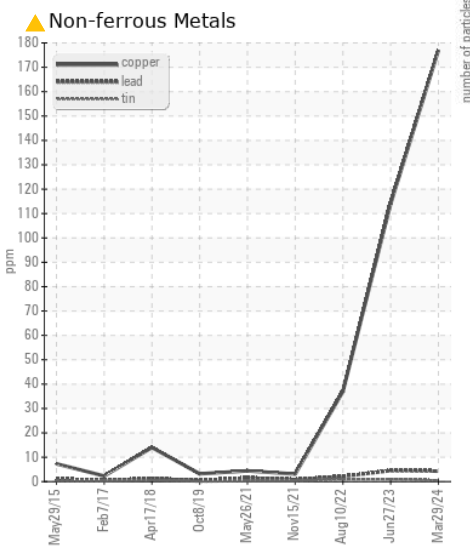
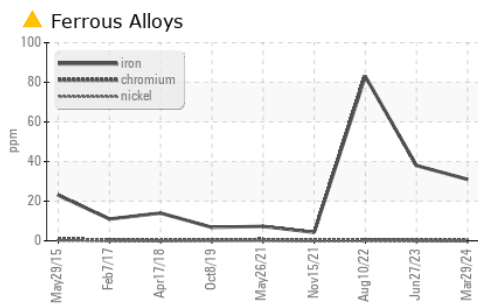
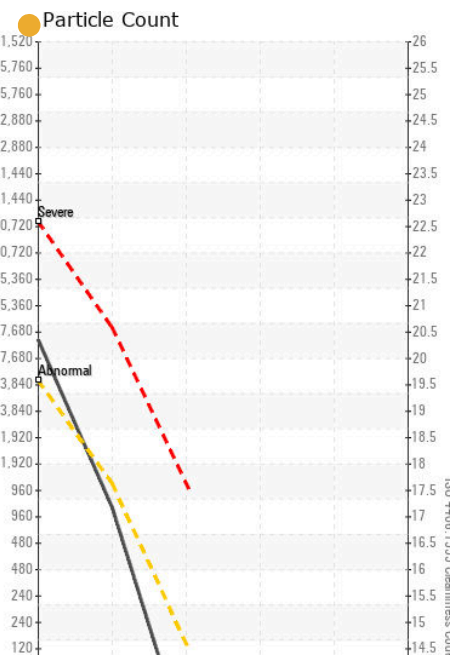
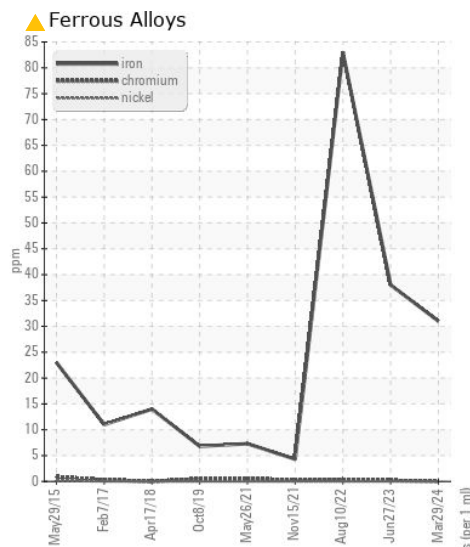
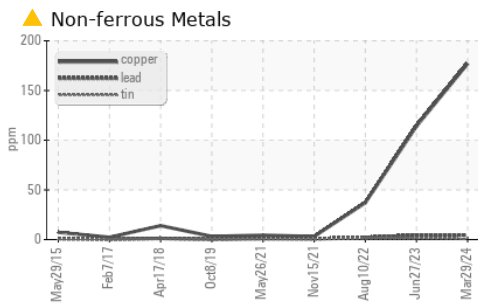
There is a light amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185(m)	>20	1	2	5
Potassium	ppm	ASTM D5185(m)	>20	<1	1	7
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	● 8523	▲ 11712	▲ 76551
Particles >6µm		ASTM D7647	>1300	950	● 2439	▲ 7155
Particles >14µm		ASTM D7647	>160	43	● 177	● 168
Particles >21µm		ASTM D7647	>40	9	45	28
Particles >38µm		ASTM D7647	>10	1	1	2
Particles >71µm		ASTM D7647	>3	0	0	1
Oil Cleanliness		ISO 4406 (c)	>19/17/14	● 20/17/13	▲ 21/18/15	▲ 23/20/15
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	VLITE	▲ LIGHT
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	NEG

FLUID CONDITION

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		1	2	5
Boron	ppm	ASTM D5185(m)	1	<1	<1	2
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	1	0	<1	<1
Manganese	ppm	ASTM D5185(m)	1	<1	<1	1
Magnesium	ppm	ASTM D5185(m)	1	15	8	12
Calcium	ppm	ASTM D5185(m)	2864	1953	2112	1999
Phosphorus	ppm	ASTM D5185(m)	987	826	959	938
Zinc	ppm	ASTM D5185(m)	1162	925	1011	1067
Sulfur	ppm	ASTM D5185(m)	3713	2189	2415	● 11863
Acid Number (AN)	mg KOH/g	ASTM D974*	3.32	0.72	1.23	0.45
Visc @ 40°C	cSt	ASTM D7279(m)	35.38	39.3	40.1	33.0
Visc @ 100°C	cSt	ASTM D7279(m)	6.28	6.5	6.6	5.9
Viscosity Index (VI)	Scale	ASTM D2270*	128	117	117	123



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0076097
Lab Number : 02637659
Unique Number : 5786821
Test Package : IND 2 (Additional Tests: KV100, PQ, VI)

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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.