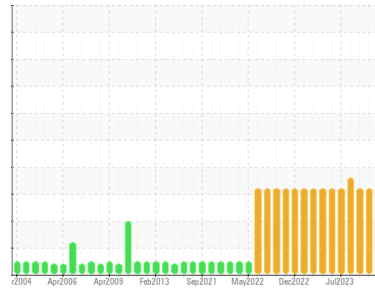




OIL ANALYSIS REPORT

Machine Id
CATERPILLAR 12G 8318 (S/N 61M12623)
 Component
Hydraulic System
 Fluid
PETRO CANADA DURATRAN XL SYN BLEND (--- GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation
 We advise that you check all areas where dirt can enter the system. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear
 The iron level is abnormal. All other component wear rates are normal.

Contamination
 Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The amount and size of particulates present in the system are acceptable.

Fluid Condition
 The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0913068	WC0913176	WC0831332
Sample Date	Client Info		06 May 2024	08 Apr 2024	03 Nov 2023
Machine Age	hrs	Client Info	13395	13099	12357
Oil Age	hrs	Client Info	13395	13099	12357
Oil Changed	Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	▲ 35	▲ 36	▲ 40
Chromium	ppm	ASTM D5185m >10	2	2	1
Nickel	ppm	ASTM D5185m >10	<1	<1	0
Titanium	ppm	ASTM D5185m	<1	1	<1
Silver	ppm	ASTM D5185m	<1	0	0
Aluminum	ppm	ASTM D5185m >10	● 8	● 8	● 7
Lead	ppm	ASTM D5185m >10	1	2	1
Copper	ppm	ASTM D5185m >75	8	8	7
Tin	ppm	ASTM D5185m >10	<1	1	0
Vanadium	ppm	ASTM D5185m	<1	<1	0
Cadmium	ppm	ASTM D5185m	<1	<1	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 112	51	57	39
Barium	ppm	ASTM D5185m 1	0	<1	0
Molybdenum	ppm	ASTM D5185m 1	2	3	1
Manganese	ppm	ASTM D5185m 1	<1	1	0
Magnesium	ppm	ASTM D5185m 10	23	22	23
Calcium	ppm	ASTM D5185m 3500	1973	2005	1691
Phosphorus	ppm	ASTM D5185m 1200	985	1043	853
Zinc	ppm	ASTM D5185m 1400	1168	1105	1126
Sulfur	ppm	ASTM D5185m 2370	3447	3278	2949

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	▲ 20	▲ 20	▲ 20
Sodium	ppm	ASTM D5185m	17	19	16
Potassium	ppm	ASTM D5185m >20	3	3	3

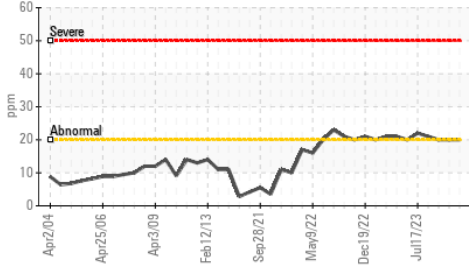
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		694	2115	652
Particles >6µm	ASTM D7647	>1300	80	170	195
Particles >14µm	ASTM D7647	>160	6	12	21
Particles >21µm	ASTM D7647	>40	2	4	5
Particles >38µm	ASTM D7647	>10	0	0	0
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>--/17/14	17/13/10	18/15/11	17/15/12

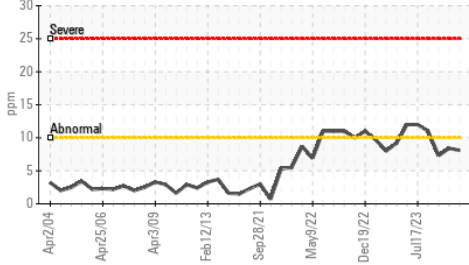
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 3.0	1.32	1.13	0.99

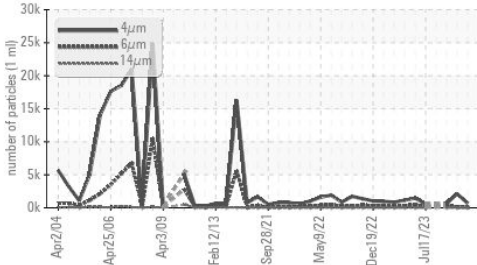
▲ Silicon (ppm)



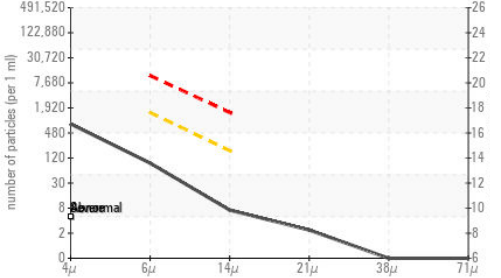
● Aluminum (ppm)



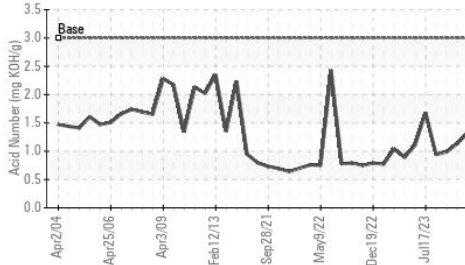
▲ Particle Trend



Particle Count



Acid Number



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	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46.85	36.3	36.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
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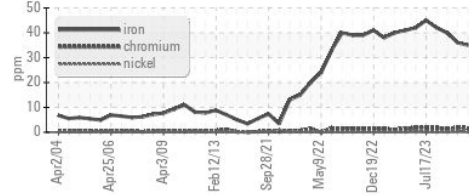
Color

Bottom

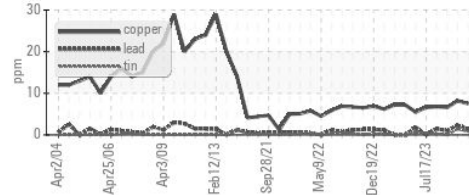


GRAPHS

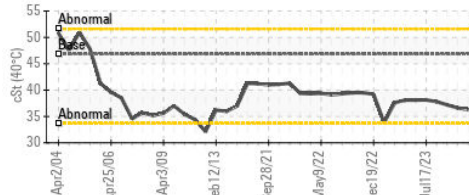
▲ Ferrous Alloys



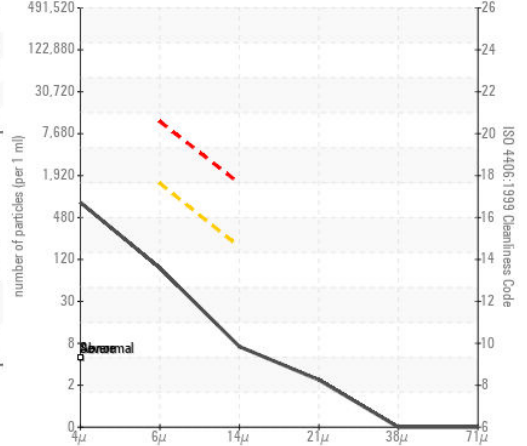
Non-ferrous Metals



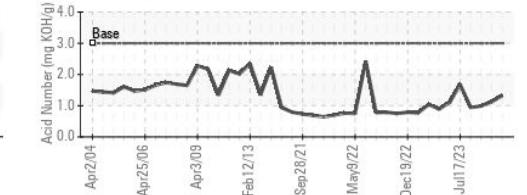
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0913068

Lab Number : 06180105

Unique Number : 11031431

Test Package : CONST

Received : 15 May 2024

Tested : 16 May 2024

Diagnosed : 17 May 2024 - Don Baldrige

TRADER CONSTRUCTION CO.

PO DRAWER 1578

NEW BERN, NC

US 28563

Contact: MIKE WYATT

mwyatt@traderconstruction.com

T: (252)633-1399

F: (252)638-4871

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)