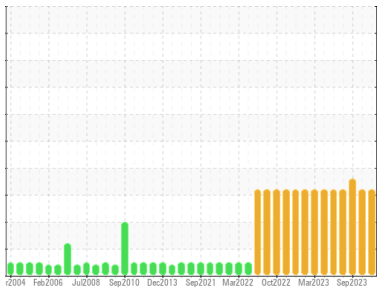
OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

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

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		**WC0913176**	WC0831332	WC0837000
Sample Date		Client Info		**08 Apr 2024**	03 Nov 2023	11 Sep 2023
Machine Age	hrs	Client Info		**13099**	12357	11872
Oil Age	hrs	Client Info		**13099**	12357	11872
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
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	▲ **36**	▲ 40	▲ 42
Chromium	ppm	ASTM D5185m	>10	**2**	1	2
Nickel	ppm	ASTM D5185m	>10	**<1**	0	<1
Titanium	ppm	ASTM D5185m		**1**	<1	<1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>10	● **8**	● 7	● 11
Lead	ppm	ASTM D5185m	>10	**2**	1	2
Copper	ppm	ASTM D5185m	>75	**8**	7	7
Tin	ppm	ASTM D5185m	>10	**1**	0	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	112	**57**	39	35
Barium	ppm	ASTM D5185m	1	**<1**	0	0
Molybdenum	ppm	ASTM D5185m	1	**3**	1	2
Manganese	ppm	ASTM D5185m	1	**1**	0	1
Magnesium	ppm	ASTM D5185m	10	**22**	23	26
Calcium	ppm	ASTM D5185m	3500	**2005**	1691	1751
Phosphorus	ppm	ASTM D5185m	1200	**1043**	853	895
Zinc	ppm	ASTM D5185m	1400	**1105**	1126	1126
Sulfur	ppm	ASTM D5185m	2370	**3278**	2949	3443

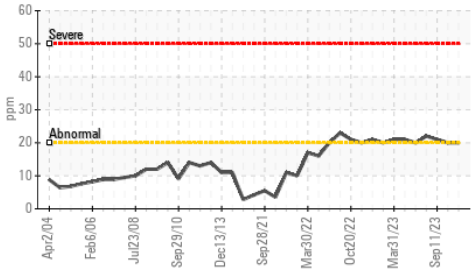
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	▲ **20**	▲ 20	▲ 21
Sodium	ppm	ASTM D5185m		**19**	16	19
Potassium	ppm	ASTM D5185m	>20	**3**	3	0

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

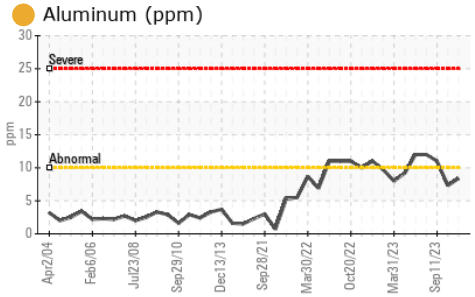
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	3.0	**1.13**	0.99	0.94

OIL ANALYSIS REPORT

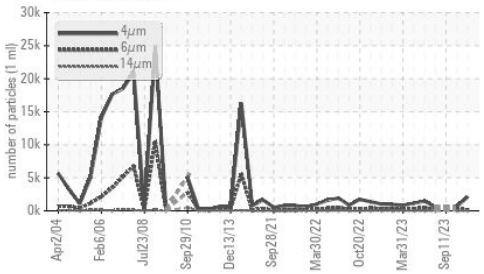
Silicon (ppm)



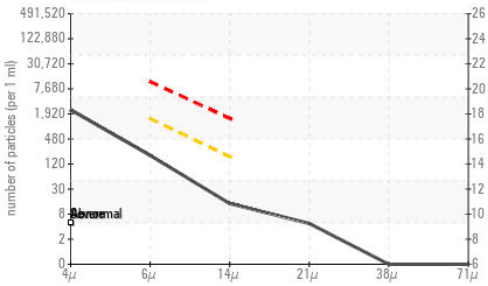
Aluminum (ppm)



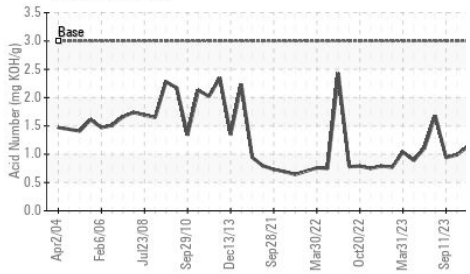
Particle Trend



Particle Count



Acid Number



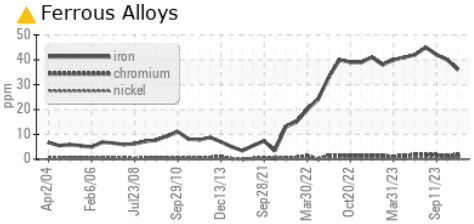
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	▲ MODER
Sand/Dirt	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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46.85	**36.6**	37.2	37.8

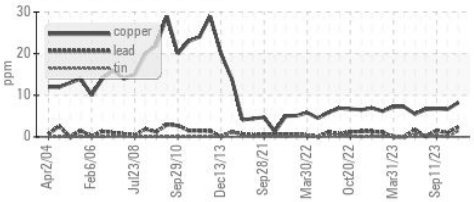
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

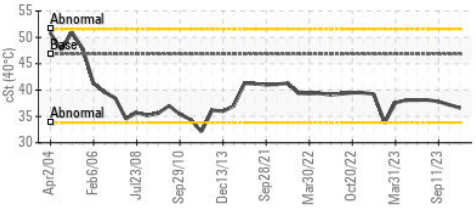
Ferrous Alloys



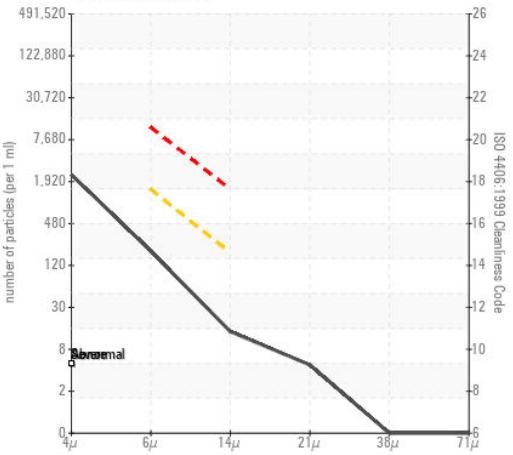
Non-ferrous Metals



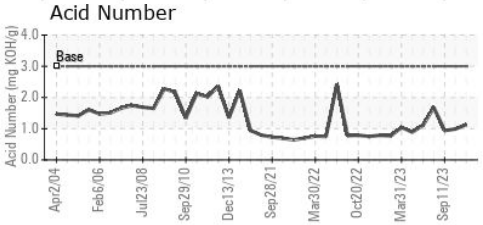
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0913176
Lab Number : 06147246
Unique Number : 10977324
Test Package : CONST

Received : 12 Apr 2024
Tested : 15 Apr 2024
Diagnosed : 16 Apr 2024 - Don Baldridge

Certificate L2367

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)

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Report Id: TRANEW [WUSCAR] 06147246 (Generated: 04/16/2024 12:04:49) Rev: 1

Contact/Location: MIKE WYATT - TRANEW