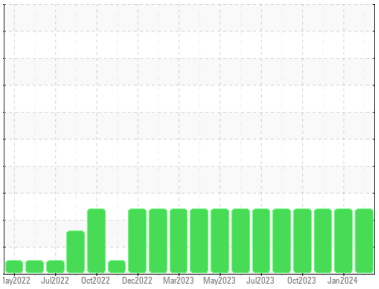
OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Machine Id
CATERPILLAR 374 8367 (S/N TMX00235)
Component
Hydraulic System
Fluid
TDH FLUID SAE 70W80 (--- 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
All 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		**WC0888114**	WC0888225	WC0879381
Sample Date		Client Info		**19 Mar 2024**	30 Jan 2024	29 Nov 2023
Machine Age	hrs	Client Info		**10523**	9765	8996
Oil Age	hrs	Client Info		**10523**	9765	8996
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	**28**	28	29
Chromium	ppm	ASTM D5185m	>10	**2**	3	3
Nickel	ppm	ASTM D5185m	>10	**0**	0	0
Titanium	ppm	ASTM D5185m		**<1**	1	<1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>10	**14**	15	16
Lead	ppm	ASTM D5185m	>10	**0**	2	<1
Copper	ppm	ASTM D5185m	>75	**8**	9	8
Tin	ppm	ASTM D5185m	>10	**0**	1	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	10	**39**	32	26
Barium	ppm	ASTM D5185m	10	**0**	0	0
Molybdenum	ppm	ASTM D5185m	10	**2**	2	<1
Manganese	ppm	ASTM D5185m		**0**	<1	<1
Magnesium	ppm	ASTM D5185m	100	**22**	26	24
Calcium	ppm	ASTM D5185m	3500	**1912**	1635	1440
Phosphorus	ppm	ASTM D5185m	1150	**875**	860	792
Zinc	ppm	ASTM D5185m	1150	**1048**	1054	955
Sulfur	ppm	ASTM D5185m	5000	**3555**	3095	3001

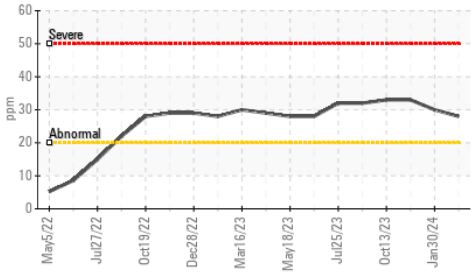
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**28**	30	33
Sodium	ppm	ASTM D5185m		**17**	19	19
Potassium	ppm	ASTM D5185m	>20	**0**	2	1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**865**	772	481
Particles >6µm		ASTM D7647	>1300	**243**	260	161
Particles >14µm		ASTM D7647	>160	**26**	27	17
Particles >21µm		ASTM D7647	>40	**6**	6	5
Particles >38µm		ASTM D7647	>10	**1**	0	1
Particles >71µm		ASTM D7647	>3	**1**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**17/15/12**	17/15/12	16/15/11

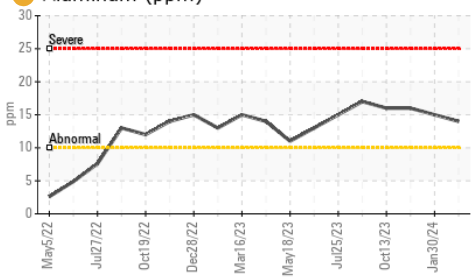
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	2.25	**1.06**	1.10	1.03

OIL ANALYSIS REPORT

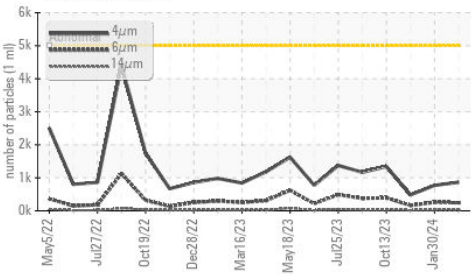
Silicon (ppm)



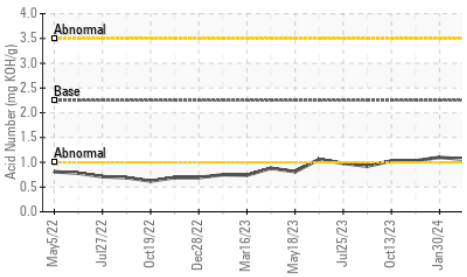
Aluminum (ppm)



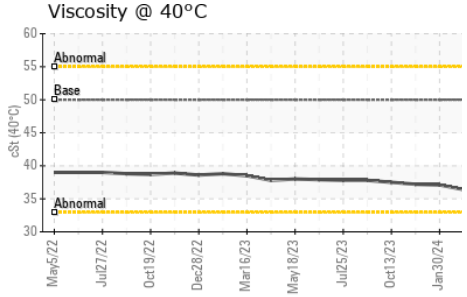
Particle Trend



Acid Number



Viscosity @ 40°C



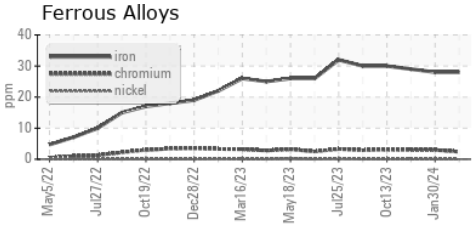
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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	50	**36.4**	37.1	37.2

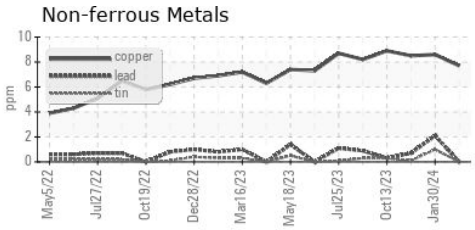
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

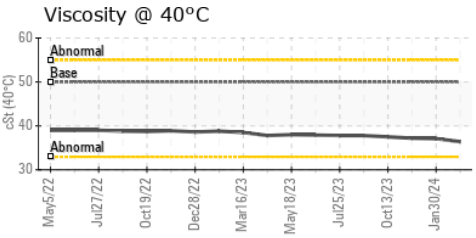
Ferrous Alloys



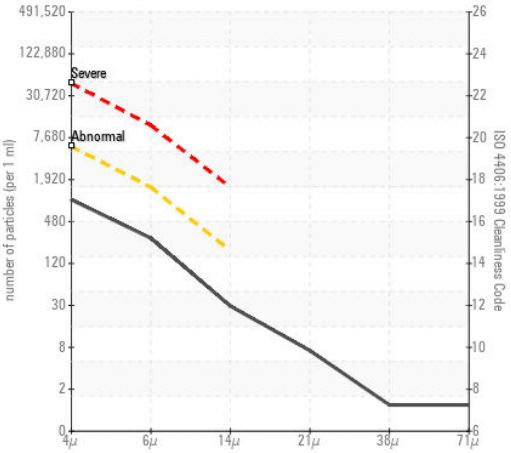
Non-ferrous Metals



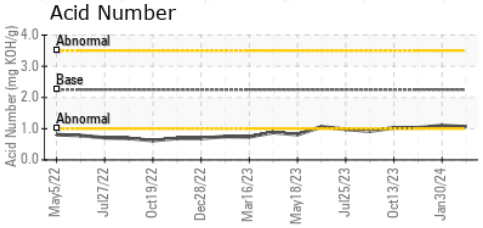
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0888114
Lab Number : 06130550
Unique Number : 10950015
Test Package : CONST

Received : 27 Mar 2024
Tested : 28 Mar 2024
Diagnosed : 30 Mar 2024 - Don Baldridge

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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