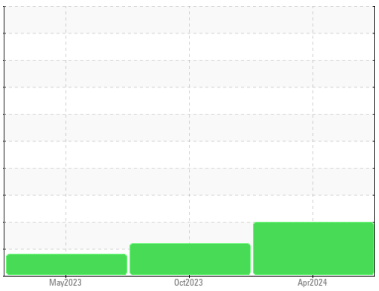
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
JOHN DEERE 8R310 11613 (S/N 1RW8310DENB201038)
Component
Hydraulic System
Fluid
TDH FLUID SAE 75W80 (--- GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear
The iron level is abnormal. The copper level is abnormal.

Contamination
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Fluid Condition
The oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0913222**	WC0862857	WC0816236
Sample Date		Client Info		**02 Apr 2024**	09 Oct 2023	31 May 2023
Machine Age	hrs	Client Info		**4560**	3189	2189
Oil Age	hrs	Client Info		**2371**	1000	1110
Oil Changed		Client Info		**Changed**	Not Changd	Changed
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	▲ **27**	16	▲ 31
Chromium	ppm	ASTM D5185m	>10	**<1**	0	<1
Nickel	ppm	ASTM D5185m	>10	**1**	0	0
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m		**<1**	0	0
Aluminum	ppm	ASTM D5185m	>10	**4**	3	5
Lead	ppm	ASTM D5185m	>10	**9**	3	1
Copper	ppm	ASTM D5185m	>75	▲ **87**	33	12
Tin	ppm	ASTM D5185m	>10	**6**	2	<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	10	**103**	84	12
Barium	ppm	ASTM D5185m	10	**<1**	<1	4
Molybdenum	ppm	ASTM D5185m	10	**6**	3	2
Manganese	ppm	ASTM D5185m		**1**	<1	1
Magnesium	ppm	ASTM D5185m	100	**56**	63	90
Calcium	ppm	ASTM D5185m	3500	**3228**	3087	3247
Phosphorus	ppm	ASTM D5185m	1150	**1172**	1041	1013
Zinc	ppm	ASTM D5185m	1150	**1206**	1224	1192
Sulfur	ppm	ASTM D5185m	5000	**3485**	2999	3914

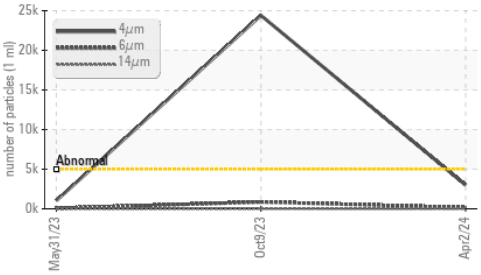
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**9**	8	5
Sodium	ppm	ASTM D5185m		**2**	4	5
Potassium	ppm	ASTM D5185m	>20	**2**	0	<1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**2997**	▲ 24405	1039
Particles >6µm		ASTM D7647	>1300	**159**	862	68
Particles >14µm		ASTM D7647	>160	**7**	15	7
Particles >21µm		ASTM D7647	>40	**2**	5	1
Particles >38µm		ASTM D7647	>10	**0**	1	0
Particles >71µm		ASTM D7647	>3	**0**	1	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**19/14/10**	▲ 22/17/11	17/13/10

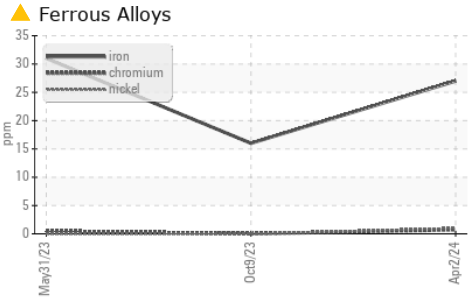
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	2.25	**0.83**	0.97	1.17

OIL ANALYSIS REPORT

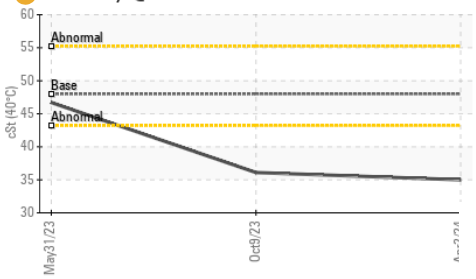
Particle Trend



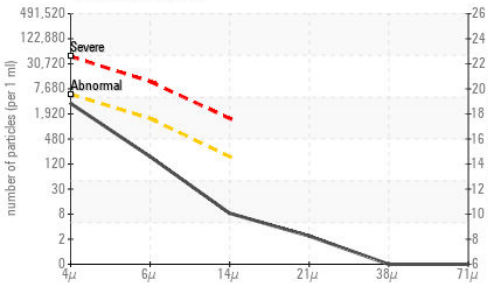
Ferrous Alloys



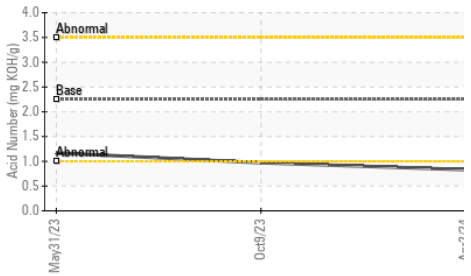
Viscosity @ 40°C



Particle Count

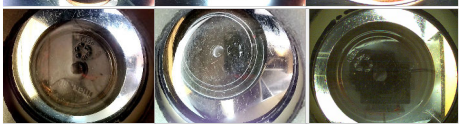


Acid Number



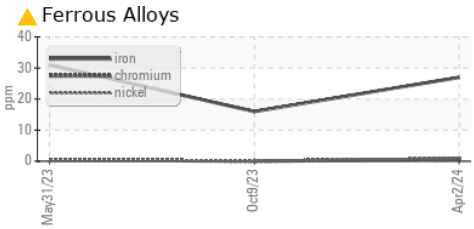
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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	48	**35.0**	36.1	46.7

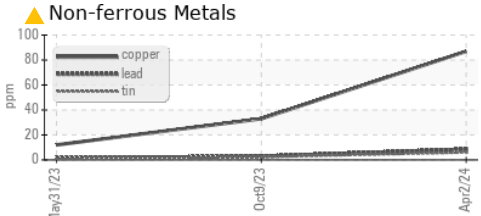
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

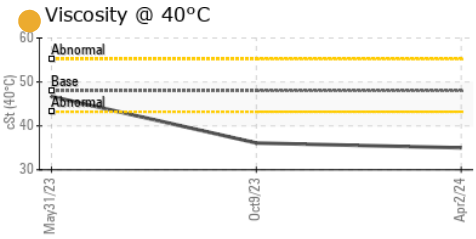
Ferrous Alloys



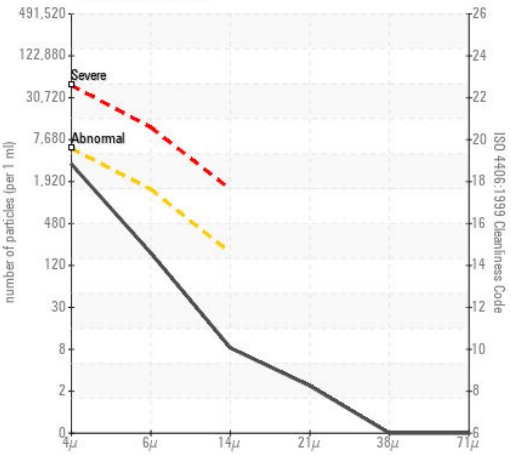
Non-ferrous Metals



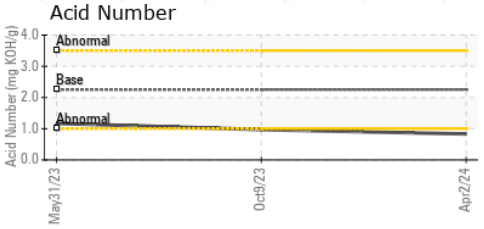
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0913222
Lab Number : 06147243
Unique Number : 10977321
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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