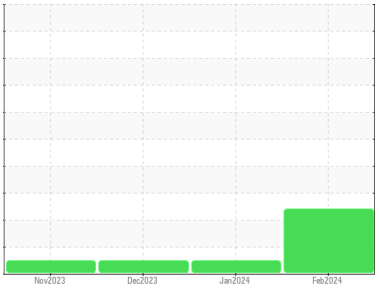
OIL ANALYSIS REPORT

Sample Rating Trend



WATER

Area
[W49983]
Machine Id
JOHN DEERE 824K 1DW824KXPKF694323
Component
Hydraulic System
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- QTS)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

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

Contamination
There is a light concentration of water present in the oil. 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 oils additive package is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**JR0200308**	JR0199788	JR0180719
Sample Date		Client Info		**21 Feb 2024**	29 Jan 2024	15 Dec 2023
Machine Age	hrs	Client Info		**5029**	4854	4354
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**ABNORMAL**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184	>50	**15**	24	22
Iron	ppm	ASTM D5185m	>71	**33**	31	32
Chromium	ppm	ASTM D5185m	>11	▲ **14**	11	10
Nickel	ppm	ASTM D5185m	>6	**0**	0	<1
Titanium	ppm	ASTM D5185m		**0**	0	<1
Silver	ppm	ASTM D5185m		**<1**	0	0
Aluminum	ppm	ASTM D5185m	>11	**2**	3	4
Lead	ppm	ASTM D5185m	>13	**<1**	<1	<1
Copper	ppm	ASTM D5185m	>21	**9**	8	8
Tin	ppm	ASTM D5185m	>5	**0**	<1	0
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		**0**	<1	1
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**2**	2	3
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**15**	6	10
Calcium	ppm	ASTM D5185m		**105**	89	92
Phosphorus	ppm	ASTM D5185m		**566**	596	589
Zinc	ppm	ASTM D5185m		**809**	802	792
Sulfur	ppm	ASTM D5185m		**1488**	1563	1528

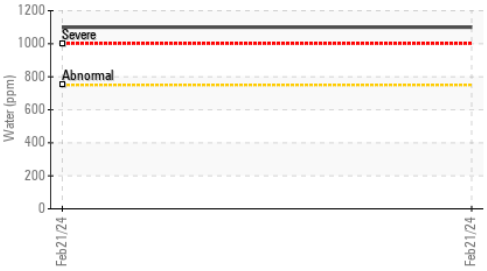
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>24	**5**	6	6
Sodium	ppm	ASTM D5185m	>21	**<1**	4	6
Potassium	ppm	ASTM D5185m	>20	**0**	3	3
Water	%	ASTM D6304	>0.075	▲ **0.110**	---	---
ppm Water	ppm	ASTM D6304	>750	▲ **1100**	---	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>80000	**19727**	7710	15098
Particles >6µm		ASTM D7647	>5000	**112**	170	105
Particles >14µm		ASTM D7647	>640	**7**	19	6
Particles >21µm		ASTM D7647	>160	**2**	5	3
Particles >38µm		ASTM D7647	>40	**0**	0	0
Particles >71µm		ASTM D7647	>10	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>23/19/16	**21/14/10**	20/15/11	21/14/10

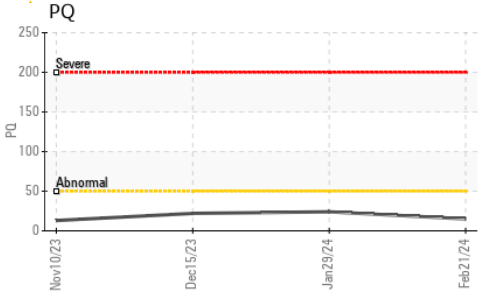
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.73**	0.69	0.70

OIL ANALYSIS REPORT

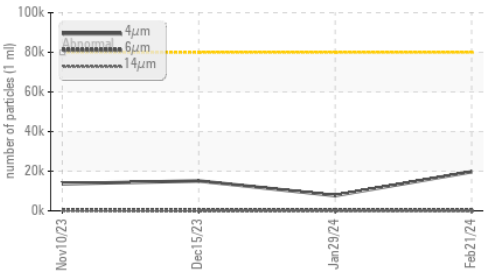
Water (KF)



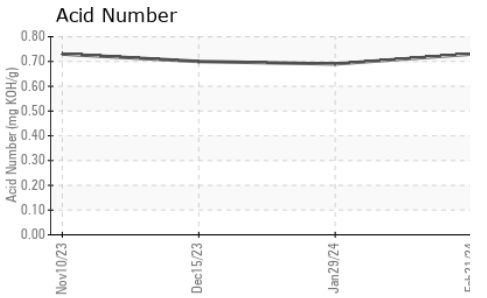
PQ



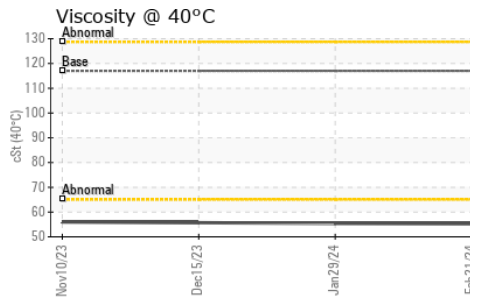
Particle Trend



Acid Number

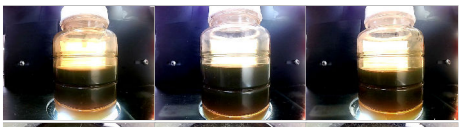


Viscosity @ 40°C



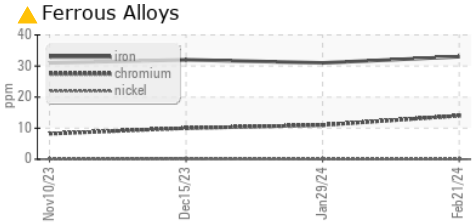
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.075	▲ **0.2%**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	117	**55.2**	55.4	55.7

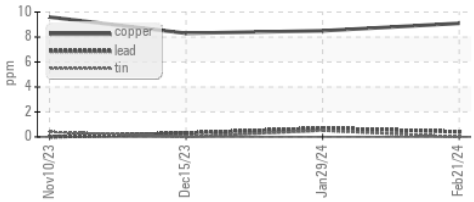
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

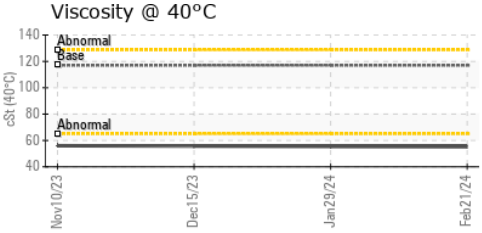
Ferrous Alloys



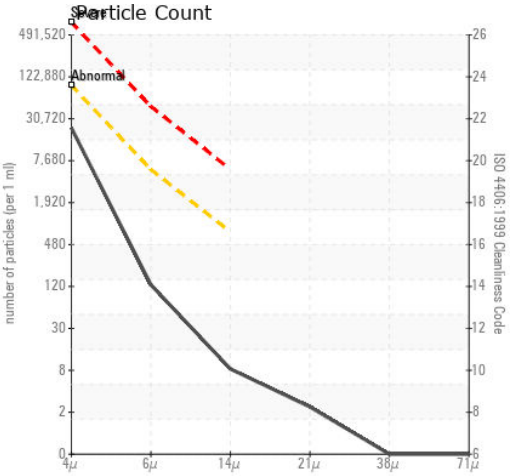
Non-ferrous Metals



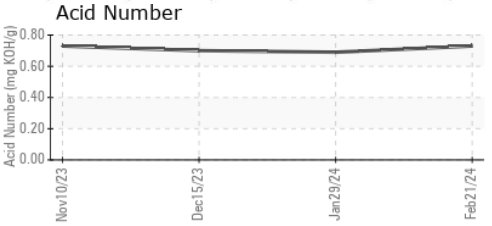
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0200308
Lab Number : 06101528
Unique Number : 10899758
Test Package : CONST (Additional Tests: KF, PQ)

Received : 27 Feb 2024
Tested : 28 Feb 2024
Diagnosed : 29 Feb 2024 - Jonathan Hester

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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