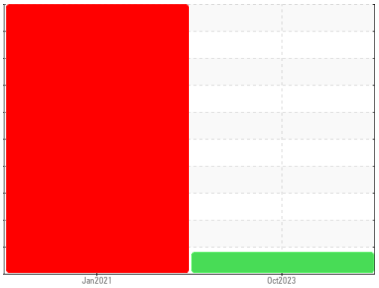
PROBLEM SUMMARY

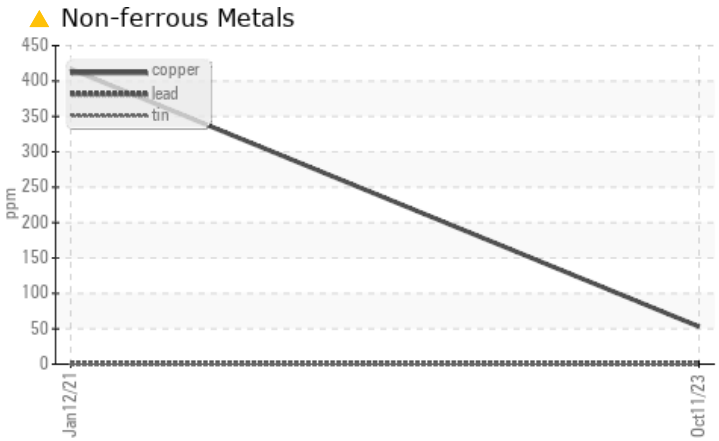
Area
[W47160]
Machine Id
JOHN DEERE 650H 1T0650HX939482
Component
Hydraulic System
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- LTR)

Sample Rating Trend



WEAR

COMPONENT CONDITION SUMMARY



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	SEVERE	---
Copper	ppm	ASTM D5185m	>51	▲ **53**	⬢ 417	---

Customer Id: JAMASH
Sample No.: JR0179275
Lab Number: 05982311
Test Package: CONST

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

12 Jan 2021 Diag: Jonathan Hester

WEAR

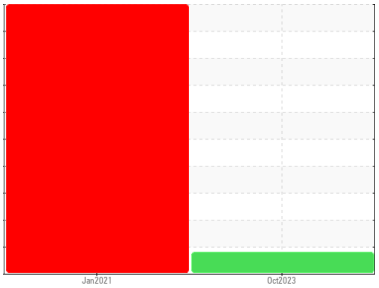
We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.The iron level is severe. The chromium level is abnormal. The copper level is severe. 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. The AN level is acceptable for this fluid.

view report

OIL ANALYSIS REPORT

Area
[W47160]
Machine Id
JOHN DEERE 650H 1T0650HX939482
Component
Hydraulic System
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- LTR)

Sample Rating Trend



WEAR

DIAGNOSIS

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

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

Contamination
There is no indication of any contamination 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		**JR0179275**	JR0067691	---
Sample Date		Client Info		**11 Oct 2023**	12 Jan 2021	---
Machine Age	hrs	Client Info		**3321**	2847	---
Oil Age	hrs	Client Info		**0**	0	---
Oil Changed		Client Info		**Not Changd**	Changed	---
Sample Status				**ABNORMAL**	SEVERE	---

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184	>50	**14**	67	---
Iron	ppm	ASTM D5185m	>23	**9**	⬢ 71	---
Chromium	ppm	ASTM D5185m	>9	**1**	▲ 13	---
Nickel	ppm	ASTM D5185m	>5	**0**	0	---
Titanium	ppm	ASTM D5185m		**0**	1	---
Silver	ppm	ASTM D5185m		**0**	<1	---
Aluminum	ppm	ASTM D5185m	>9	**3**	▲ 12	---
Lead	ppm	ASTM D5185m	>28	**<1**	<1	---
Copper	ppm	ASTM D5185m	>51	▲ **53**	⬢ 417	---
Tin	ppm	ASTM D5185m	>5	**0**	0	---
Antimony	ppm	ASTM D5185m		**---**	0	---
Vanadium	ppm	ASTM D5185m		**0**	0	---
Cadmium	ppm	ASTM D5185m		**0**	0	---

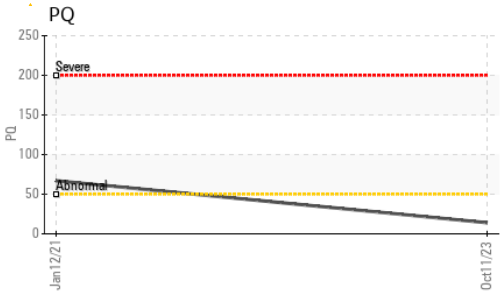
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**106**	22	---
Barium	ppm	ASTM D5185m		**0**	0	---
Molybdenum	ppm	ASTM D5185m		**55**	5	---
Manganese	ppm	ASTM D5185m		**0**	1	---
Magnesium	ppm	ASTM D5185m		**260**	224	---
Calcium	ppm	ASTM D5185m		**2597**	2250	---
Phosphorus	ppm	ASTM D5185m		**928**	1052	---
Zinc	ppm	ASTM D5185m		**1105**	1195	---
Sulfur	ppm	ASTM D5185m		**3188**	3004	---

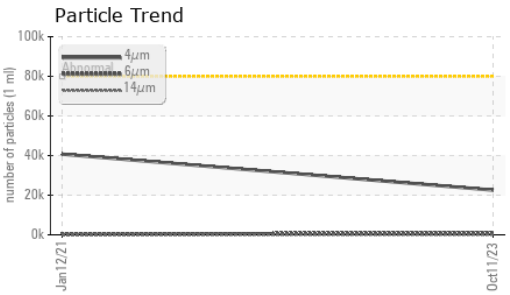
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>31	**11**	⬢ 48	---
Sodium	ppm	ASTM D5185m	>21	**1**	2	---
Potassium	ppm	ASTM D5185m	>20	**0**	4	---

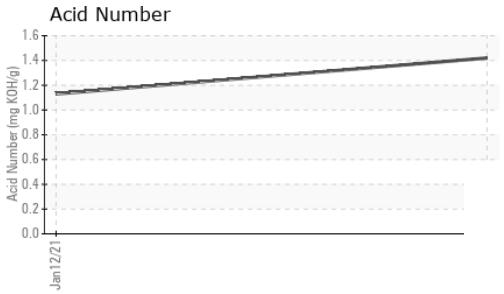
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>80000	**22556**	40723	---
Particles >6µm		ASTM D7647	>20000	**1011**	182	---
Particles >14µm		ASTM D7647	>640	**36**	17	---
Particles >21µm		ASTM D7647	>160	**10**	4	---
Particles >38µm		ASTM D7647	>40	**1**	0	---
Particles >71µm		ASTM D7647	>10	**0**	0	---
Oil Cleanliness		ISO 4406 (c)	>23/21/16	**22/17/12**	23/15/11	---

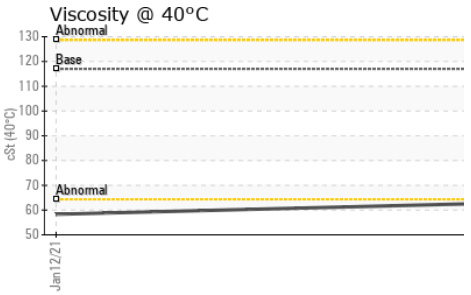
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**1.42**	1.130	---

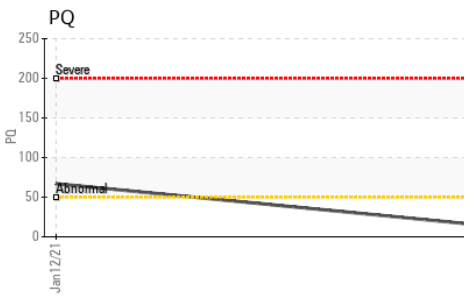
OIL ANALYSIS REPORT





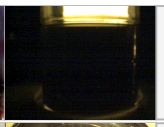
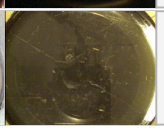




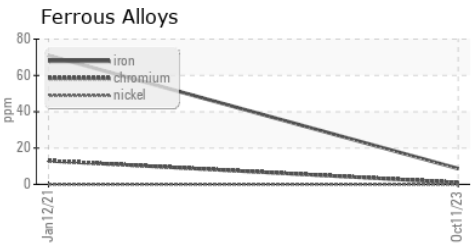


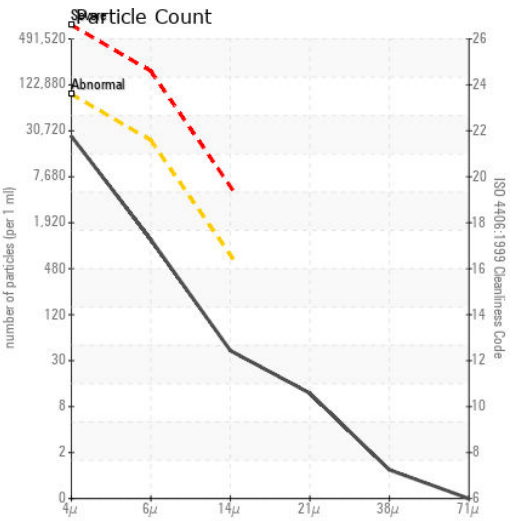
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	**NONE**	NONE	---
Sand/Dirt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

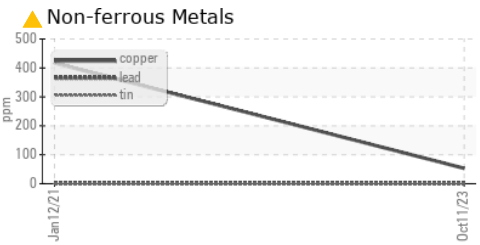
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	117	**62.7**	58.3	---

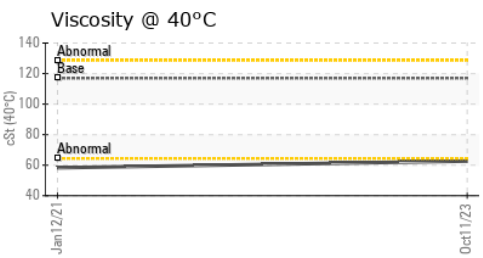
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					no image
Bottom					no image

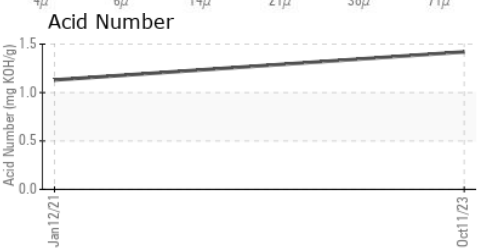
GRAPHS











Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0179275 **Received** : 18 Oct 2023
Lab Number : 05982311 **Diagnosed** : 20 Oct 2023
Unique Number : 10699606 **Diagnostician** : Jonathan Hester
Test Package : CONST (Additional Tests: PQ)

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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