



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 650H C9008668 (S/N T0650HX938193)
 Component
Hydraulic System
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of water entry. We recommend you service the filters on this component. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0218706	JR0185091	JR0175822
Sample Date		Client Info		05 Jun 2024	04 Oct 2023	08 Jun 2023
Machine Age	hrs	Client Info		12798	12501	12328
Oil Age	hrs	Client Info		776	479	306
Filter Age	hrs	Client Info		776	479	306
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	30	19	19
Iron	ppm	ASTM D5185m	>23	11	9	7
Chromium	ppm	ASTM D5185m	>9	2	2	1
Nickel	ppm	ASTM D5185m	>5	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>9	6	<1	4
Lead	ppm	ASTM D5185m	>28	0	<1	1
Copper	ppm	ASTM D5185m	>51	46	33	15
Tin	ppm	ASTM D5185m	>5	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

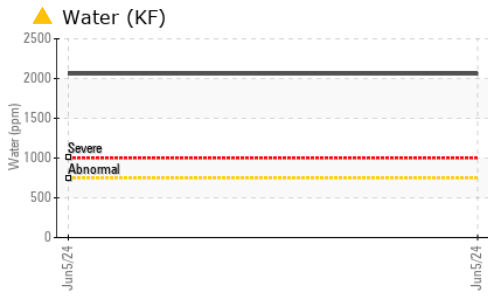
There is a light concentration of water present in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>31	10	10	9
Potassium	ppm	ASTM D5185m	>20	4	2	2
Water	%	ASTM D6304	>0.075	▲ 0.206	---	---
ppm Water	ppm	ASTM D6304	>750	▲ 2060	---	---
Particles >4µm		ASTM D7647	>80000	409	12824	8698
Particles >6µm		ASTM D7647	>20000	223	678	1385
Particles >14µm		ASTM D7647	>640	38	30	99
Particles >21µm		ASTM D7647	>160	13	6	28
Particles >38µm		ASTM D7647	>40	2	1	2
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	16/15/12	21/17/12	20/18/14
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

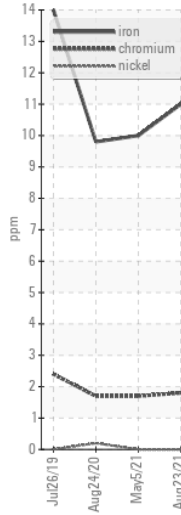
FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oils additive package is suitable for further service.

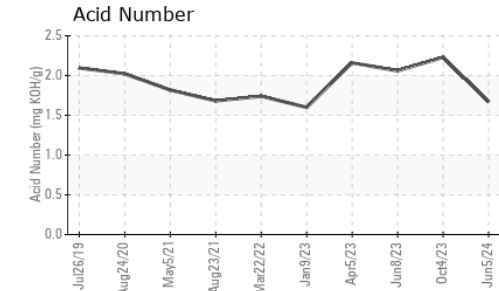
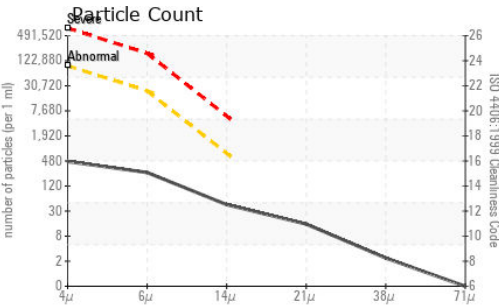
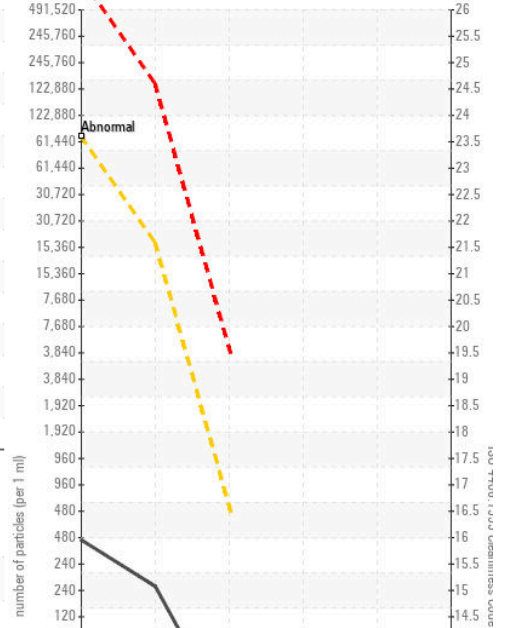
Sodium	ppm	ASTM D5185m	>21	4	0	2
Boron	ppm	ASTM D5185m		313	233	239
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		187	193	186
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		665	651	696
Calcium	ppm	ASTM D5185m		1560	1452	1647
Phosphorus	ppm	ASTM D5185m		855	896	896
Zinc	ppm	ASTM D5185m		1004	1042	1071
Sulfur	ppm	ASTM D5185m		3339	3381	3796
Acid Number (AN)	mg KOH/g	ASTM D8045		1.67	2.23	2.06
Visc @ 40°C	cSt	ASTM D445	117	80.5	79.9	81.5



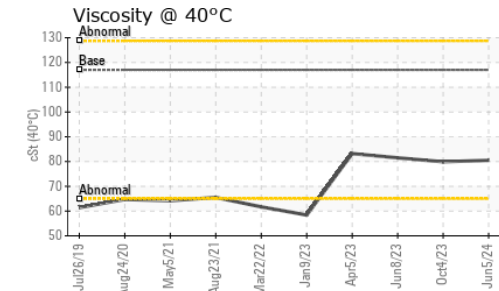
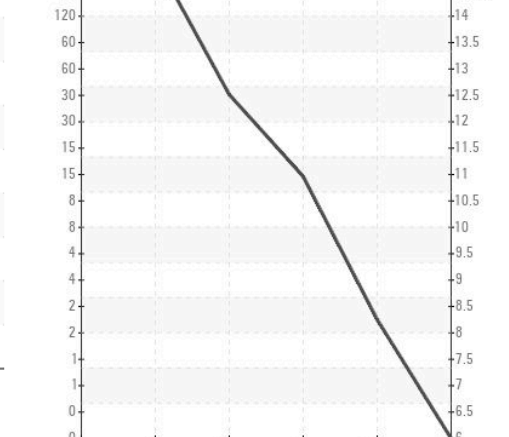
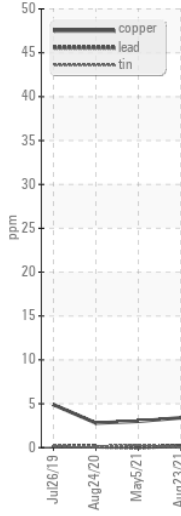
Ferrous Alloys



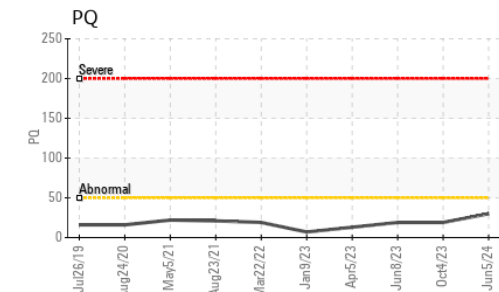
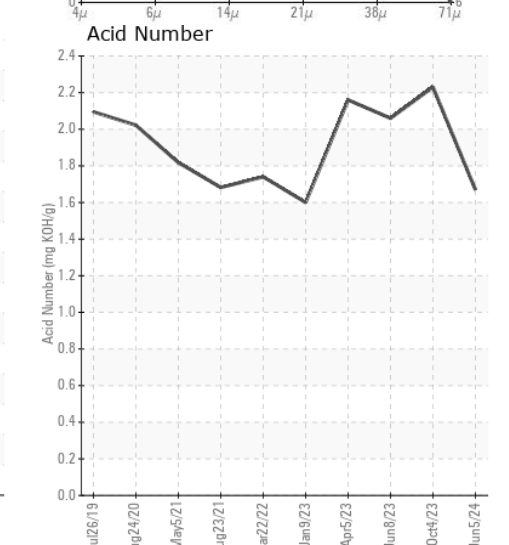
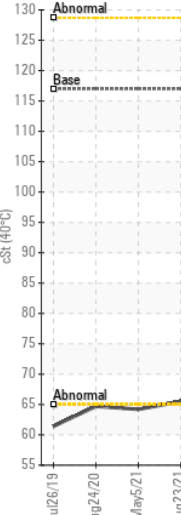
Particle Count



Non-ferrous Metals



Viscosity @ 40°C



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0218706 **Received** : 14 Jun 2024
Lab Number : 06209959 **Tested** : 21 Jun 2024
Unique Number : 11082823 **Diagnosed** : 21 Jun 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: KF, PQ)

TENNOCA CONSTRUCTION
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 CANDLER, NC
 US 28715
 Contact: MARK ROSS
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 F:

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)