



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 1FF050GXAKH290140
 Component
Hydraulic System
 Fluid
HITACHI HYDRAULIC SUPER EX 46HN (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment:
 Top Up Amount: 2.6 QTS)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0214543	JR0162846	JR0153134
Sample Date		Client Info		22 Apr 2024	15 Mar 2023	18 Nov 2022
Machine Age	hrs	Client Info		3026	2423	2245
Oil Age	hrs	Client Info		2552	2127	2245
Filter Age	hrs	Client Info		2552	500	2245
Oil Changed		Client Info		Oil Added	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	14	13	10
Iron	ppm	ASTM D5185m	>32	5	4	4
Chromium	ppm	ASTM D5185m	>9	<1	0	0
Nickel	ppm	ASTM D5185m	>5	1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>9	2	0	<1
Lead	ppm	ASTM D5185m	>28	2	0	0
Copper	ppm	ASTM D5185m	>50	2	1	2
Tin	ppm	ASTM D5185m	>5	1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

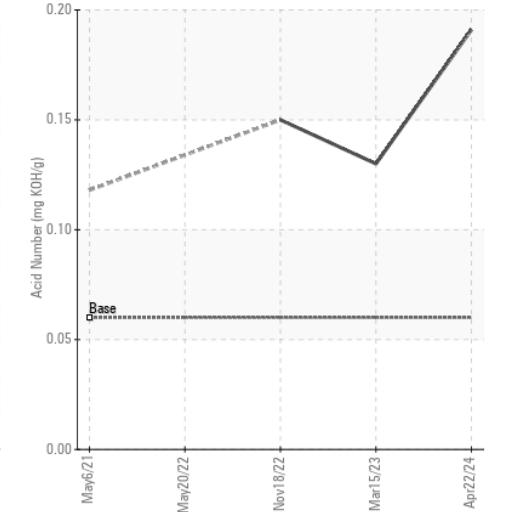
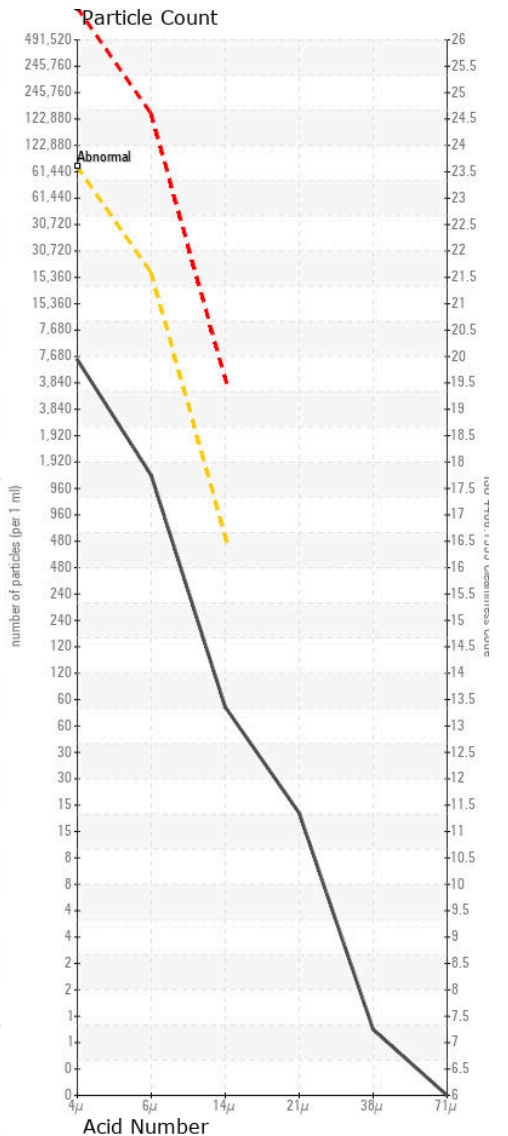
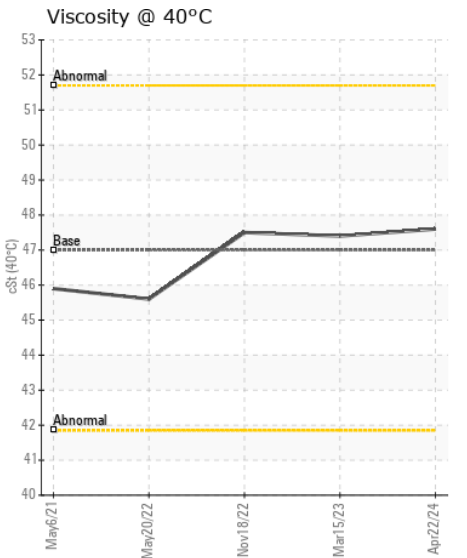
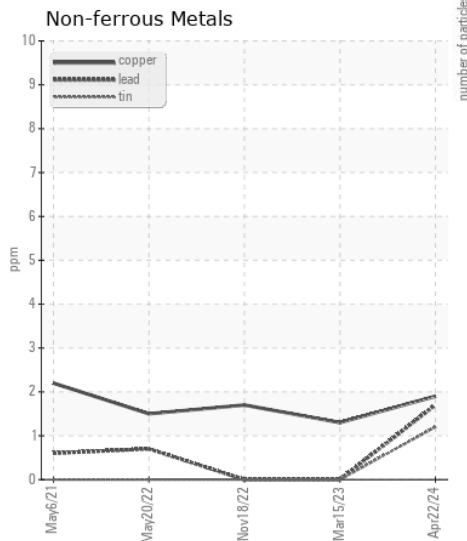
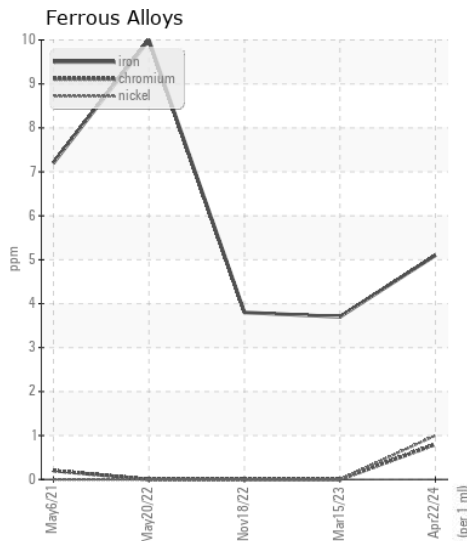
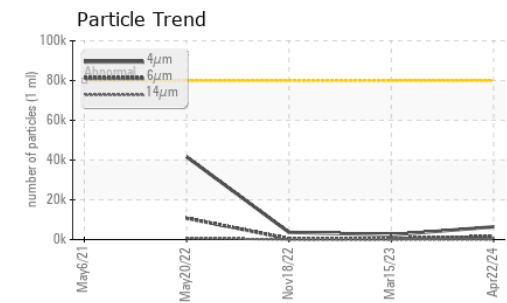
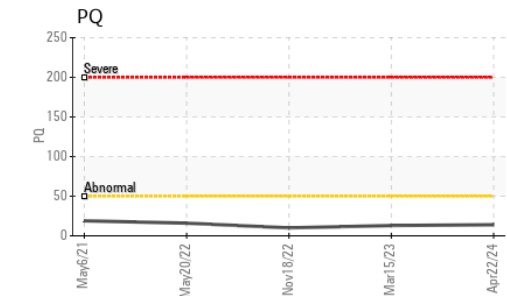
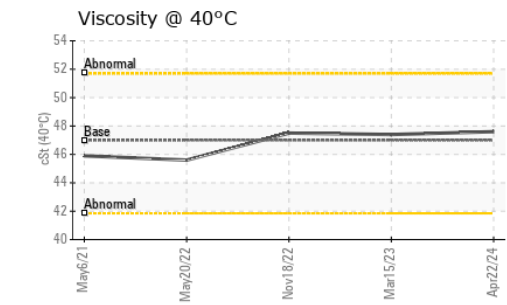
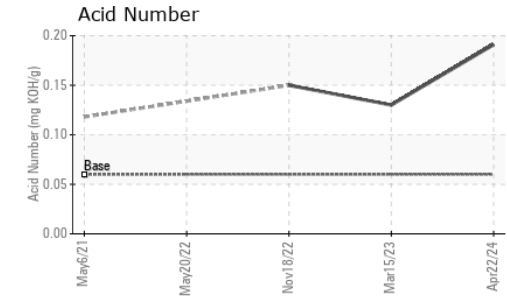
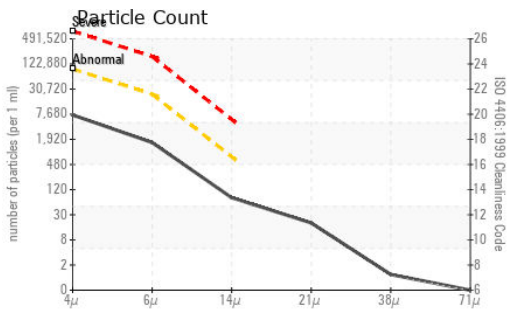
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>11	3	1	<1
Potassium	ppm	ASTM D5185m	>20	2	0	0
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	6415	2370	3649
Particles >6µm		ASTM D7647	>20000	1411	429	428
Particles >14µm		ASTM D7647	>640	68	30	34
Particles >21µm		ASTM D7647	>160	17	10	11
Particles >38µm		ASTM D7647	>40	1	0	1
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	20/18/13	18/16/12	19/16/12
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	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>21	0	0	0
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		1	0	0
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		1	1	0
Calcium	ppm	ASTM D5185m		12	8	4
Phosphorus	ppm	ASTM D5185m	827	432	432	455
Zinc	ppm	ASTM D5185m	0	66	52	58
Sulfur	ppm	ASTM D5185m	13	535	248	657
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.191	0.13	0.15
Visc @ 40°C	cSt	ASTM D445	47	47.6	47.4	47.5



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0214543 **Received** : 24 Apr 2024
Lab Number : 06159769 **Tested** : 25 Apr 2024
Unique Number : 10995192 **Diagnosed** : 26 Apr 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PQ)

NPL CONSTRUCTION
 7611 COPPERMINE DR
 MANASSAS, VA
 US 20109-2668
 Contact: BRANDON

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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F: