



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 1FF350GXPJF812880
 Component
Hydraulic System
 Fluid
HITACHI HYDRAULIC SUPER EX 46HN (220 GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment: HOURS ON MACHINE: 5476)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0172927	JR0132553	JR0122959
Sample Date		Client Info		12 May 2023	14 Oct 2022	21 Mar 2022
Machine Age	hrs	Client Info		5476	4967	4487
Oil Age	hrs	Client Info		1070	4967	4487
Filter Age	hrs	Client Info		0	4967	4487
Oil Changed		Client Info		Not Chngd	Changed	Not Chngd
Filter Changed		Client Info		Not Chngd	Changed	Not Chngd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	13	8	16
Iron	ppm	ASTM D5185m	>32	6	2	5
Chromium	ppm	ASTM D5185m	>9	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>9	4	<1	1
Lead	ppm	ASTM D5185m	>28	0	0	<1
Copper	ppm	ASTM D5185m	>50	2	<1	<1
Tin	ppm	ASTM D5185m	>5	0	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

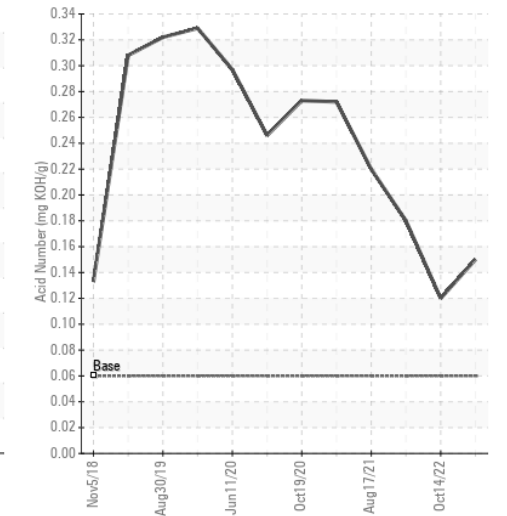
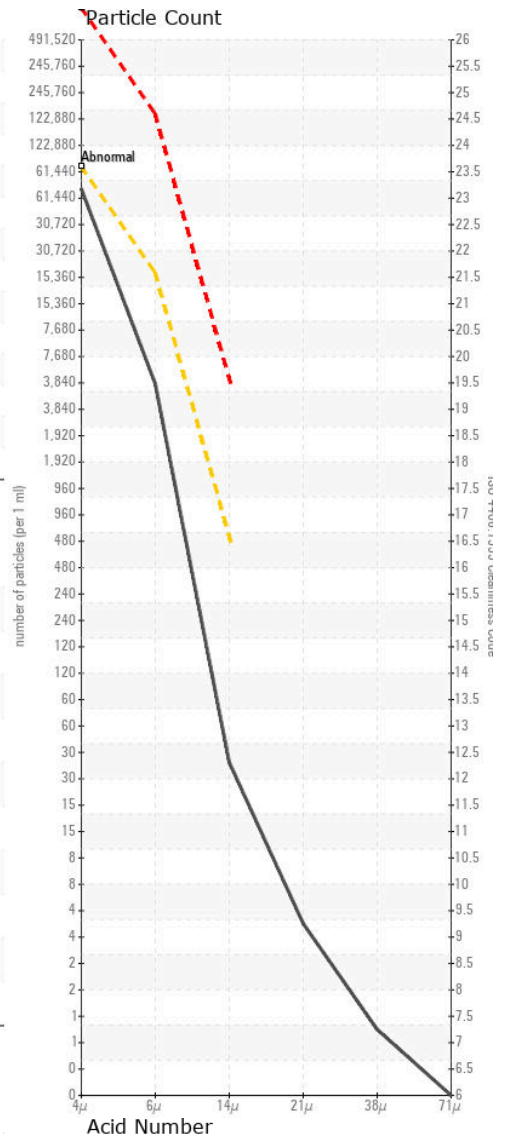
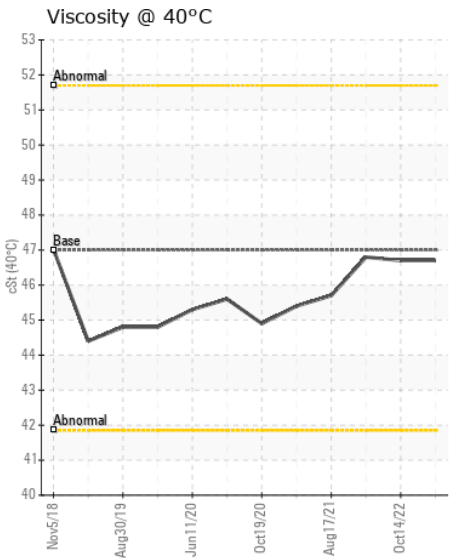
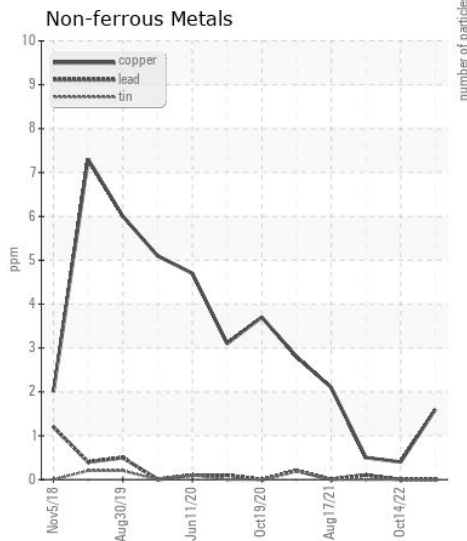
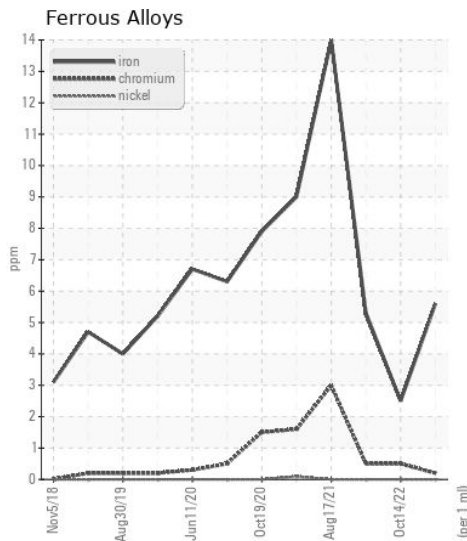
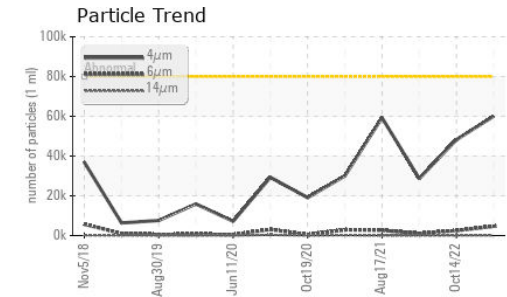
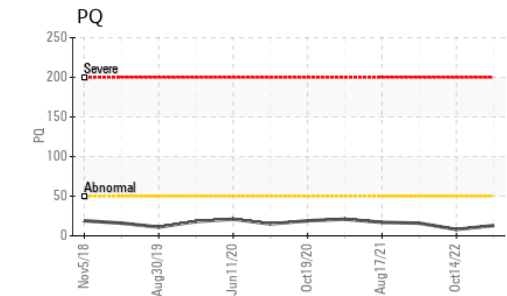
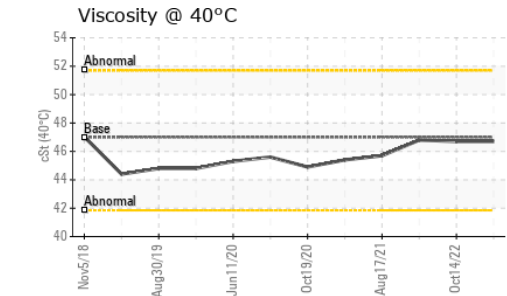
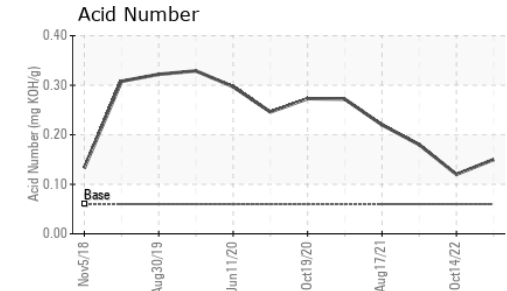
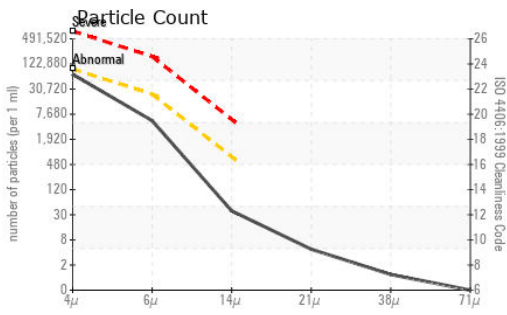
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>11	2	2	2
Potassium	ppm	ASTM D5185m	>20	2	0	<1
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	60066	48233	28674
Particles >6µm		ASTM D7647	>20000	4675	2507	1083
Particles >14µm		ASTM D7647	>640	33	19	20
Particles >21µm		ASTM D7647	>160	4	5	4
Particles >38µm		ASTM D7647	>40	1	1	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	23/19/12	23/19/11	22/17/11
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	1	0
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	<1
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		1	2	0
Calcium	ppm	ASTM D5185m		5	0	2
Phosphorus	ppm	ASTM D5185m	827	564	548	580
Zinc	ppm	ASTM D5185m	0	53	13	29
Sulfur	ppm	ASTM D5185m	13	0	0	99
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.15	0.12	0.18
Visc @ 40°C	cSt	ASTM D445	47	46.7	46.7	46.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0172927 **Received** : 15 May 2023
Lab Number : 05846973 **Tested** : 16 May 2023
Unique Number : 10471080 **Diagnosed** : 17 May 2023 - Jonathan Hester
Test Package : CONST (Additional Tests: PQ)

FITZGERALD EXCAVATING
 PO BOX 2168
 WINCHESTER, VA
 US 22604
 Contact: Service Manager

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: