



WEAR	<b>ABNORMAL</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>ABNORMAL</b>

### [ILA PROPERTIES]

Machine Id  
**JOHN DEERE 350G 1FF350GXEMF815195**

Component  
**Hydraulic System**

Fluid  
**HITACHI HYDRAULIC SUPER EX 46HN (--- QTS)**

### RECOMMENDATION

Recommend drain oil if not already done. Reduce drain interval to 2000 hours or drain and flush and use recommended zinc free oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0195421</b>	JR0174435	JR0153556
Sample Date		Client Info		<b>16 May 2024</b>	06 Jun 2023	28 Nov 2022
Machine Age	hrs	Client Info		<b>1997</b>	1435	1020
Oil Age	hrs	Client Info		<b>0</b>	1435	1020
Filter Age	hrs	Client Info		<b>0</b>	0	1020
Oil Changed		Client Info		<b>Not Changed</b>	N/A	Not Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

### WEAR

The aluminum level is abnormal. The copper level is abnormal.

PQ		ASTM D8184	>50	<b>11</b>	21	10
Iron	ppm	ASTM D5185m	>32	<b>7</b>	11	7
Chromium	ppm	ASTM D5185m	>9	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>9	<b>▲ 10</b>	3	3
Lead	ppm	ASTM D5185m	>28	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>50	<b>▲ 82</b>	7	5
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

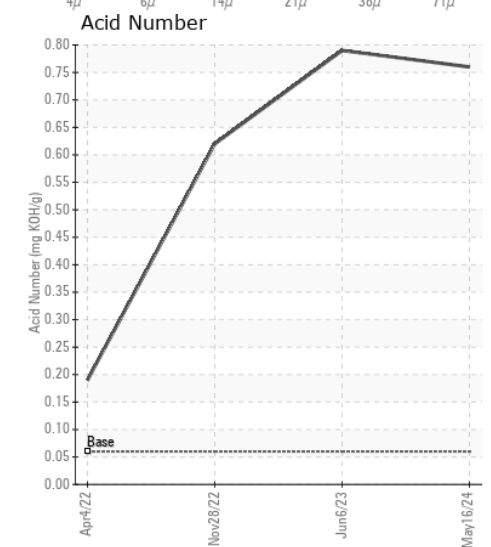
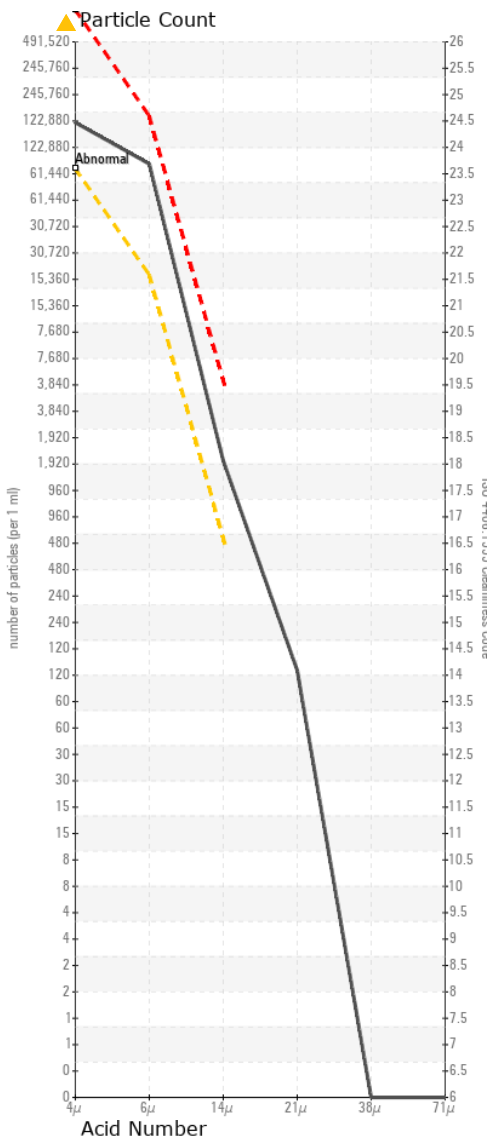
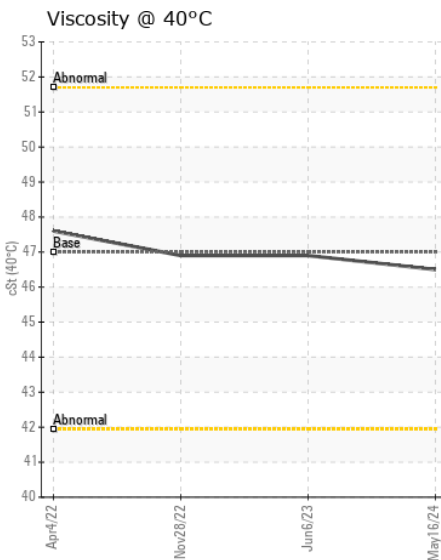
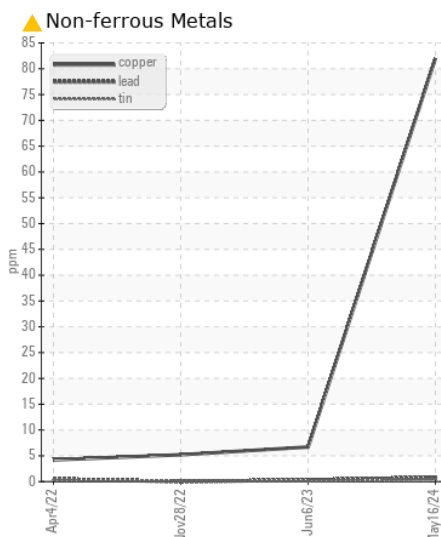
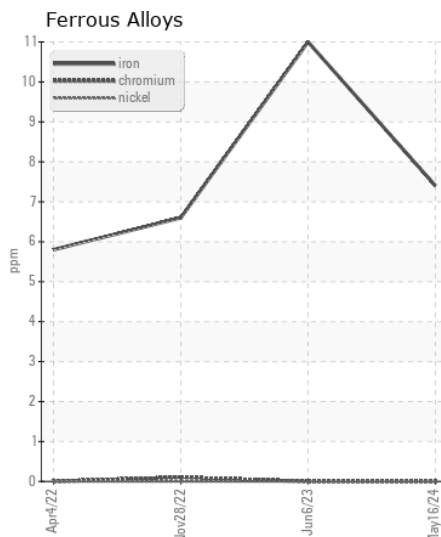
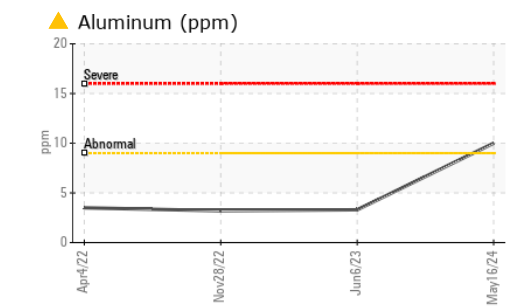
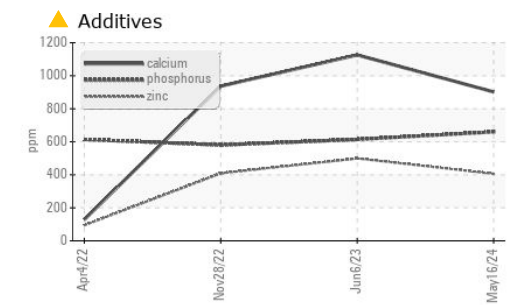
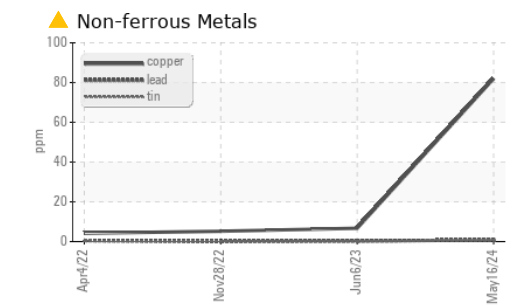
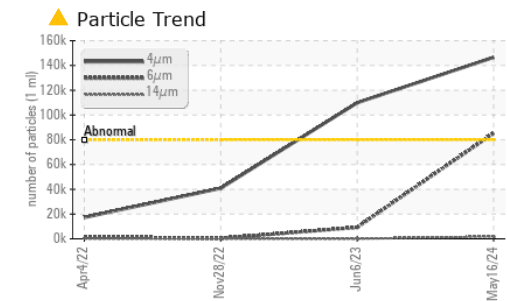
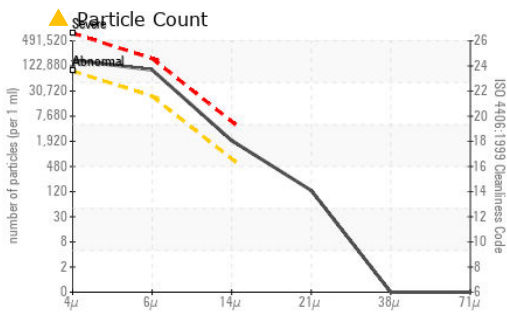
There is a high amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>11	<b>8</b>	13	8
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	3	<1
Water		WC Method	>0.075	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>80000	<b>▲ 146602</b>	● 109898	40887
Particles >6µm		ASTM D7647	>20000	<b>▲ 85324</b>	9211	403
Particles >14µm		ASTM D7647	>640	<b>▲ 1758</b>	25	14
Particles >21µm		ASTM D7647	>160	<b>113</b>	4	3
Particles >38µm		ASTM D7647	>40	<b>0</b>	1	0
Particles >71µm		ASTM D7647	>10	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	<b>▲ 24/24/18</b>	● 24/20/12	23/16/11
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.075	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

Zinc level above manufacturer's recommendations. The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m	>21	<b>1</b>	0	<1
Boron	ppm	ASTM D5185m		<b>&lt;1</b>	1	4
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>3</b>	3	2
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>8</b>	10	10
Calcium	ppm	ASTM D5185m		<b>902</b>	1126	937
Phosphorus	ppm	ASTM D5185m	827	<b>660</b>	614	580
Zinc	ppm	ASTM D5185m	0	<b>▲ 406</b>	▲ 499	▲ 409
Sulfur	ppm	ASTM D5185m	13	<b>1973</b>	2328	2006
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	<b>0.76</b>	0.79	0.62
Visc @ 40°C	cSt	ASTM D445	47	<b>46.5</b>	46.9	46.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : JR0195421

Lab Number : 06186056

Unique Number : 11042808

Test Package : CONST ( Additional Tests: PQ )

Received : 21 May 2024

Tested : 22 May 2024

Diagnosed : 23 May 2024 - Don Baldrige

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)

JRE - STEPHENSON

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