



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

Machine Id  
**JOHN DEERE 1FF035GXTFK275107**  
 Component  
**Hydraulic System**  
 Fluid  
**HITACHI HYDRAULIC SUPER EX 46HN (--- GAL)**

### 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>JR0225702</b>	JR0169045	JR0146739
Sample Date		Client Info		<b>01 Jul 2024</b>	23 Apr 2023	21 Oct 2022
Machine Age	hrs	Client Info		<b>3355</b>	2895	2503
Oil Age	hrs	Client Info		<b>460</b>	0	1628
Filter Age	hrs	Client Info		<b>0</b>	0	1628
Oil Changed		Client Info		<b>Not Changed</b>	Changed	Not Changed
Filter Changed		Client Info		<b>Not Changed</b>	Changed	Not Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	<b>15</b>	12	9
Iron	ppm	ASTM D5185m	>32	<b>5</b>	8	7
Chromium	ppm	ASTM D5185m	>9	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>9	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185m	>28	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>50	<b>4</b>	12	12
Tin	ppm	ASTM D5185m	>5	<b>0</b>	0	0
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

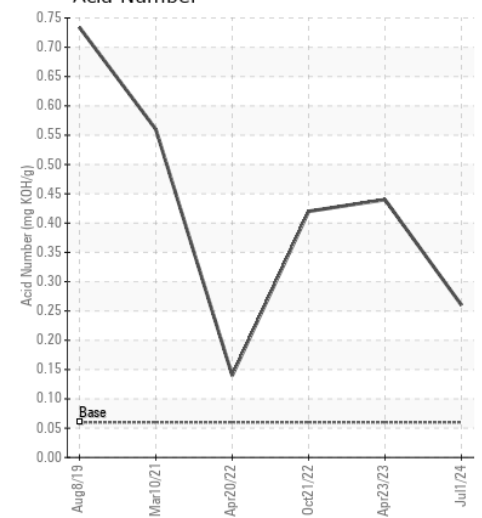
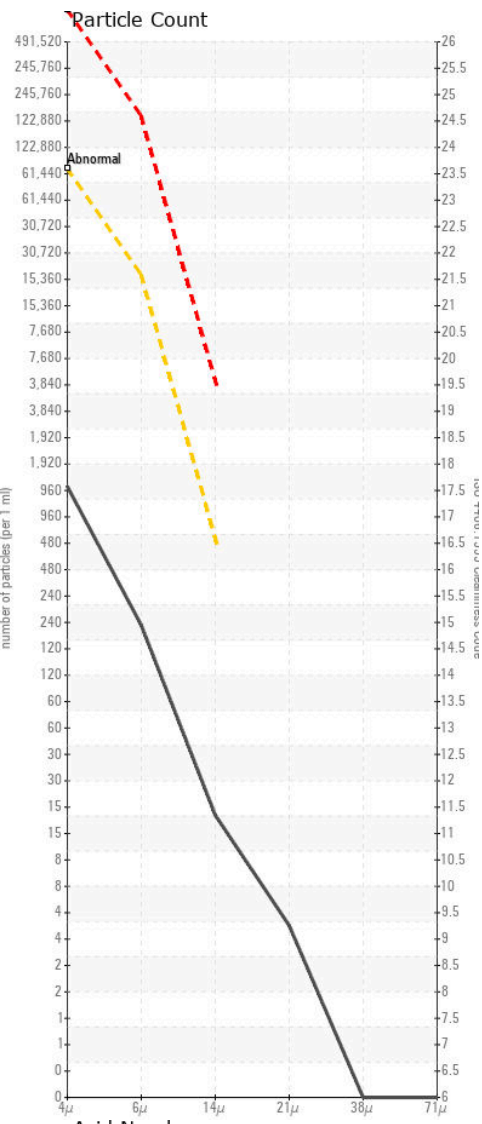
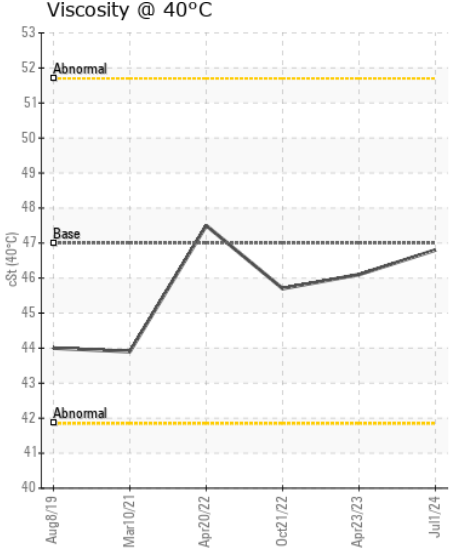
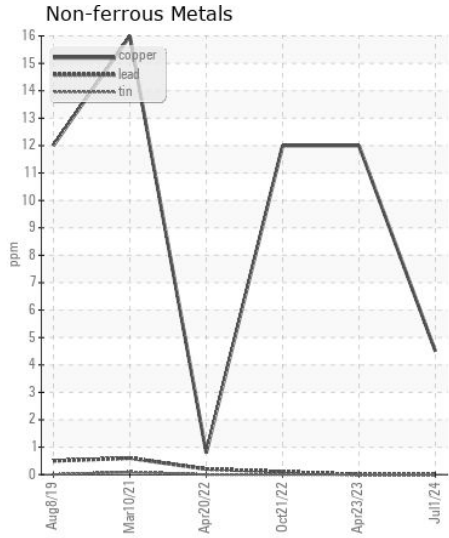
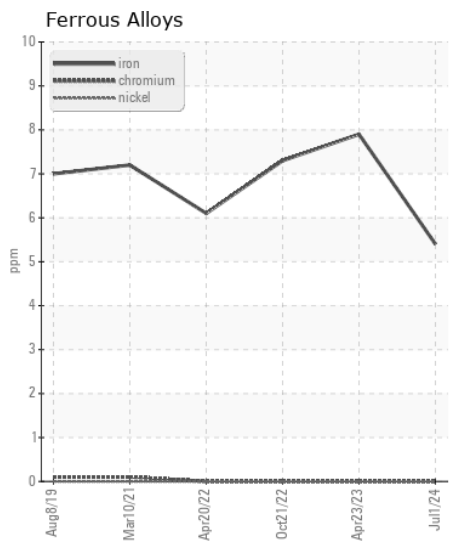
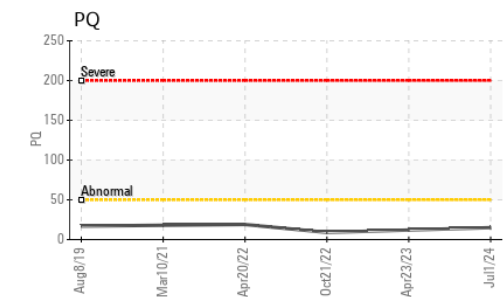
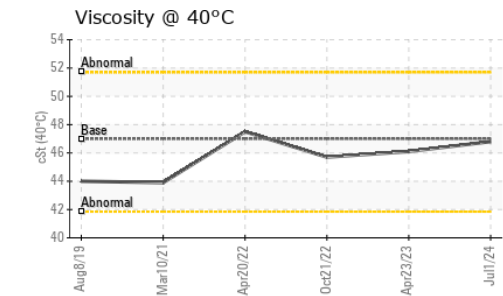
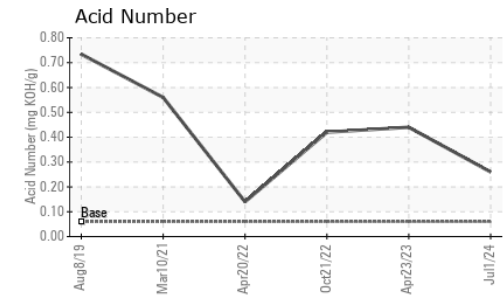
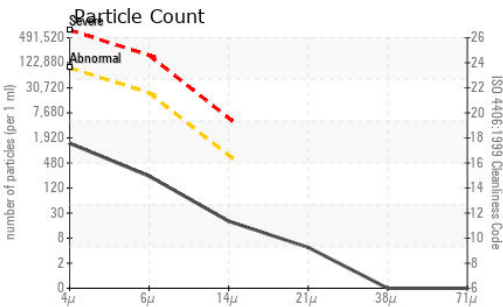
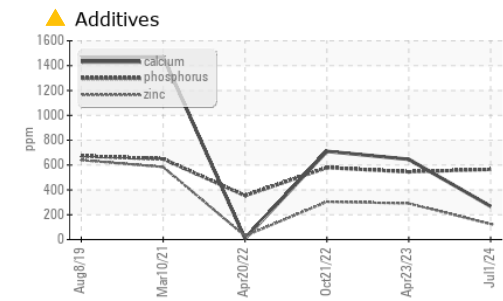
The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>11	<b>1</b>	3	3
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	1
Water		WC Method	>0.075	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>80000	<b>1252</b>	6072	6445
Particles >6µm		ASTM D7647	>20000	<b>204</b>	1107	990
Particles >14µm		ASTM D7647	>640	<b>17</b>	45	59
Particles >21µm		ASTM D7647	>160	<b>4</b>	13	10
Particles >38µm		ASTM D7647	>40	<b>0</b>	0	1
Particles >71µm		ASTM D7647	>10	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	<b>17/15/11</b>	20/17/13	20/17/13
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>&lt;1</b>	<1	0
Boron	ppm	ASTM D5185m		<b>3</b>	15	16
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	<1
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>2</b>	8	6
Calcium	ppm	ASTM D5185m		<b>267</b>	646	710
Phosphorus	ppm	ASTM D5185m	827	<b>565</b>	545	579
Zinc	ppm	ASTM D5185m	0	<b>▲ 125</b>	▲ 291	▲ 304
Sulfur	ppm	ASTM D5185m	13	<b>490</b>	766	1147
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	<b>0.26</b>	0.44	0.42
Visc @ 40°C	cSt	ASTM D445	47	<b>46.8</b>	46.1	45.7



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0225702 **Received** : 03 Jul 2024  
**Lab Number** : 06227329 **Tested** : 05 Jul 2024  
**Unique Number** : 11110822 **Diagnosed** : 06 Jul 2024 - Don Baldridge  
**Test Package** : CONST ( Additional Tests: PQ )

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

Certificate L2367  
 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)