



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



Machine Id  
**JOHN DEERE 310E 1DW310EXLMF711960**  
Component  
**Center Differential**  
Fluid  
**JOHN DEERE HY-GARD HYD/TRANS (--- GAL)**

### RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0190836</b>	JR0185933	JR0163410
Sample Date		Client Info		<b>20 Nov 2023</b>	01 Sep 2023	21 Mar 2023
Machine Age	hrs	Client Info		<b>3012</b>	2532	2029
Oil Age	hrs	Client Info		<b>3012</b>	503	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changed</b>	Not Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Not Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

### WEAR

The copper level is abnormal. All other component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		<b>55</b>	38	133
Iron	ppm	ASTM D5185m	>500	<b>181</b>	53	390
Chromium	ppm	ASTM D5185m	>10	<b>1</b>	<1	3
Nickel	ppm	ASTM D5185m	>10	<b>4</b>	<1	11
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	6	4
Lead	ppm	ASTM D5185m	>25	<b>13</b>	3	18
Copper	ppm	ASTM D5185m	>100	<b>▲ 238</b>	66	<b>▲ 303</b>
Tin	ppm	ASTM D5185m	>10	<b>8</b>	2	9
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	MODER

### CONTAMINATION

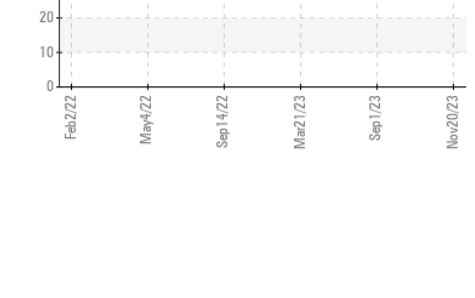
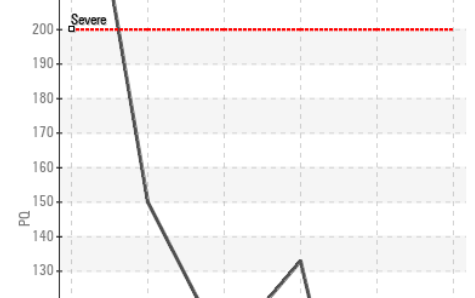
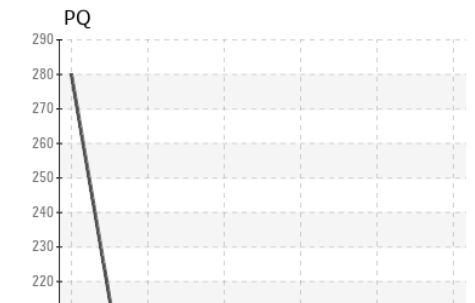
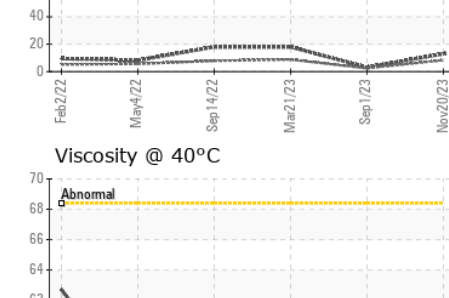
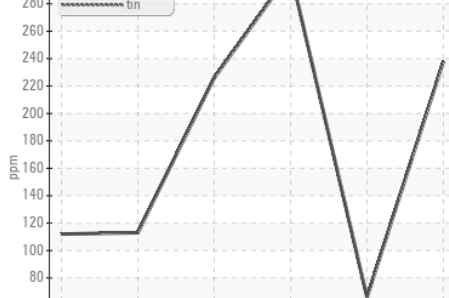
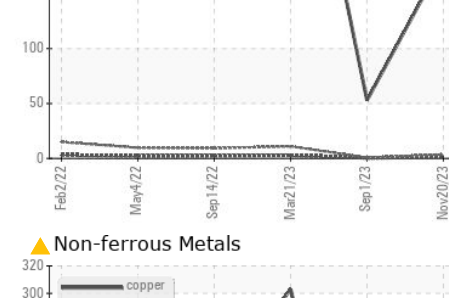
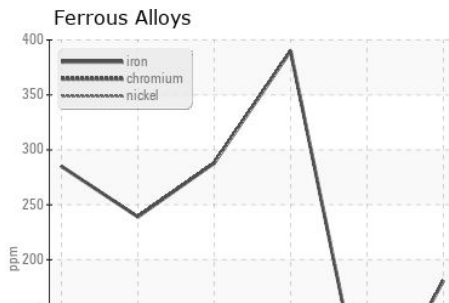
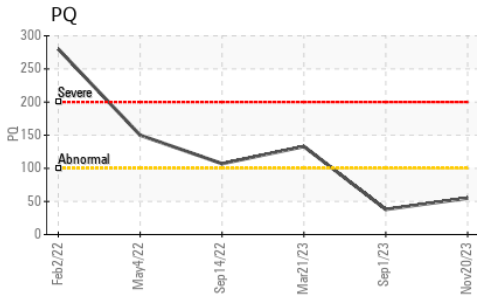
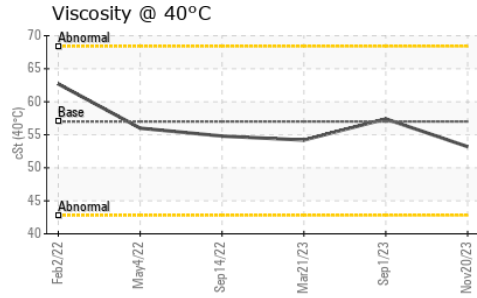
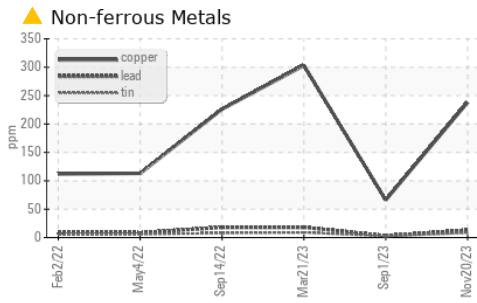
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>75	<b>10</b>	10	18
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	1	0
Water		WC Method	>.2	<b>NEG</b>	NEG	NEG
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	<b>▲ MODER</b>	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	>.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>3</b>	1	10
Boron	ppm	ASTM D5185m	6	<b>12</b>	3	35
Barium	ppm	ASTM D5185m	0	<b>0</b>	2	1
Molybdenum	ppm	ASTM D5185m	0	<b>0</b>	0	<1
Manganese	ppm	ASTM D5185m		<b>9</b>	5	24
Magnesium	ppm	ASTM D5185m	145	<b>88</b>	95	65
Calcium	ppm	ASTM D5185m	3570	<b>3356</b>	3484	3175
Phosphorus	ppm	ASTM D5185m	1290	<b>1041</b>	1009	921
Zinc	ppm	ASTM D5185m	1640	<b>1268</b>	1236	1160
Sulfur	ppm	ASTM D5185m		<b>3403</b>	3678	3671
Visc @ 40°C	cSt	ASTM D445	57.0	<b>53.2</b>	57.4	54.2



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0190836 **Received** : 21 Nov 2023  
**Lab Number** : 06014268 **Tested** : 22 Nov 2023  
**Unique Number** : 10753412 **Diagnosed** : 24 Nov 2023 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: PQ )

**JRE - GARNER**  
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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)