



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



Machine Id  
**JOHN DEERE 310E 1DW310EXCMF712160**  
Component  
**Rear Axle**  
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>JR0212855</b>	JR0191178	JR0186088
Sample Date		Client Info		<b>10 May 2024</b>	13 Dec 2023	03 Oct 2023
Machine Age	hrs	Client Info		<b>2469</b>	2017	1040
Oil Age	hrs	Client Info		<b>452</b>	2017	1610
Filter Age	hrs	Client Info		<b>0</b>	0	570
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

Bearing and/or bushing wear is indicated. All other component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		<b>107</b>	195	132
Iron	ppm	ASTM D5185m	>1501	<b>254</b>	303	207
Chromium	ppm	ASTM D5185m	>11	<b>2</b>	2	1
Nickel	ppm	ASTM D5185m	>10	<b>7</b>	5	4
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>21	<b>3</b>	3	3
Lead	ppm	ASTM D5185m	>51	<b>0</b>	21	15
Copper	ppm	ASTM D5185m	>101	<b>▲ 250</b>	▲ 341	▲ 265
Tin	ppm	ASTM D5185m	>10	<b>▲ 11</b>	▲ 10	8
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	MODER
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

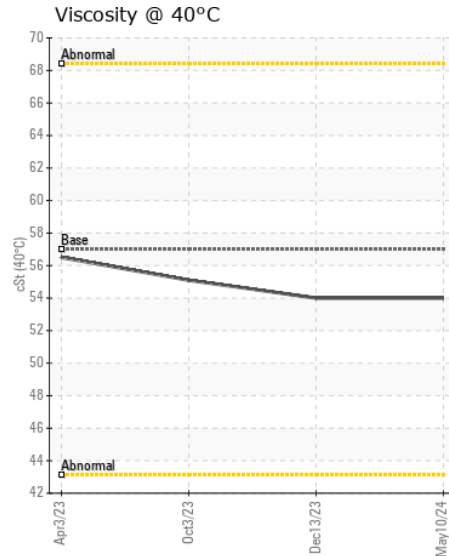
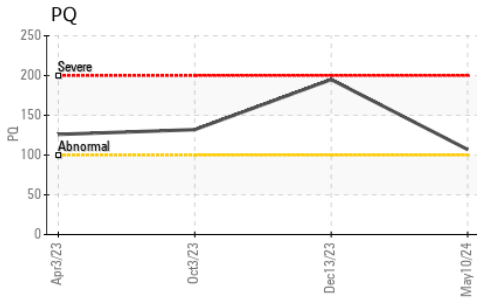
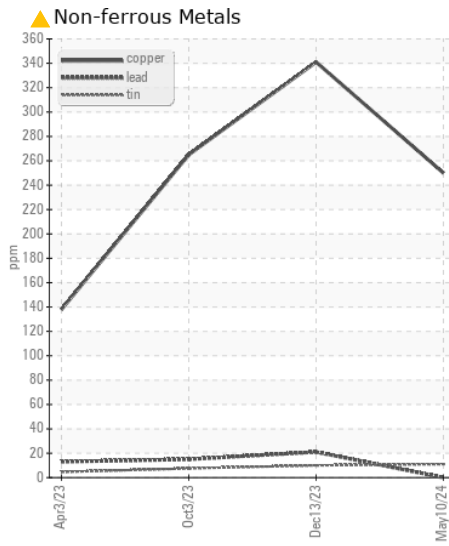
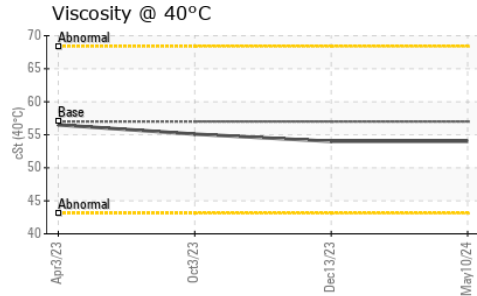
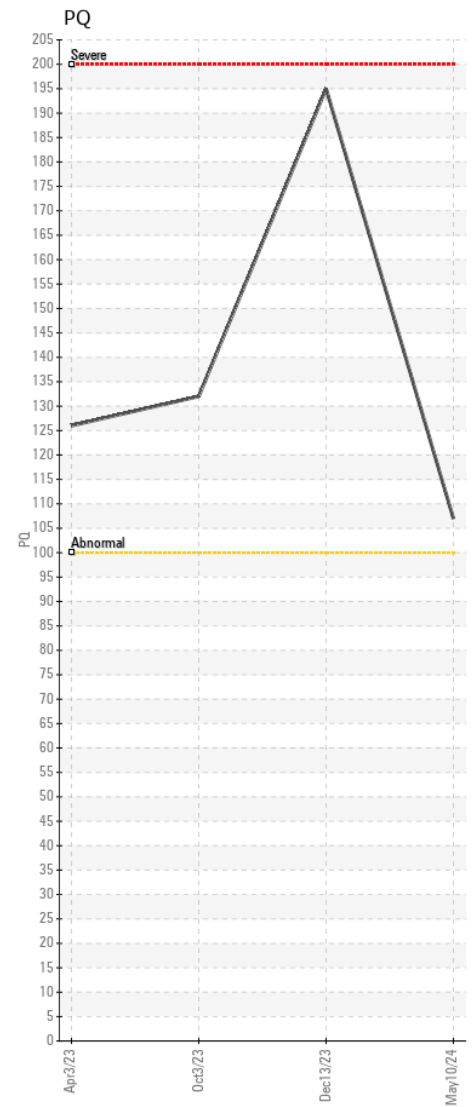
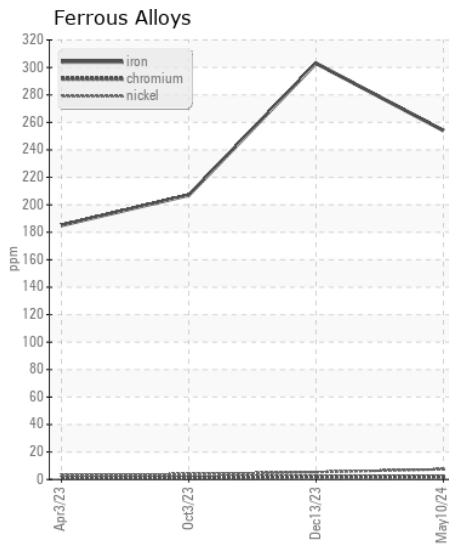
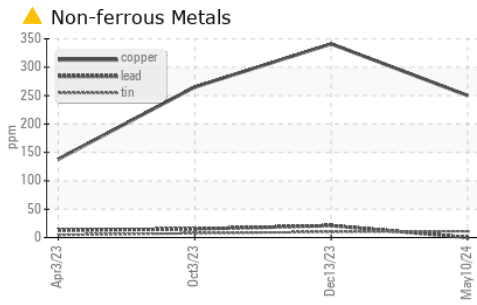
There is no indication of any contamination in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Silicon	ppm	ASTM D5185m	>31	<b>14</b>	16	13
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	1
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Silt	scalar	*Visual	NONE	<b>LIGHT</b>	MODER	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	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	>0.1	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sodium	ppm	ASTM D5185m	>51	<b>11</b>	9	8
Boron	ppm	ASTM D5185m	6	<b>39</b>	27	30
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>0</b>	<1	0
Manganese	ppm	ASTM D5185m		<b>24</b>	16	14
Magnesium	ppm	ASTM D5185m	145	<b>74</b>	67	78
Calcium	ppm	ASTM D5185m	3570	<b>3427</b>	3309	3214
Phosphorus	ppm	ASTM D5185m	1290	<b>1078</b>	969	1012
Zinc	ppm	ASTM D5185m	1640	<b>1323</b>	1195	1238
Sulfur	ppm	ASTM D5185m		<b>4005</b>	3307	3144
Visc @ 40°C	cSt	ASTM D445	57.0	<b>54.0</b>	54.0	55.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0212855 **Received** : 13 May 2024  
**Lab Number** : 06177447 **Tested** : 14 May 2024  
**Unique Number** : 11023500 **Diagnosed** : 15 May 2024 - 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)