



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



Machine Id  
**JOHN DEERE 310E 1DW310EXCMF712451**  
Component  
**Rear Differential**  
Fluid  
**JOHN DEERE HY-GARD HYD/TRANS (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0219648</b>	JR0181062	JR0125144
Sample Date		Client Info		<b>08 Jul 2024</b>	21 Nov 2023	08 Mar 2022
Machine Age	hrs	Client Info		<b>2490</b>	1969	463
Oil Age	hrs	Client Info		<b>521</b>	0	463
Filter Age	hrs	Client Info		<b>0</b>	0	463
Oil Changed		Client Info		<b>Not Changd</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	ABNORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

PQ		ASTM D8184		<b>59</b>	90	196
Iron	ppm	ASTM D5185m	>500	<b>118</b>	239	272
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	2	3
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	4	6
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	1	4
Lead	ppm	ASTM D5185m	>25	<b>6</b>	▲ 25	11
Copper	ppm	ASTM D5185m	>100	<b>165</b>	▲ 555	▲ 484
Tin	ppm	ASTM D5185m	>10	<b>6</b>	▲ 16	▲ 13
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	MODER
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

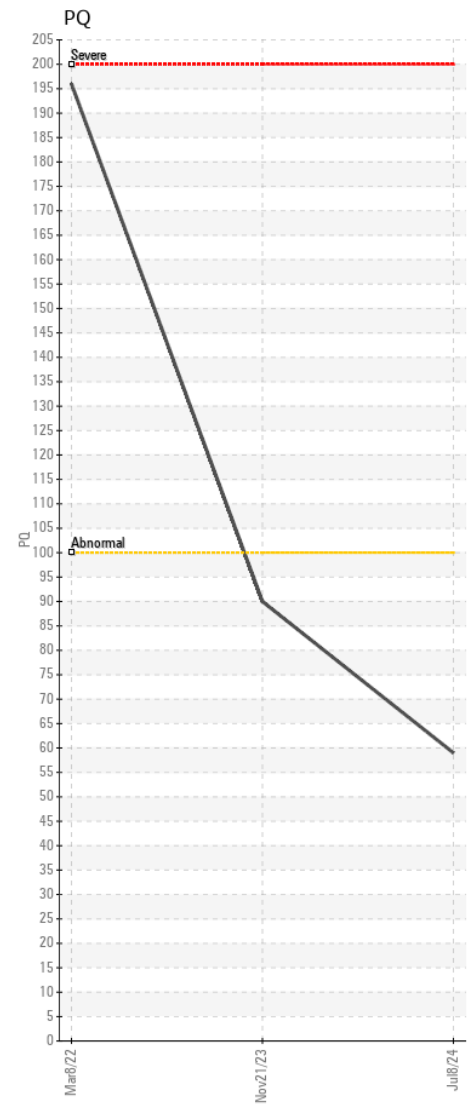
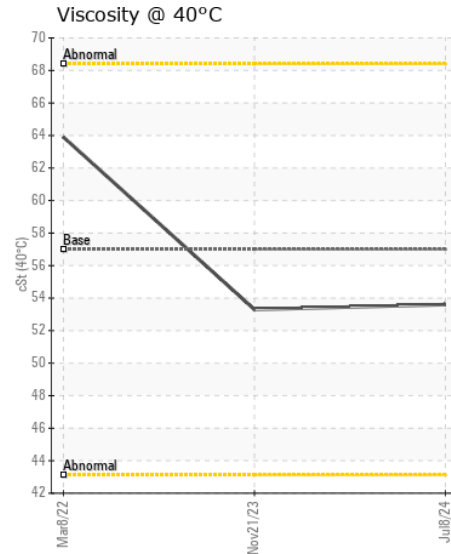
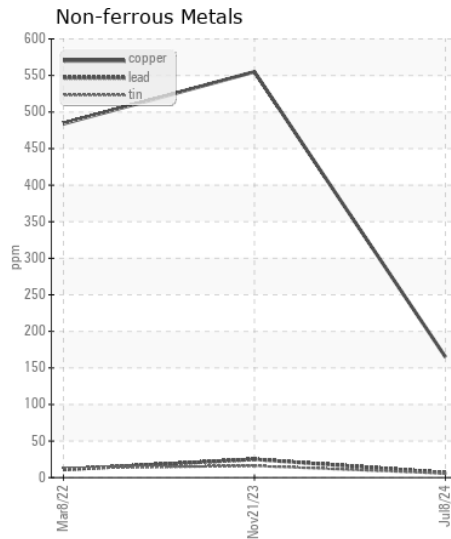
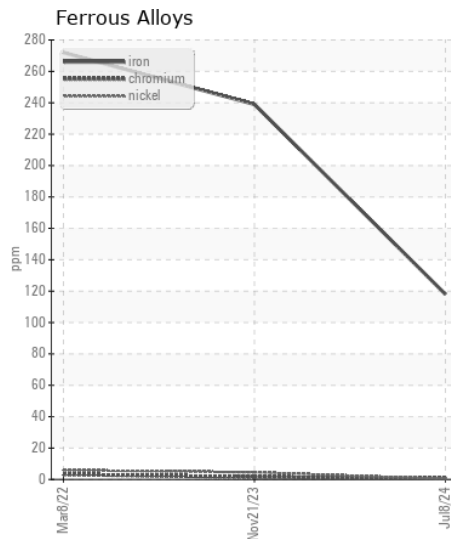
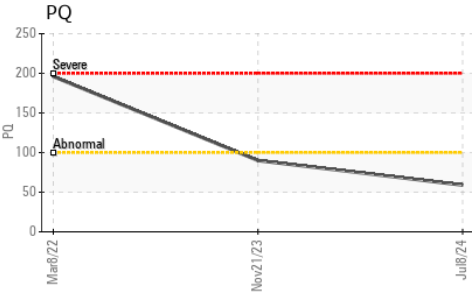
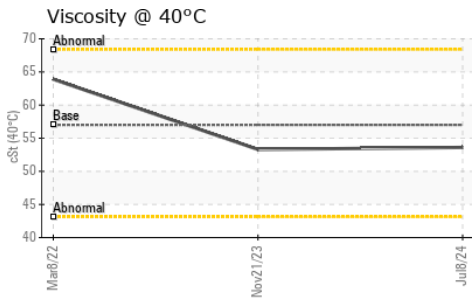
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>75	<b>13</b>	11	24
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	6
Water		WC Method	>.2	<b>NEG</b>	NEG	NEG
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>LIGHT</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	>.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>	5	17
Boron	ppm	ASTM D5185m	6	<b>9</b>	12	92
Barium	ppm	ASTM D5185m	0	<b>&lt;1</b>	1	0
Molybdenum	ppm	ASTM D5185m	0	<b>3</b>	<1	<1
Manganese	ppm	ASTM D5185m		<b>3</b>	8	43
Magnesium	ppm	ASTM D5185m	145	<b>100</b>	68	24
Calcium	ppm	ASTM D5185m	3570	<b>3279</b>	2926	3452
Phosphorus	ppm	ASTM D5185m	1290	<b>1016</b>	998	1177
Zinc	ppm	ASTM D5185m	1640	<b>1167</b>	1154	1438
Sulfur	ppm	ASTM D5185m		<b>3964</b>	3061	3067
Visc @ 40°C	cSt	ASTM D445	57.0	<b>53.6</b>	53.3	63.9



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0219648 **Received** : 10 Jul 2024  
**Lab Number** : 06232515 **Tested** : 11 Jul 2024  
**Unique Number** : 11116008 **Diagnosed** : 12 Jul 2024 - Sean Felton  
**Test Package** : CONST ( Additional Tests: PQ )

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 - CHARLOTTE**  
 9550 STATESVILLE ROAD  
 CHARLOTTE, NC  
 US 28269  
 Contact: CHARLOTTE SHOP  
 myoung@jamesriverequipment.com  
 T: (704)597-0211  
 F: (704)596-6198