



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



Machine Id  
**JOHN DEERE 310E 1DW310EXELF705139**  
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>JR0219827</b>	JR0203438	JR0170806
Sample Date		Client Info		<b>20 Jun 2024</b>	14 Feb 2024	25 Aug 2023
Machine Age	hrs	Client Info		<b>4542</b>	3930	3538
Oil Age	hrs	Client Info		<b>612</b>	2849	3001
Filter Age	hrs	Client Info		<b>0</b>	2849	0
Oil Changed		Client Info		<b>Not Changed</b>	Changed	Not Changed
Filter Changed		Client Info		<b>Not Changed</b>	N/A	Not Changed
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		<b>142</b>	207	194
Iron	ppm	ASTM D5185m	>500	<b>331</b>	511	405
Chromium	ppm	ASTM D5185m	>10	<b>2</b>	2	1
Nickel	ppm	ASTM D5185m	>10	<b>3</b>	3	3
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	3	5
Lead	ppm	ASTM D5185m	>25	<b>&lt;1</b>	2	2
Copper	ppm	ASTM D5185m	>100	<b>141</b>	161	▲ 129
Tin	ppm	ASTM D5185m	>10	<b>4</b>	5	● 4
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	MODER	LIGHT
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

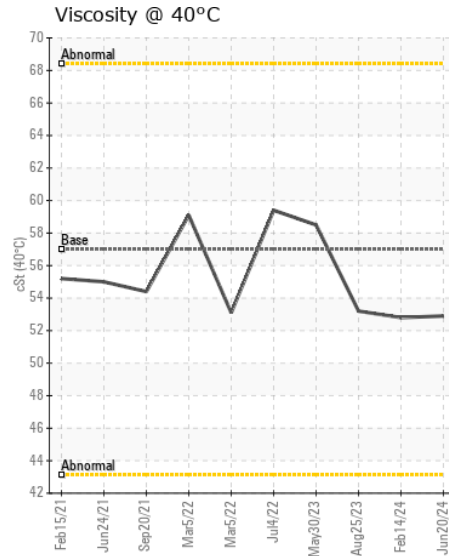
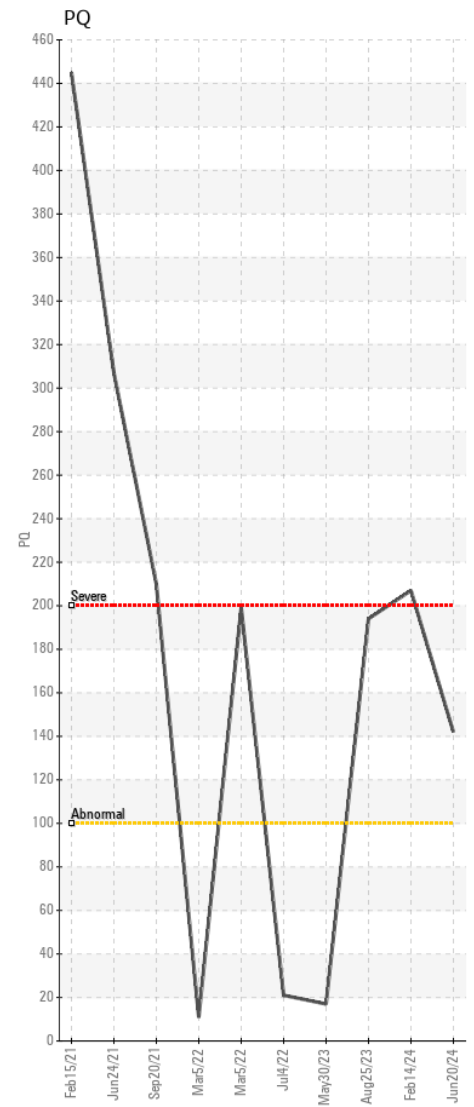
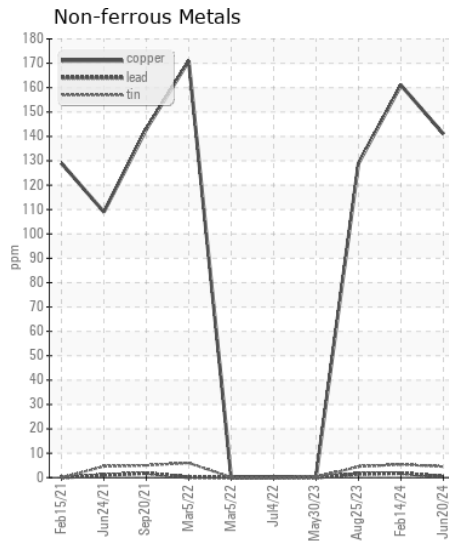
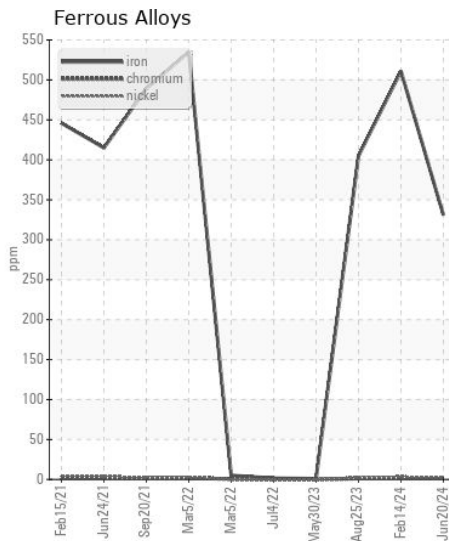
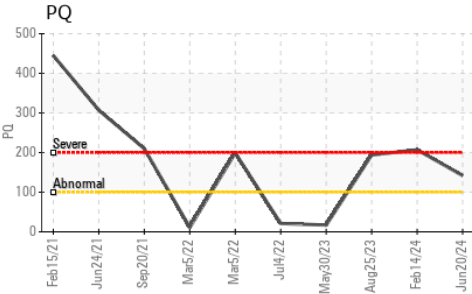
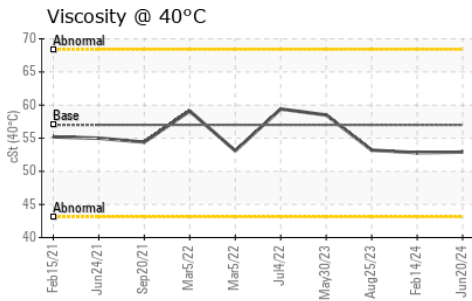
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>75	<b>9</b>	15	10
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	<1
Water		WC Method	>.2	<b>NEG</b>	NEG	NEG
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	LIGHT
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	>.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>2</b>	3	2
Boron	ppm	ASTM D5185m	6	<b>6</b>	8	8
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>3</b>	3	3
Manganese	ppm	ASTM D5185m		<b>7</b>	10	9
Magnesium	ppm	ASTM D5185m	145	<b>99</b>	89	96
Calcium	ppm	ASTM D5185m	3570	<b>3346</b>	3231	3328
Phosphorus	ppm	ASTM D5185m	1290	<b>1121</b>	1007	971
Zinc	ppm	ASTM D5185m	1640	<b>1301</b>	1190	1220
Sulfur	ppm	ASTM D5185m		<b>3439</b>	3487	3995
Visc @ 40°C	cSt	ASTM D445	57.0	<b>52.9</b>	52.8	53.2



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0219827 **Received** : 25 Jun 2024  
**Lab Number** : 06220022 **Tested** : 26 Jun 2024  
**Unique Number** : 11098219 **Diagnosed** : 26 Jun 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: PQ )

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

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)