



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 310E 1DW310EXCMF712160
Component
Front Axle
Fluid
JOHN DEERE HY-GARD HYDRAULIC/RANSMISSION (--- 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		JR0212565	JR0191176	JR0186087
Sample Date		Client Info		10 May 2024	13 Dec 2023	03 Oct 2023
Machine Age	hrs	Client Info		2469	2017	1610
Oil Age	hrs	Client Info		452	2017	1610
Filter Age	hrs	Client Info		0	0	570
Oil Changed		Client Info		Not Changed	Changed	Not Changed
Filter Changed		Client Info		Not Changed	Changed	Not Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

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		102	215	149
Iron	ppm	ASTM D5185m	>1501	262	309	219
Chromium	ppm	ASTM D5185m	>11	2	2	2
Nickel	ppm	ASTM D5185m	>10	7	9	7
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>21	2	3	3
Lead	ppm	ASTM D5185m	>51	0	3	0
Copper	ppm	ASTM D5185m	>101	▲ 275	▲ 251	198
Tin	ppm	ASTM D5185m	>10	▲ 11	▲ 10	8
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

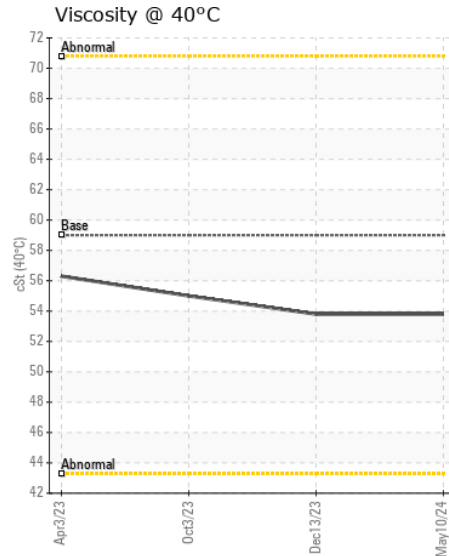
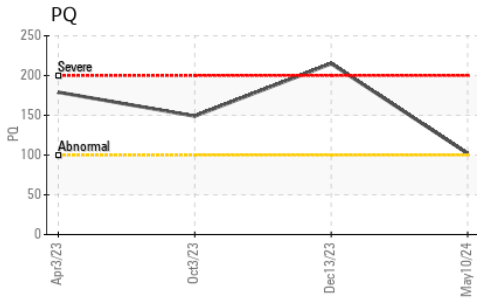
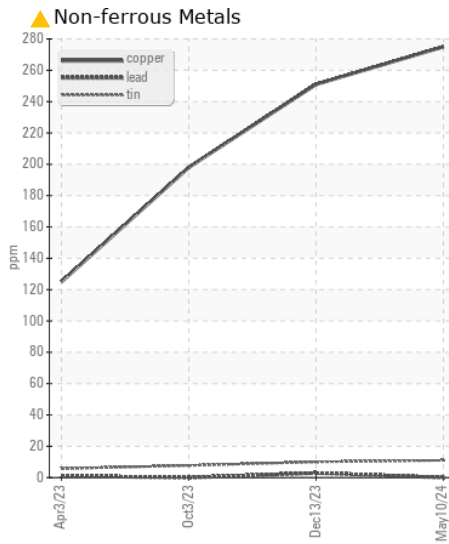
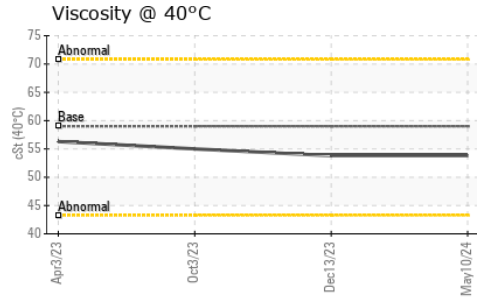
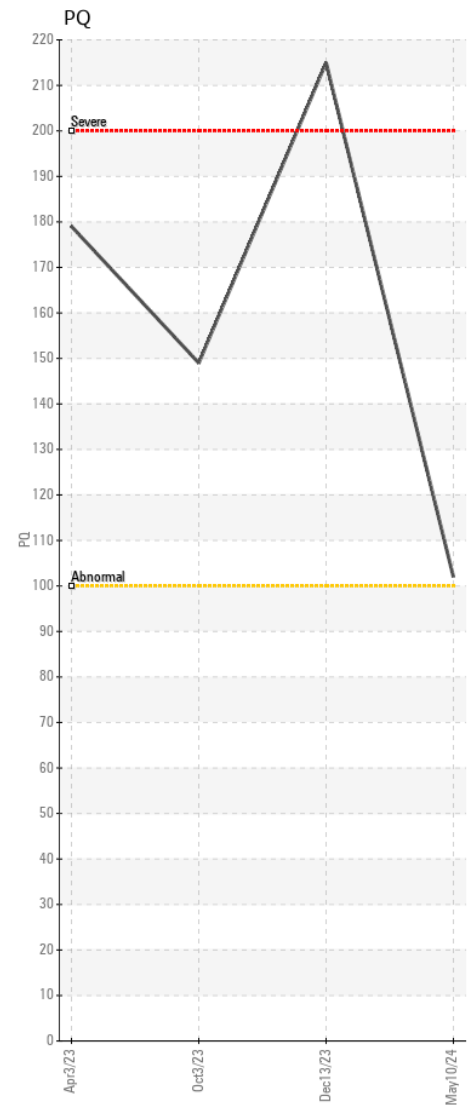
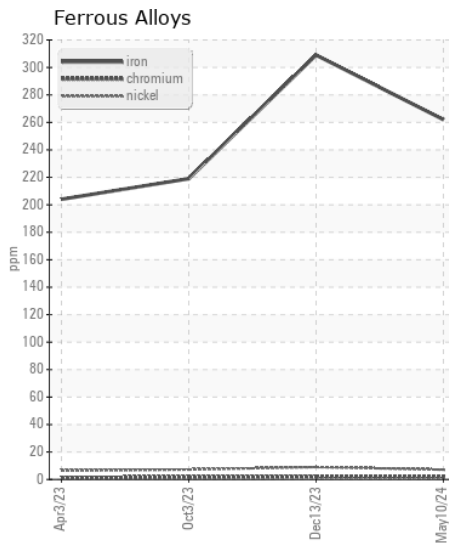
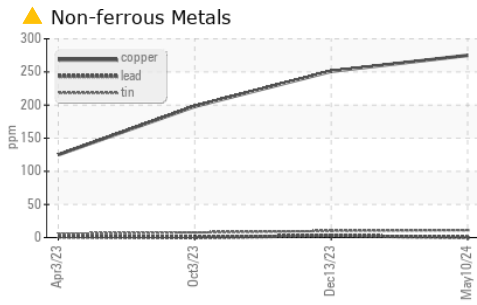
There is no indication of any contamination in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Silicon	ppm	ASTM D5185m	>31	14	15	12
Potassium	ppm	ASTM D5185m	>20	0	0	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	MODER	MODER	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	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	12	11	10
Boron	ppm	ASTM D5185m		39	36	39
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	0
Manganese	ppm	ASTM D5185m		25	25	24
Magnesium	ppm	ASTM D5185m		71	60	73
Calcium	ppm	ASTM D5185m		3478	3286	3212
Phosphorus	ppm	ASTM D5185m		1065	991	1033
Zinc	ppm	ASTM D5185m		1284	1183	1231
Sulfur	ppm	ASTM D5185m		4033	3269	3134
Visc @ 40°C	cSt	ASTM D445	59	53.8	53.8	55.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0212565 **Received** : 13 May 2024
Lab Number : 06177446 **Tested** : 14 May 2024
Unique Number : 11023499 **Diagnosed** : 15 May 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PQ)

JRE - GARNER
 4161 AUBURN CHURCH RD
 GARNER, NC
 US 27529

Contact: RALEIGH SHOP
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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)

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