



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 310E 1DW310EXCMF712103
Component
Rear Axle
Fluid
JOHN DEERE HY-GARD HYDRAULIC/RANSMISSION (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0212986	JR0190559	---
Sample Date		Client Info		11 Apr 2024	12 Nov 2023	---
Machine Age	hrs	Client Info		1533	1533	---
Oil Age	hrs	Client Info		1533	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	Not Changd	---
Filter Changed		Client Info		Changed	Not Changd	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

Bearing and/or bushing wear is indicated. All other metal levels are typical for a new component breaking in.

PQ		ASTM D8184		144	113	---
Iron	ppm	ASTM D5185m	>1501	295	296	---
Chromium	ppm	ASTM D5185m	>11	2	1	---
Nickel	ppm	ASTM D5185m	>10	6	6	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>21	2	1	---
Lead	ppm	ASTM D5185m	>51	22	24	---
Copper	ppm	ASTM D5185m	>101	▲ 362	▲ 311	---
Tin	ppm	ASTM D5185m	>10	10	7	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

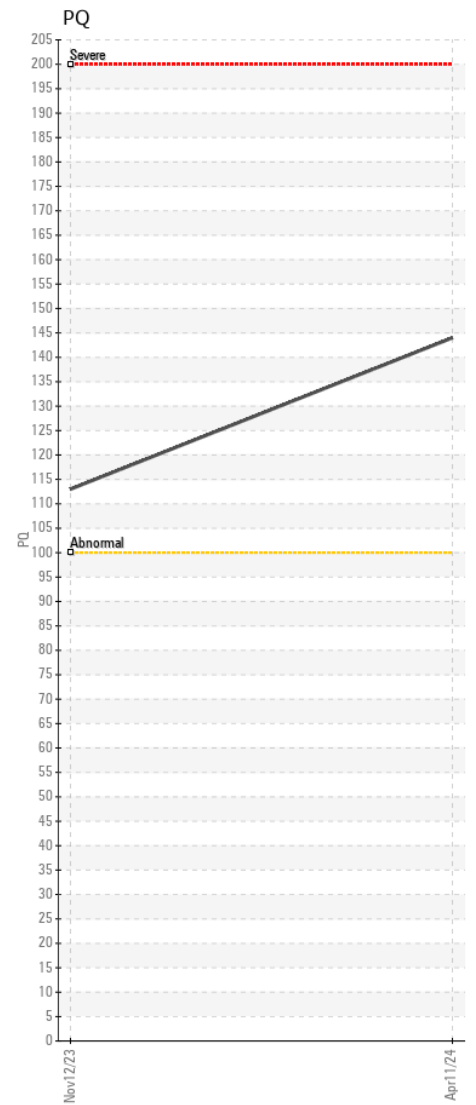
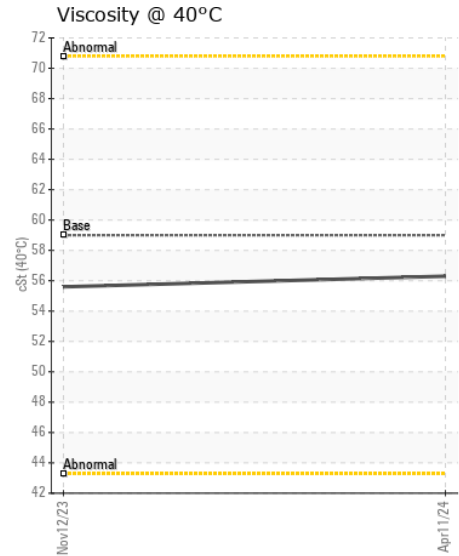
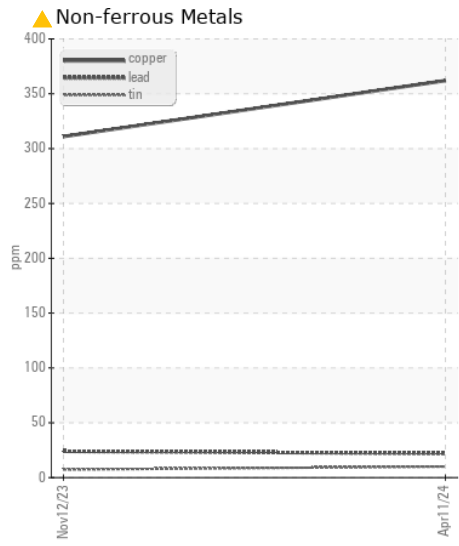
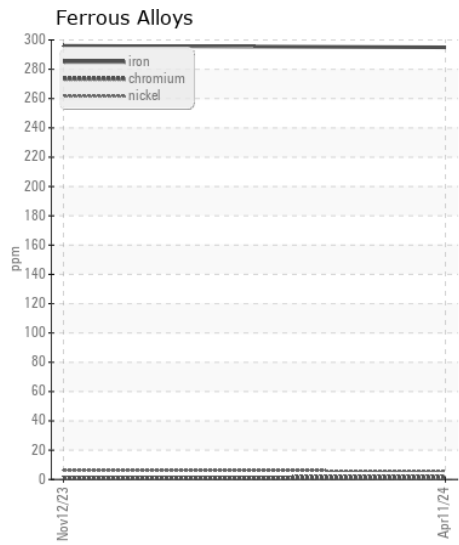
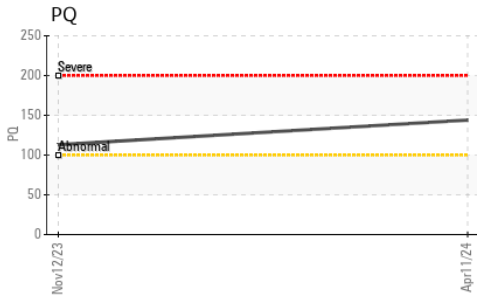
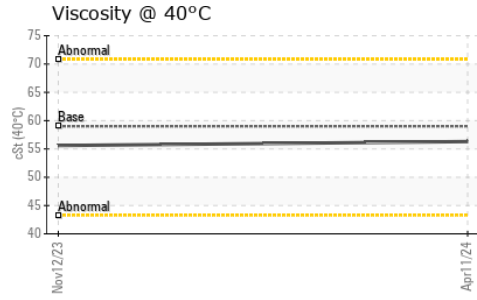
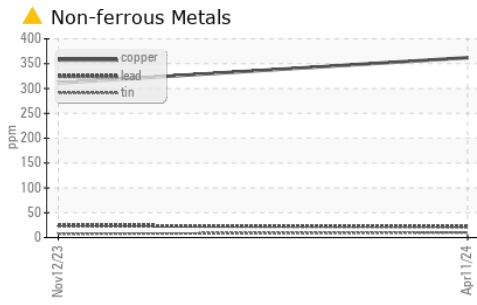
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>31	14	12	---
Potassium	ppm	ASTM D5185m	>20	2	<1	---
Water		WC Method	>0.1	NEG	NEG	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	---

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m	>51	9	7	---
Boron	ppm	ASTM D5185m		34	31	---
Barium	ppm	ASTM D5185m		<1	0	---
Molybdenum	ppm	ASTM D5185m		0	0	---
Manganese	ppm	ASTM D5185m		27	25	---
Magnesium	ppm	ASTM D5185m		78	78	---
Calcium	ppm	ASTM D5185m		3294	3198	---
Phosphorus	ppm	ASTM D5185m		1123	1064	---
Zinc	ppm	ASTM D5185m		1322	1244	---
Sulfur	ppm	ASTM D5185m		4071	3805	---
Visc @ 40°C	cSt	ASTM D445	59	56.3	55.6	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0212986 **Received** : 17 Apr 2024
Lab Number : 06152232 **Tested** : 18 Apr 2024
Unique Number : 10982310 **Diagnosed** : 22 Apr 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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