



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 310E 1DW310EXJPF716428
Component
Front Differential
Fluid
JOHN DEERE HY-GARD HYD/TRANS (39 QTS)

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		JR0211183	JR0192250	JR0168704
Sample Date		Client Info		10 Apr 2024	08 Nov 2023	03 Aug 2023
Machine Age	hrs	Client Info		1950	1475	962
Oil Age	hrs	Client Info		917	955	520
Filter Age	hrs	Client Info		0	0	520
Oil Changed		Client Info		Changed	N/A	Not Changd
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Bearing and/or bushing wear is indicated.

PQ		ASTM D8184		284	260	305
Iron	ppm	ASTM D5185m	>500	376	313	281
Chromium	ppm	ASTM D5185m	>10	4	3	2
Nickel	ppm	ASTM D5185m	>10	17	15	16
Titanium	ppm	ASTM D5185m		1	1	<1
Silver	ppm	ASTM D5185m		<1	0	<1
Aluminum	ppm	ASTM D5185m	>25	4	9	4
Lead	ppm	ASTM D5185m	>25	2	1	<1
Copper	ppm	ASTM D5185m	>100	▲ 273	190	166
Tin	ppm	ASTM D5185m	>10	10	8	7
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	HEAVY
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

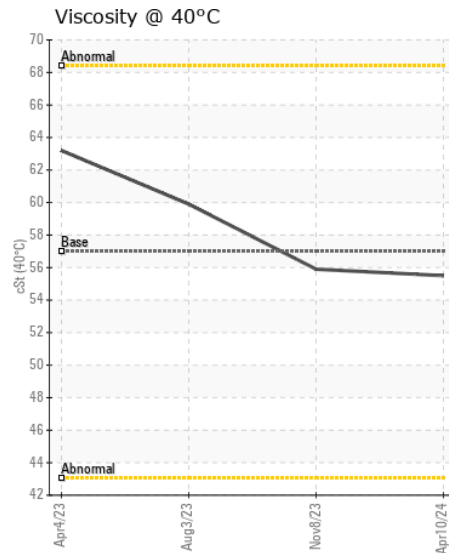
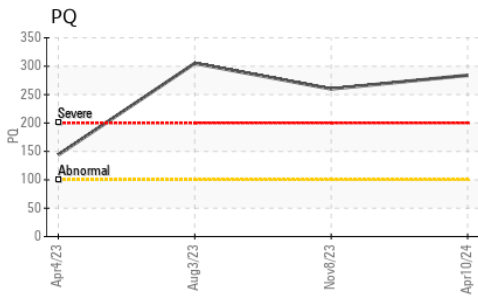
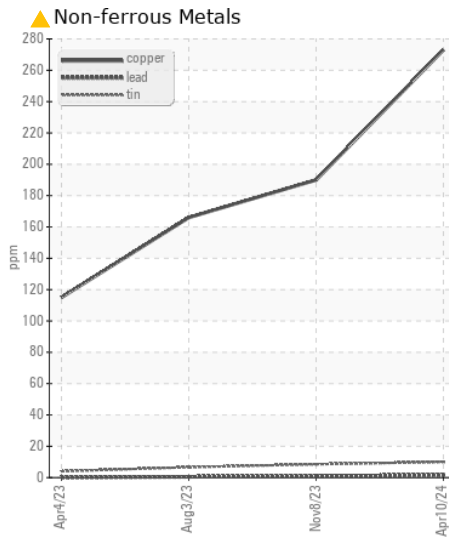
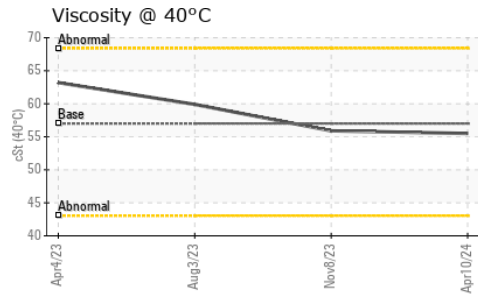
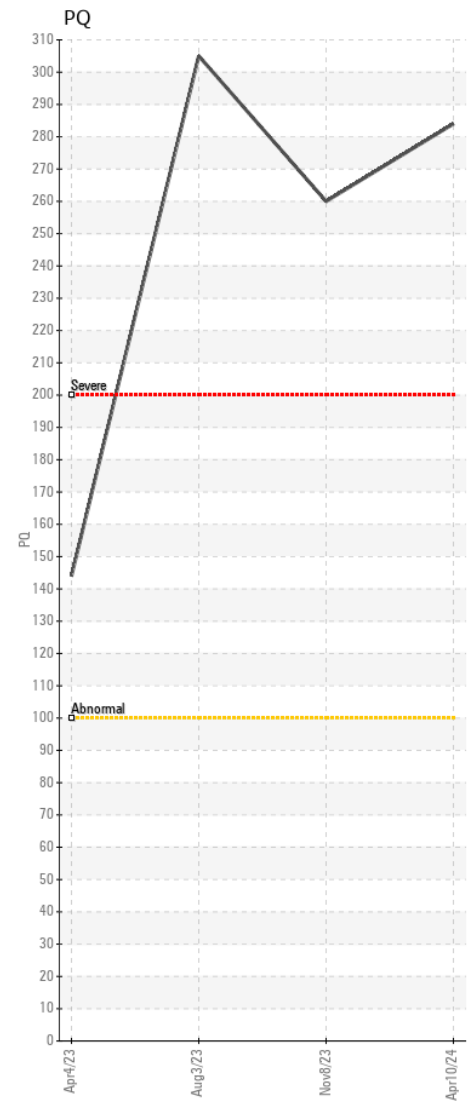
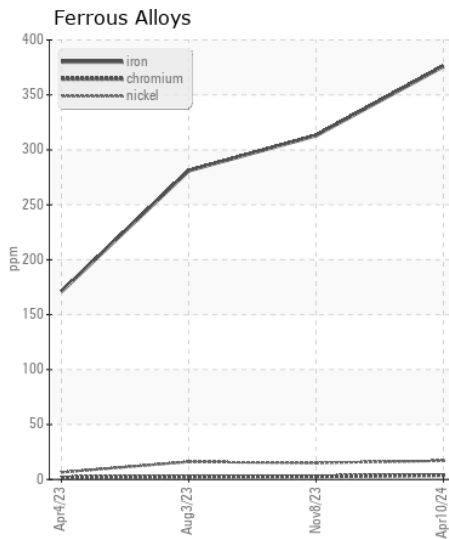
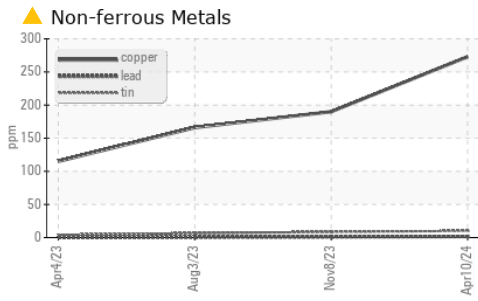
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>75	25	32	20
Potassium	ppm	ASTM D5185m	>20	3	2	2
Water		WC Method	>.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	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	>.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		10	10	6
Boron	ppm	ASTM D5185m	6	57	46	51
Barium	ppm	ASTM D5185m	0	1	0	0
Molybdenum	ppm	ASTM D5185m	0	7	5	7
Manganese	ppm	ASTM D5185m		40	36	42
Magnesium	ppm	ASTM D5185m	145	84	97	92
Calcium	ppm	ASTM D5185m	3570	3498	3477	3736
Phosphorus	ppm	ASTM D5185m	1290	1207	1135	1158
Zinc	ppm	ASTM D5185m	1640	1278	1395	1386
Sulfur	ppm	ASTM D5185m		4614	3532	3879
Visc @ 40°C	cSt	ASTM D445	57.0	55.5	55.9	59.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0211183 **Received** : 11 Apr 2024
Lab Number : 06146116 **Tested** : 12 Apr 2024
Unique Number : 10976194 **Diagnosed** : 15 Apr 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PQ)

JRE - MANASSAS PARK
 9107 OWENS DRIVE
 MANASSAS PARK, VA
 US 20111

Contact: DON VEST
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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)