



WEAR	SEVERE
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 310E 1DW310EXCMF708674
Component
Center Differential
Fluid
JOHN DEERE HY-GARD HYDRAULIC/RANSMISSION (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0221254	JR0177536	JR0161744
Sample Date		Client Info		02 Jul 2024	23 Oct 2023	18 Apr 2023
Machine Age	hrs	Client Info		3983	3589	2961
Oil Age	hrs	Client Info		0	2662	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				SEVERE	NORMAL	NORMAL

WEAR

Bearing and/or bushing wear is indicated.

PQ		ASTM D8184		107	24	214
Iron	ppm	ASTM D5185m	>500	447	316	340
Chromium	ppm	ASTM D5185m	>10	2	1	1
Nickel	ppm	ASTM D5185m	>10	4	4	3
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	4	1	2
Lead	ppm	ASTM D5185m	>25	1	2	0
Copper	ppm	ASTM D5185m	>100	▲ 583	156	116
Tin	ppm	ASTM D5185m	>10	▲ 10	6	5
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	MODER

CONTAMINATION

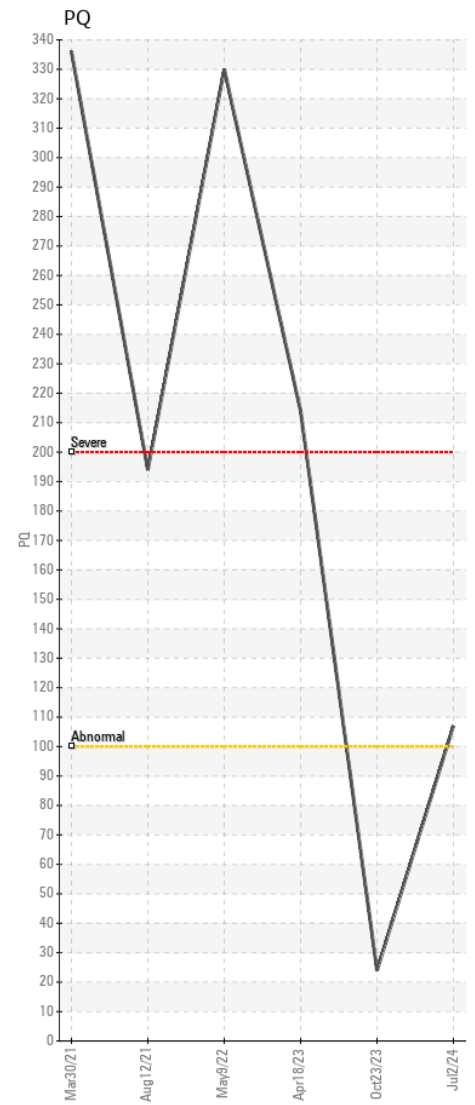
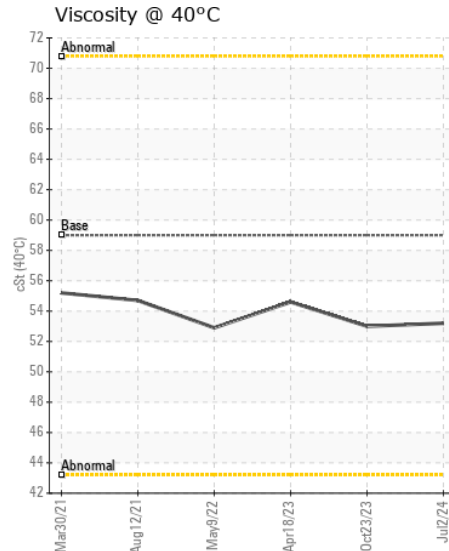
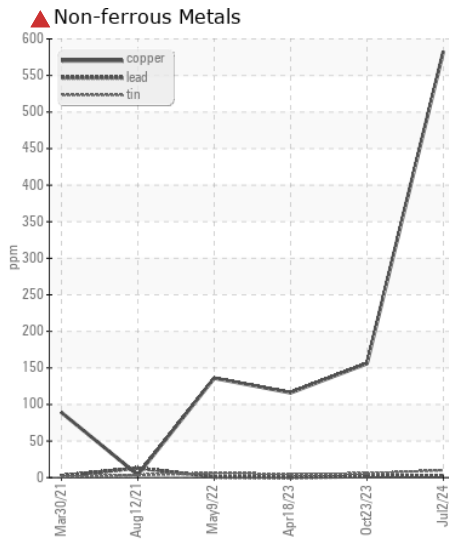
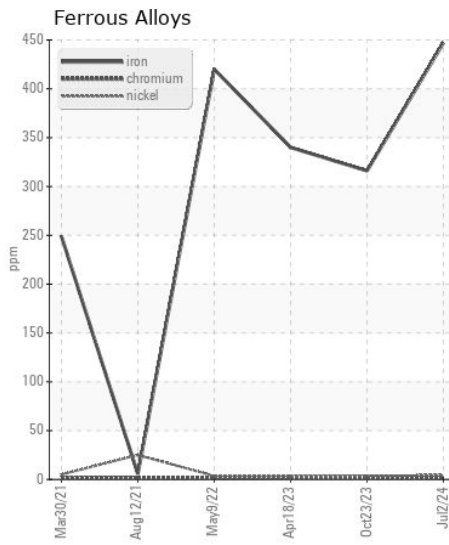
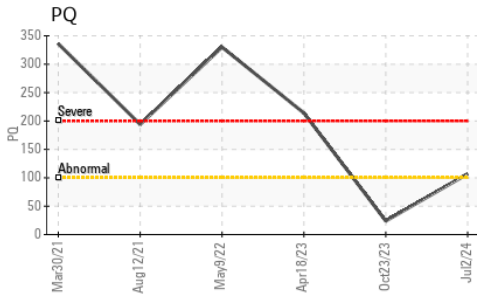
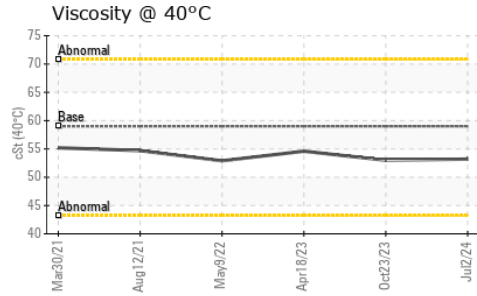
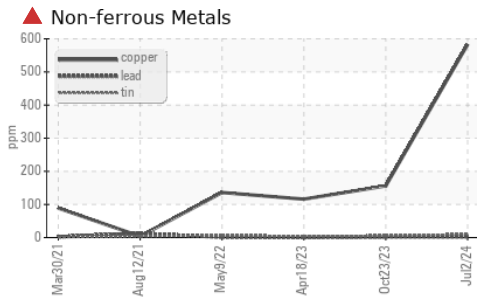
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>75	16	10	12
Potassium	ppm	ASTM D5185m	>20	2	0	0
Water		WC Method	>.2	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	>.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		8	4	4
Boron	ppm	ASTM D5185m		7	12	12
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		4	3	4
Manganese	ppm	ASTM D5185m		15	12	13
Magnesium	ppm	ASTM D5185m		90	80	99
Calcium	ppm	ASTM D5185m		3574	3127	3480
Phosphorus	ppm	ASTM D5185m		1132	962	1017
Zinc	ppm	ASTM D5185m		1299	1196	1266
Sulfur	ppm	ASTM D5185m		4301	3281	3727
Visc @ 40°C	cSt	ASTM D445	59	53.2	53.0	54.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0221254 **Received** : 08 Jul 2024
Lab Number : 06230449 **Tested** : 10 Jul 2024
Unique Number : 11113942 **Diagnosed** : 10 Jul 2024 - Don Baldrige
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)

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