



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 310E 1DW310EXJKF697842
Component
Center Differential
Fluid
JOHN DEERE HY-GARD HYD/TRANS (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Oil and filter 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		JR0209561	JR0161775	JR0121697
Sample Date		Client Info		20 May 2024	15 Apr 2023	16 Jun 2022
Machine Age	hrs	Client Info		3990	0	2484
Oil Age	hrs	Client Info		0	1000	443
Filter Age	hrs	Client Info		0	1000	443
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				ABNORMAL	SEVERE	ABNORMAL

WEAR

The copper level is abnormal. All other component wear rates are normal.

PQ		ASTM D8184		256	148	129
Iron	ppm	ASTM D5185m	>500	547	617	397
Chromium	ppm	ASTM D5185m	>10	2	3	2
Nickel	ppm	ASTM D5185m	>10	1	4	2
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>25	2	5	3
Lead	ppm	ASTM D5185m	>25	15	13	8
Copper	ppm	ASTM D5185m	>100	▲ 470	▲ 679	▲ 466
Tin	ppm	ASTM D5185m	>10	10	▲ 14	10
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	MODER	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

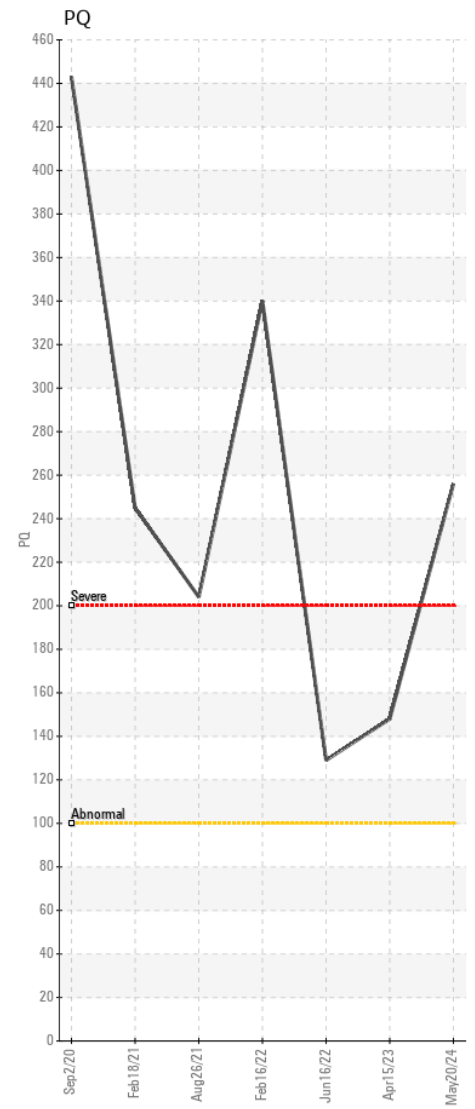
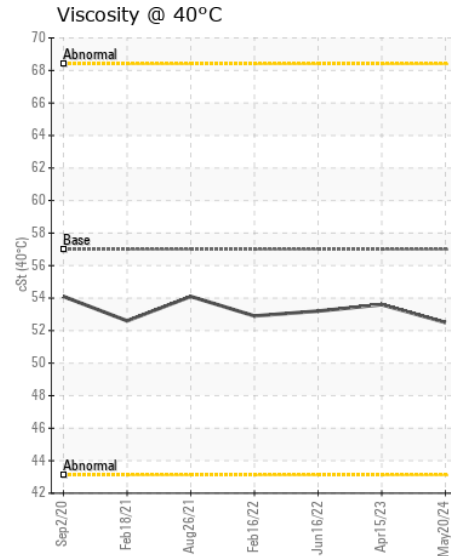
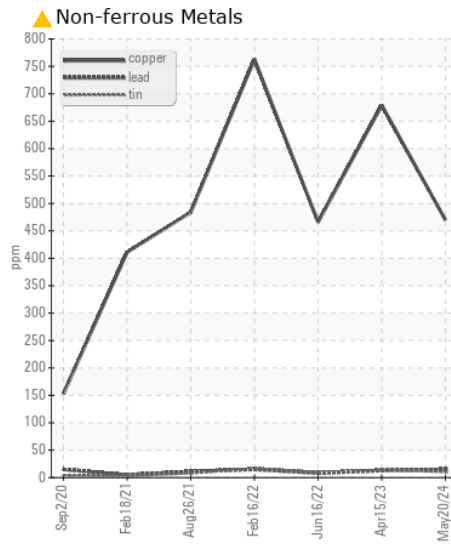
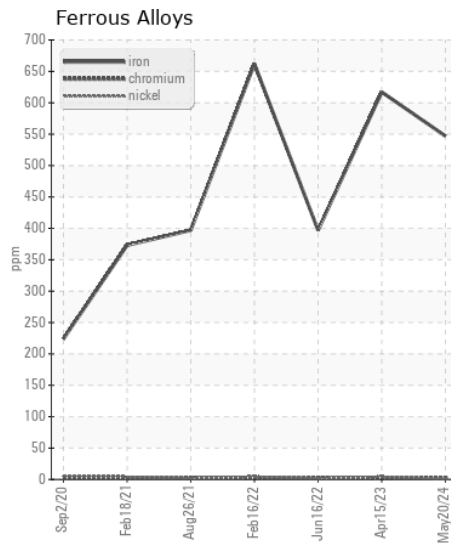
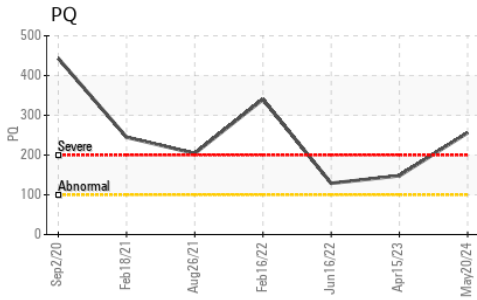
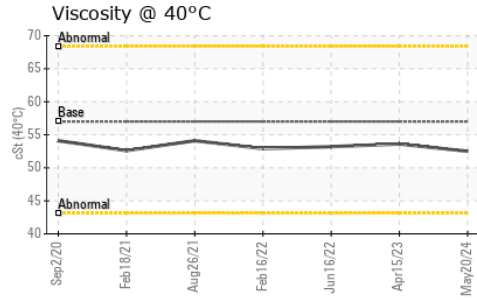
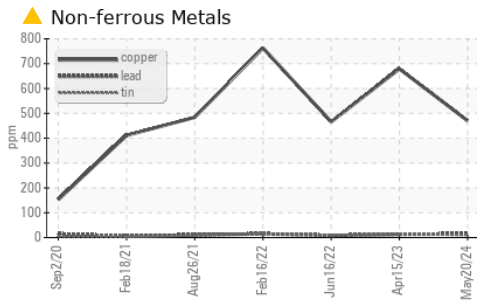
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>75	15	22	13
Potassium	ppm	ASTM D5185m	>20	0	2	0
Water		WC Method	>.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	LIGHT	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ MODER	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		2	2	2
Boron	ppm	ASTM D5185m	6	5	14	15
Barium	ppm	ASTM D5185m	0	2	2	<1
Molybdenum	ppm	ASTM D5185m	0	2	4	4
Manganese	ppm	ASTM D5185m		10	15	11
Magnesium	ppm	ASTM D5185m	145	93	104	100
Calcium	ppm	ASTM D5185m	3570	3268	3708	3431
Phosphorus	ppm	ASTM D5185m	1290	990	1152	1011
Zinc	ppm	ASTM D5185m	1640	1158	1381	1278
Sulfur	ppm	ASTM D5185m		3736	4025	3612
Visc @ 40°C	cSt	ASTM D445	57.0	52.5	53.6	53.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0209561 **Received** : 21 May 2024
Lab Number : 06186422 **Tested** : 22 May 2024
Unique Number : 11043174 **Diagnosed** : 23 May 2024 - Sean Felton
Test Package : CONST (Additional Tests: PQ)

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

Contact: RALEIGH SHOP
 sean.betts@jamesriverequipment.com; catherine.anastasio@wearcheck.com

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)

T: (919)614-2260
 F: (919)779-5432