



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 310E 1DW310EXKHF682023
Component
Front Differential
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		JR0205522	JR0142329	JR0150154
Sample Date		Client Info		13 Mar 2024	07 Mar 2023	03 Nov 2022
Machine Age	hrs	Client Info		7306	5093	4483
Oil Age	hrs	Client Info		2213	500	0
Filter Age	hrs	Client Info		0	500	0
Oil Changed		Client Info		Not Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

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

PQ		ASTM D8184		185	163	7
Iron	ppm	ASTM D5185m	>500	460	396	2
Chromium	ppm	ASTM D5185m	>10	2	2	0
Nickel	ppm	ASTM D5185m	>10	2	3	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	4	<1
Lead	ppm	ASTM D5185m	>25	0	<1	0
Copper	ppm	ASTM D5185m	>100	▲ 161	▲ 123	0
Tin	ppm	ASTM D5185m	>10	6	6	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	MODER	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

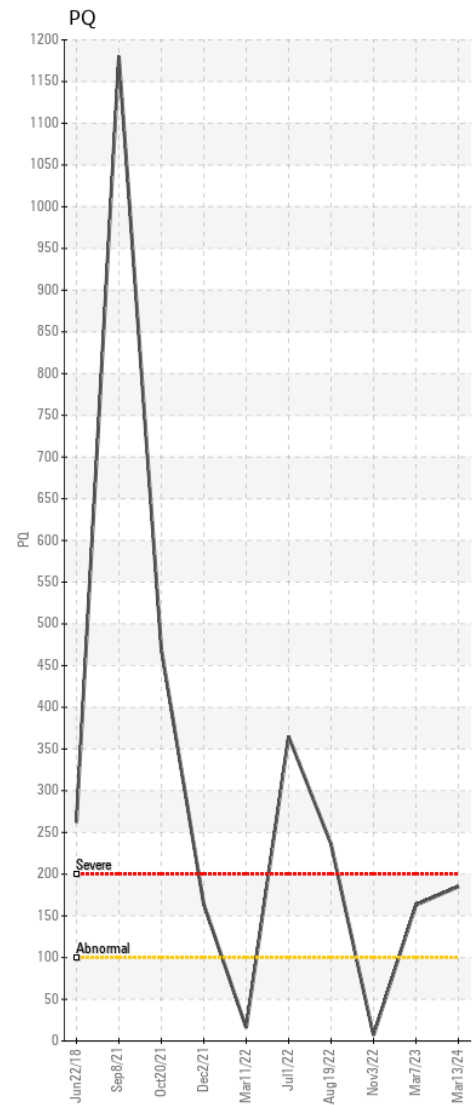
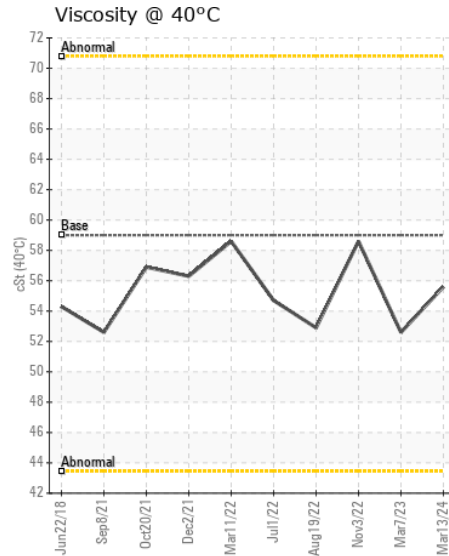
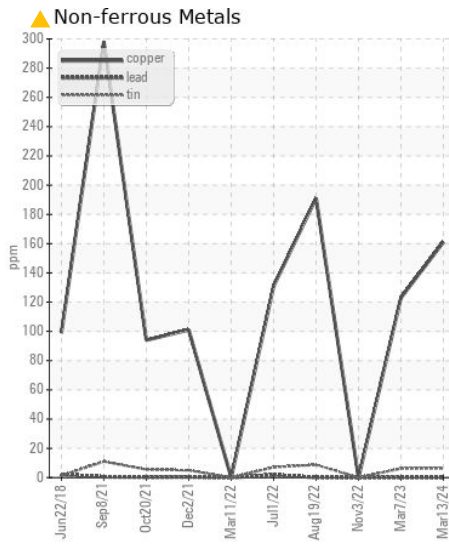
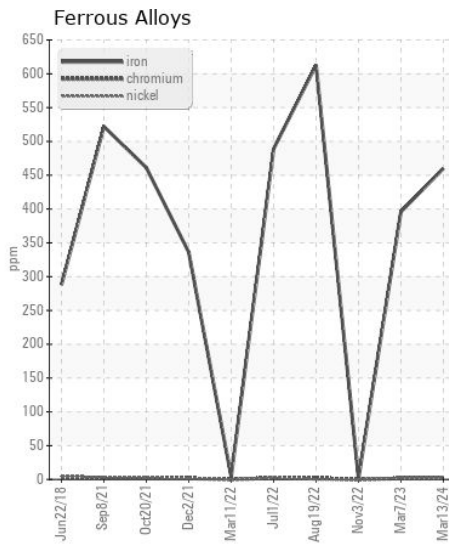
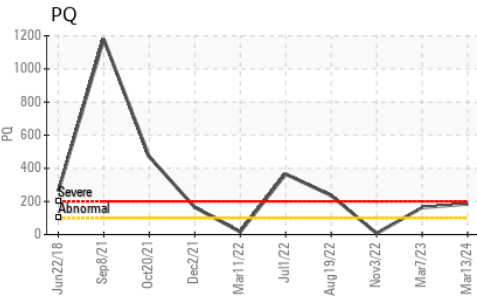
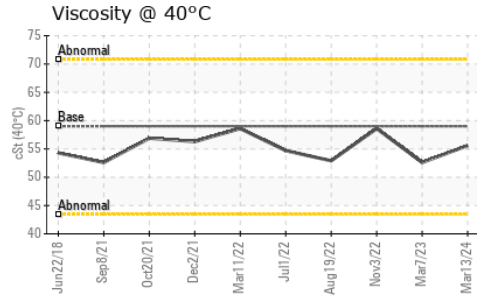
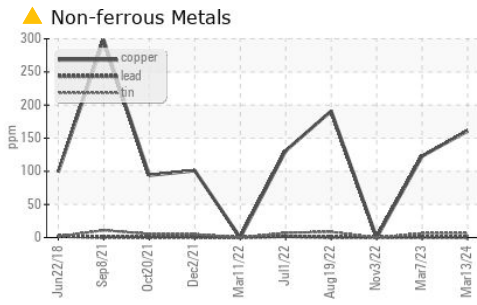
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>75	9	9	6
Potassium	ppm	ASTM D5185m	>20	2	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		1	<1	0
Boron	ppm	ASTM D5185m		11	13	2
Barium	ppm	ASTM D5185m		0	0	1
Molybdenum	ppm	ASTM D5185m		3	4	<1
Manganese	ppm	ASTM D5185m		9	9	<1
Magnesium	ppm	ASTM D5185m		84	103	93
Calcium	ppm	ASTM D5185m		3272	4316	3519
Phosphorus	ppm	ASTM D5185m		994	1241	980
Zinc	ppm	ASTM D5185m		1201	1511	1200
Sulfur	ppm	ASTM D5185m		4047	4682	3796
Visc @ 40°C	cSt	ASTM D445	59	55.6	52.6	58.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : JR0205522 Received : 19 Mar 2024
 Lab Number : 06122655 Tested : 20 Mar 2024
 Unique Number : 10936806 Diagnosed : 21 Mar 2024 - Don Baldrige
 Test Package : CONST (Additional Tests: PQ)

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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)