



WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 310SG T0310SG943050
Component
Hydraulic System
Fluid
JOHN DEERE HY-GARD HYD/TRANS (--- GAL)

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0213733	JR0174066	JRMC399978
Sample Date		Client Info		11 Jul 2024	04 Jun 2023	28 Jan 2021
Machine Age	hrs	Client Info		739	631	398
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Bearing and/or bushing wear is indicated.

PQ		ASTM D8184	>50	17	8	14
Iron	ppm	ASTM D5185m	>71	23	2	1
Chromium	ppm	ASTM D5185m	>11	6	<1	0
Nickel	ppm	ASTM D5185m	>6	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>11	▲ 15	<1	0
Lead	ppm	ASTM D5185m	>13	<1	0	0
Copper	ppm	ASTM D5185m	>21	▲ 71	<1	0
Tin	ppm	ASTM D5185m	>5	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

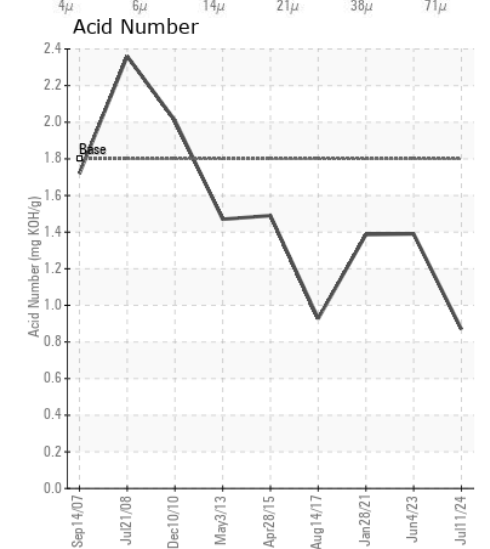
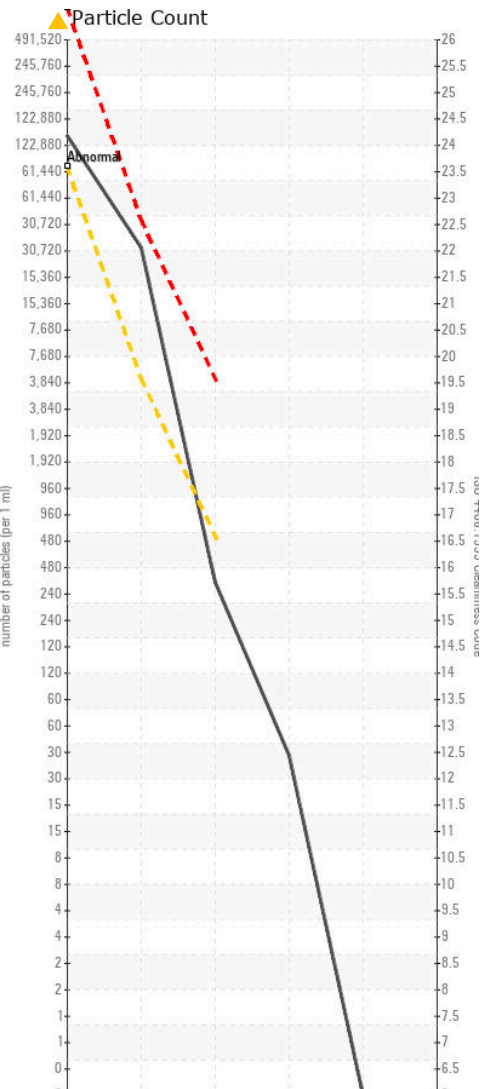
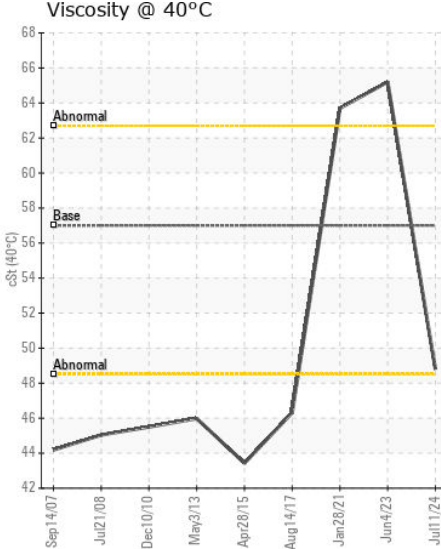
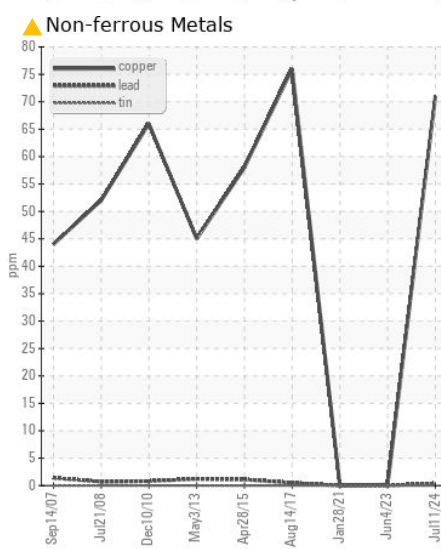
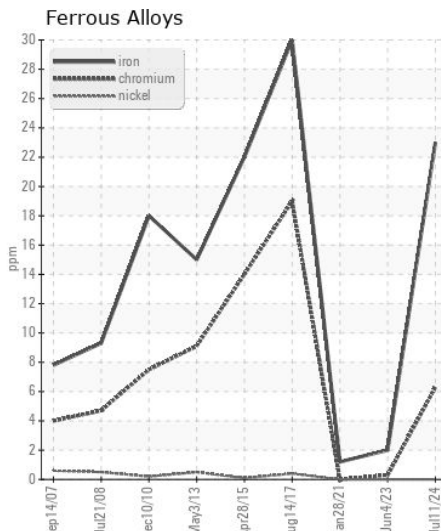
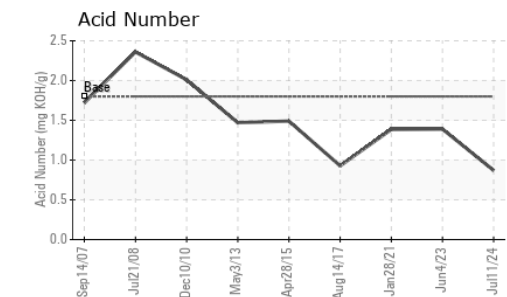
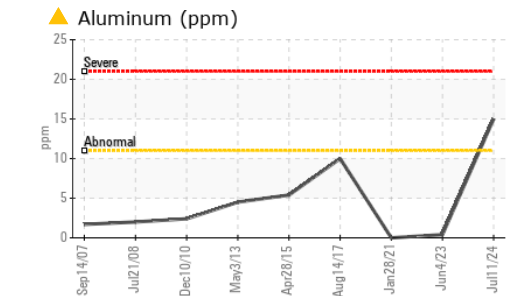
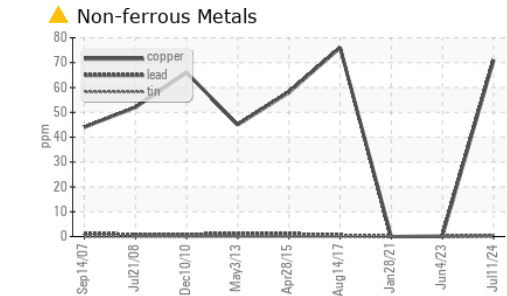
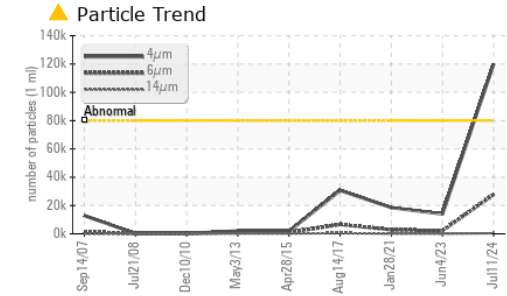
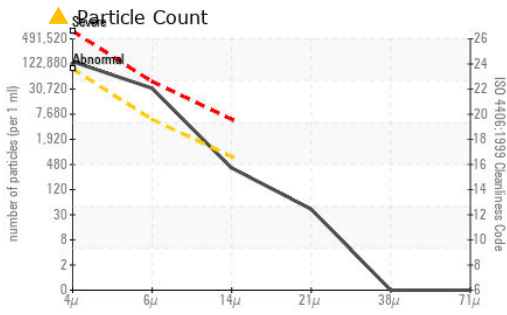
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>24	22	6	4
Potassium	ppm	ASTM D5185m	>20	2	<1	2
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	▲ 119937	14031	18545
Particles >6µm		ASTM D7647	>5000	▲ 27751	2177	2815
Particles >14µm		ASTM D7647	>640	348	76	92
Particles >21µm		ASTM D7647	>160	36	13	17
Particles >38µm		ASTM D7647	>40	0	1	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/19/16	▲ 24/22/16	21/18/13	21/19/14
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	>0.075	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>21	5	<1	2
Boron	ppm	ASTM D5185m	6	6	45	34
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	8	36	27
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	145	66	200	176
Calcium	ppm	ASTM D5185m	3570	1932	2994	3118
Phosphorus	ppm	ASTM D5185m	1290	753	950	934
Zinc	ppm	ASTM D5185m	1640	636	1184	1126
Sulfur	ppm	ASTM D5185m		2153	3825	2755
Acid Number (AN)	mg KOH/g	ASTM D8045	1.8	0.87	1.39	1.386
Visc @ 40°C	cSt	ASTM D445	57.0	48.8	65.2	63.7



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0213733 **Received** : 12 Jul 2024
Lab Number : 06234771 **Tested** : 15 Jul 2024
Unique Number : 11123605 **Diagnosed** : 15 Jul 2024 - Don Baldridge
Test Package : CONST (Additional Tests: PQ)

JRE - GREENSBORO
 411 SOUTH REGIONAL ROAD
 GREENSBORO, NC
 US 27409
 Contact: NICK GALLAHER
 NGALLAHER@JRENET.COM
 T: (336)668-2762
 F: (336)665-9556

Certificate L2367
 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)