



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Area
Store 9 - Marietta [149024]
Machine Id
JOHN DEERE 310SG T0310SG902056
Component
Hydraulic System
Fluid
JOHN DEERE HY-GARD HYD/TRANS (17 GAL)

RECOMMENDATION

We advise that you check for the source of water entry. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0046537	LEC0030184	LECP115254
Sample Date		Client Info		13 May 2024	17 Jun 2022	27 Mar 2012
Machine Age	hrs	Client Info		2712	2701	2438
Oil Age	hrs	Client Info		2712	2701	86
Filter Age	hrs	Client Info		11	1000	86
Oil Changed		Client Info		Not Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				ABNORMAL	SEVERE	NORMAL

WEAR

The copper level has decreased, but is still abnormal. All other component wear rates are normal.

PQ		ASTM D8184	>50	31	25	14.0
Iron	ppm	ASTM D5185m	>71	45	31	24
Chromium	ppm	ASTM D5185m	>11	5	6	4
Nickel	ppm	ASTM D5185m	>6	0	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		<1	<1	0
Aluminum	ppm	ASTM D5185m	>11	2	2	1
Lead	ppm	ASTM D5185m	>13	2	<1	2
Copper	ppm	ASTM D5185m	>21	▲ 28	▲ 41	14
Tin	ppm	ASTM D5185m	>5	<1	1	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

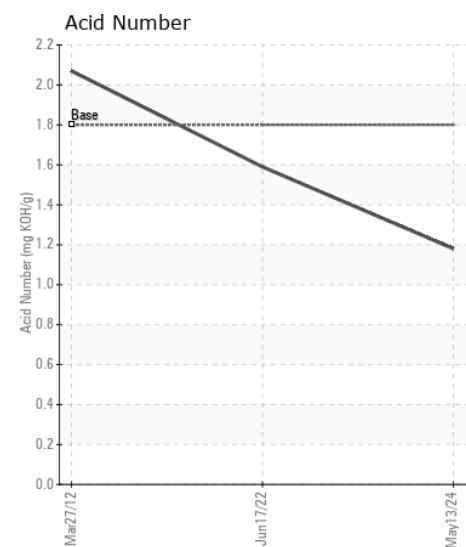
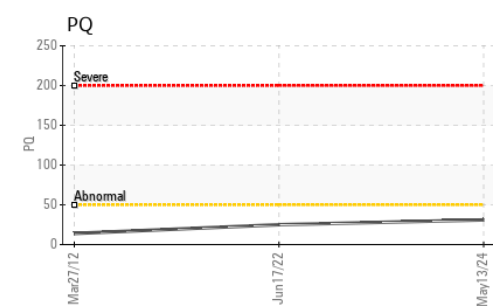
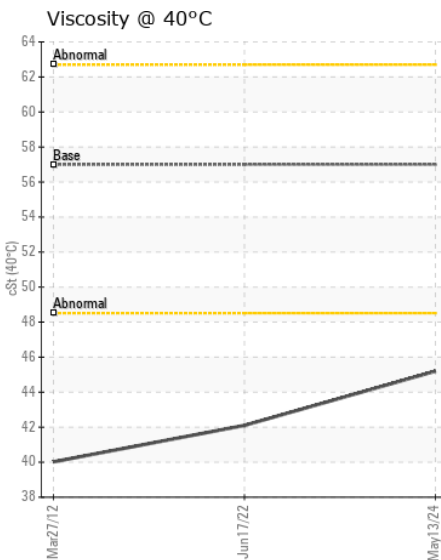
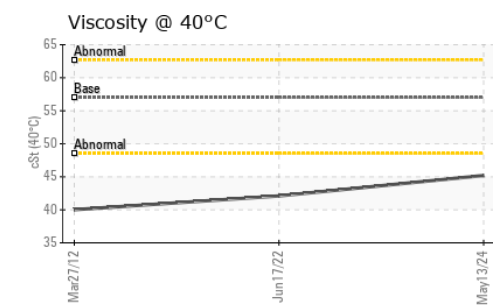
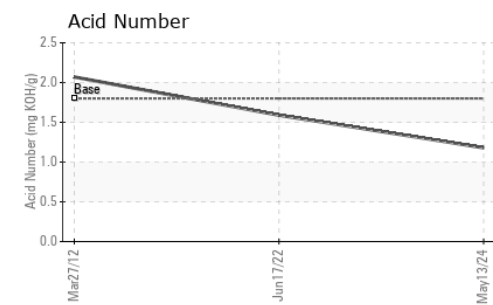
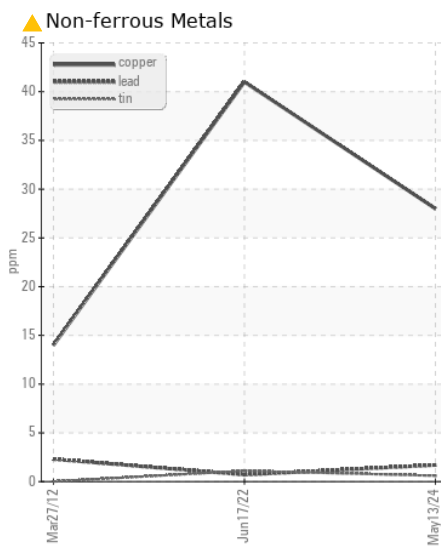
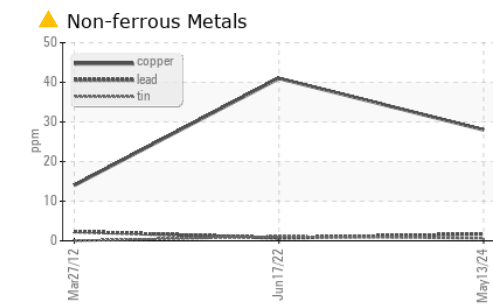
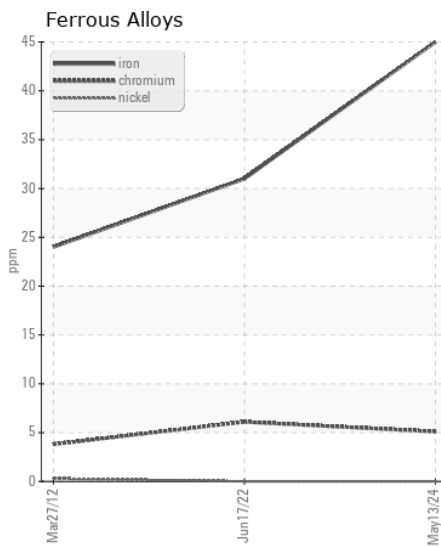
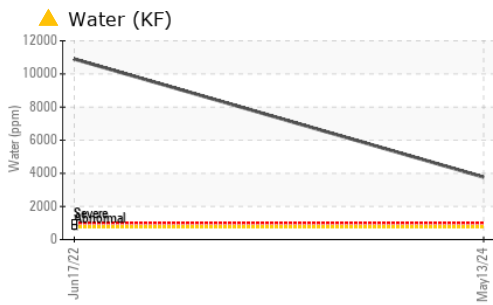
Moderate concentration of visible dirt/debris present in the oil. There is a moderate concentration of water present in the oil.

Silicon	ppm	ASTM D5185m	>24	8	7	5
Potassium	ppm	ASTM D5185m	>20	4	<1	0
Water	%	ASTM D6304	>0.075	▲ 0.377	▲ 1.09	---
ppm Water	ppm	ASTM D6304	>750	▲ 3770	▲ 10900	---
Particles >4µm		ASTM D7647	>80000	---	---	265
Particles >6µm		ASTM D7647	>5000	---	---	144
Particles >14µm		ASTM D7647	>640	---	---	24
Particles >21µm		ASTM D7647	>160	---	---	8
Particles >38µm		ASTM D7647	>40	---	---	1
Particles >71µm		ASTM D7647	>10	---	---	0
Oil Cleanliness		ISO 4406 (c)	>23/19/16	---	---	15/14/12
Silt	scalar	*Visual	NONE	LIGHT	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	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	▲ 0.2%	▲ 0.2%	NEG

FLUID CONDITION

The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m	>21	6	8	3
Boron	ppm	ASTM D5185m	6	10	17	6
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	8	11	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	145	78	83	69
Calcium	ppm	ASTM D5185m	3570	2777	3216	3690
Phosphorus	ppm	ASTM D5185m	1290	1015	1020	1324
Zinc	ppm	ASTM D5185m	1640	1241	1194	1513
Sulfur	ppm	ASTM D5185m		4168	3672	3842
Acid Number (AN)	mg KOH/g	ASTM D8045	1.8	1.18	1.59	2.07
Visc @ 40°C	cSt	ASTM D445	57.0	45.2	42.1	40.02



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0046537 **Received** : 23 May 2024
Lab Number : 06189107 **Tested** : 28 May 2024
Unique Number : 11045859 **Diagnosed** : 28 May 2024 - Don Baldrige
Test Package : CONST (Additional Tests: KF, PQ)

LESLIE EQUIPMENT COMPANY
 105 TENNIS CENTER DR.
 MARIETTA, OH
 US 45750-9765
 Contact: LEANNE KENDALL
 KendalLeanne@lec1.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)

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