



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 310E 1DW310EXPMF710038

Component
Hydraulic System

Fluid
JOHN DEERE HYDRAU (--- GAL)

RECOMMENDATION

We recommend you service the filters on this component. 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		JR0198160	JR0171030	JR05677777
Sample Date		Client Info		08 Feb 2024	19 Jul 2023	26 Oct 2022
Machine Age	hrs	Client Info		3778	3086	2442
Oil Age	hrs	Client Info		2967	2919	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184	>50	12	11	7
Iron	ppm	ASTM D5185m	>71	7	7	4
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>6	<1	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>11	4	2	2
Lead	ppm	ASTM D5185m	>13	0	<1	0
Copper	ppm	ASTM D5185m	>21	1	2	1
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

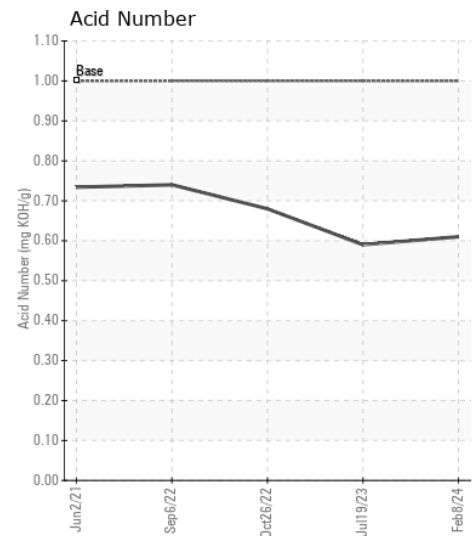
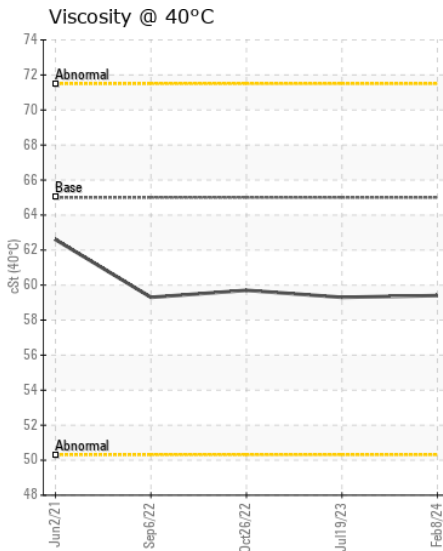
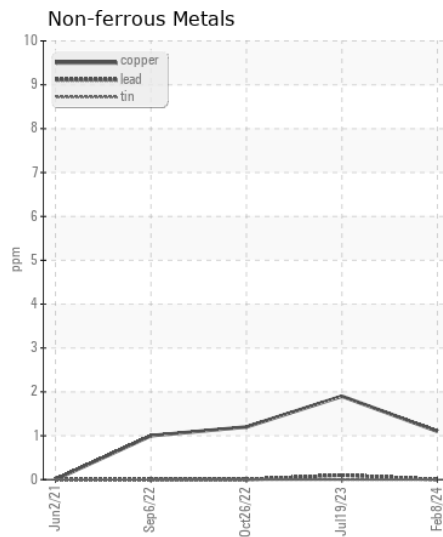
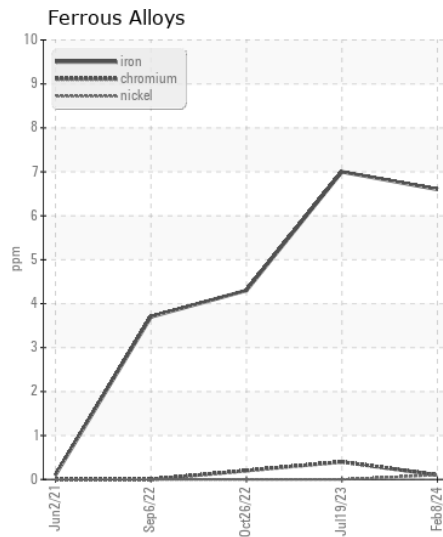
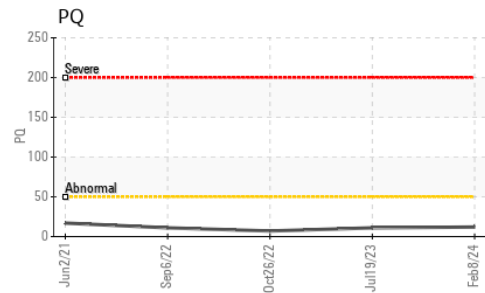
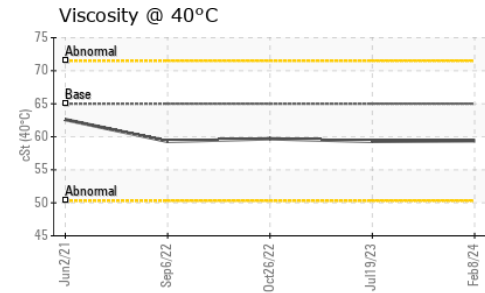
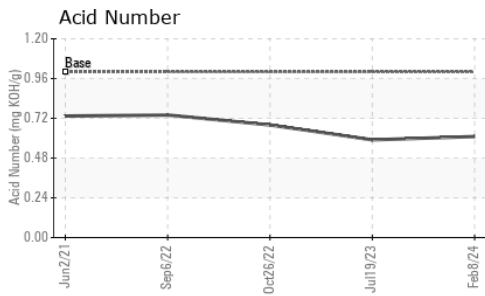
Moderate concentration of visible dirt/debris present in the oil.

Silicon	ppm	ASTM D5185m	>24	6	4	3
Potassium	ppm	ASTM D5185m	>20	<1	2	0
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	---	13508	9114
Particles >6µm		ASTM D7647	>5000	---	2409	611
Particles >14µm		ASTM D7647	>640	---	201	55
Particles >21µm		ASTM D7647	>160	---	49	15
Particles >38µm		ASTM D7647	>40	---	1	1
Particles >71µm		ASTM D7647	>10	---	0	0
Oil Cleanliness		ISO 4406 (c)	>23/19/16	---	21/18/15	20/16/13
Silt	scalar	*Visual	NONE	NONE	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	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oils additive package is suitable for further service.

Sodium	ppm	ASTM D5185m	>21	1	0	0
Boron	ppm	ASTM D5185m		<1	0	0
Barium	ppm	ASTM D5185m		0	2	<1
Molybdenum	ppm	ASTM D5185m		0	2	2
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		6	6	6
Calcium	ppm	ASTM D5185m	87	101	109	106
Phosphorus	ppm	ASTM D5185m	727	649	655	684
Zinc	ppm	ASTM D5185m	900	850	848	912
Sulfur	ppm	ASTM D5185m	1500	1646	1826	2078
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.61	0.59	0.68
Visc @ 40°C	cSt	ASTM D445	65	59.4	59.3	59.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0198160 **Received** : 14 Feb 2024
Lab Number : 06088675 **Tested** : 15 Feb 2024
Unique Number : 10876120 **Diagnosed** : 15 Feb 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: PQ)

JRE - CHARLOTTE
 9550 STATESVILLE ROAD
 CHARLOTTE, NC
 US 28269

Contact: CHARLOTTE SHOP
 myoung@jamesriverequipment.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: (704)597-0211

F: (704)596-6198