



WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 310E 1DW310EXJPF716428

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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0211179	JR0192311	JR0168703
Sample Date		Client Info		10 Apr 2024	08 Nov 2023	03 Aug 2023
Machine Age	hrs	Client Info		1950	1475	962
Oil Age	hrs	Client Info		1950	1475	962
Filter Age	hrs	Client Info		1950	0	962
Oil Changed		Client Info		Not Chngd	N/A	Not Chngd
Filter Changed		Client Info		Not Chngd	N/A	Not Chngd
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	10	9	16
Iron	ppm	ASTM D5185m	>71	2	3	3
Chromium	ppm	ASTM D5185m	>11	1	<1	<1
Nickel	ppm	ASTM D5185m	>6	0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>11	<1	3	<1
Lead	ppm	ASTM D5185m	>13	0	0	<1
Copper	ppm	ASTM D5185m	>21	2	1	<1
Tin	ppm	ASTM D5185m	>5	0	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

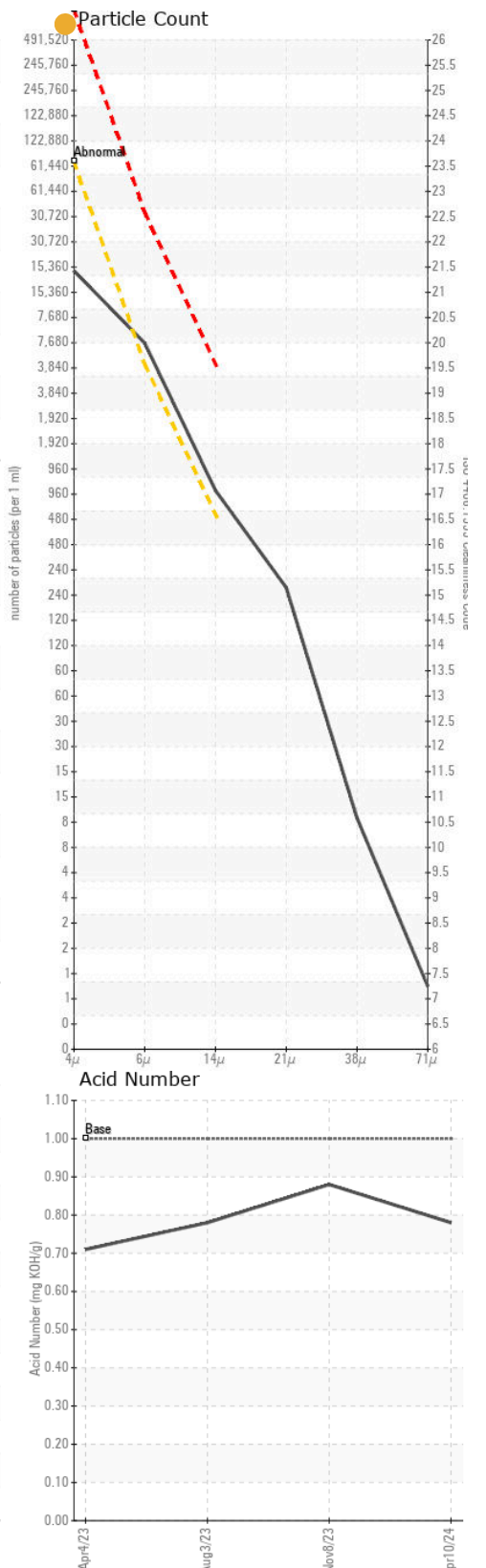
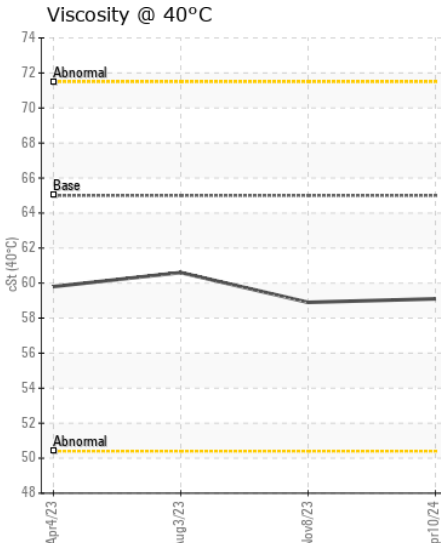
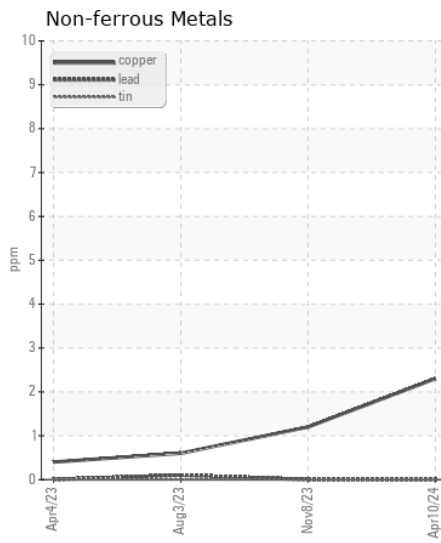
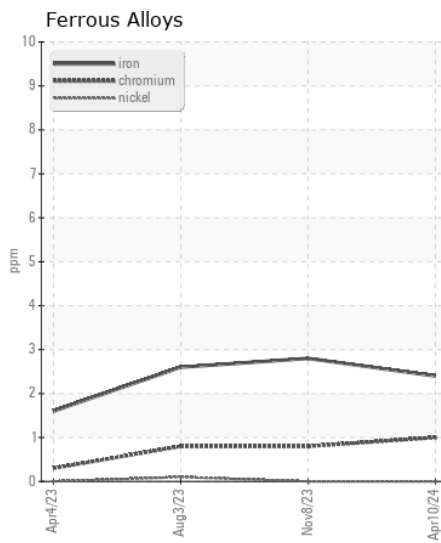
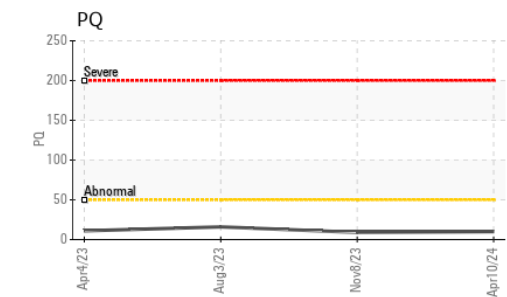
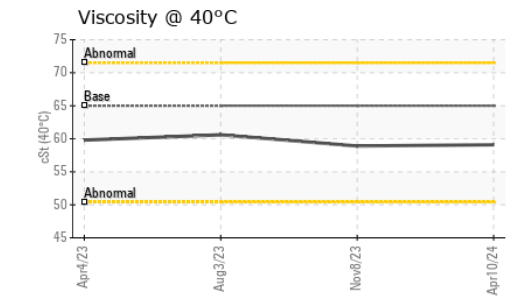
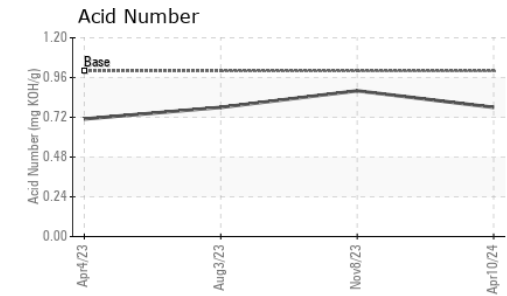
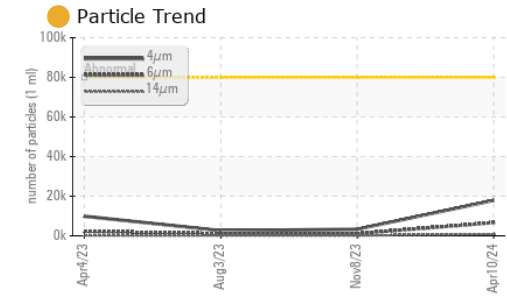
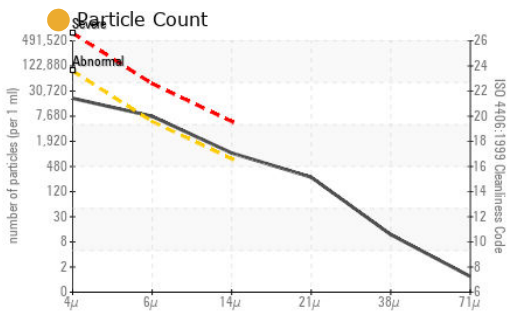
There is a light amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>24	2	1	1
Potassium	ppm	ASTM D5185m	>20	1	3	2
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	17890	3326	2616
Particles >6µm		ASTM D7647	>5000	6656	1073	1009
Particles >14µm		ASTM D7647	>640	885	102	118
Particles >21µm		ASTM D7647	>160	234	22	38
Particles >38µm		ASTM D7647	>40	10	1	3
Particles >71µm		ASTM D7647	>10	1	0	2
Oil Cleanliness		ISO 4406 (c)	>23/19/16	21/20/17	19/17/14	19/17/14
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	2	0	<1
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	<1
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m		1	2	3
Calcium	ppm	ASTM D5185m	87	114	106	102
Phosphorus	ppm	ASTM D5185m	727	639	657	664
Zinc	ppm	ASTM D5185m	900	832	915	908
Sulfur	ppm	ASTM D5185m	1500	1817	1914	1996
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.78	0.88	0.78
Visc @ 40°C	cSt	ASTM D445	65	59.1	58.9	60.6



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0211179 **Received** : 11 Apr 2024
Lab Number : 06145766 **Tested** : 12 Apr 2024
Unique Number : 10975844 **Diagnosed** : 12 Apr 2024 - Wes Davis
Test Package : CONST (Additional Tests: PQ)

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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)