



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 310E 1DW310EXAMF708863
Component
Hydraulic System
Fluid
JOHN DEERE HYDRAU (30 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0218497	JR0211096	JR0199052
Sample Date		Client Info		09 Jul 2024	25 Mar 2024	04 Jan 2024
Machine Age	hrs	Client Info		7628	7036	6583
Oil Age	hrs	Client Info		5021	4882	4922
Filter Age	hrs	Client Info		5021	0	0
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Not Chngd	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	16	13	16
Iron	ppm	ASTM D5185m	>71	3	4	5
Chromium	ppm	ASTM D5185m	>11	5	4	4
Nickel	ppm	ASTM D5185m	>6	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>11	0	0	2
Lead	ppm	ASTM D5185m	>13	0	0	<1
Copper	ppm	ASTM D5185m	>21	0	1	2
Tin	ppm	ASTM D5185m	>5	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

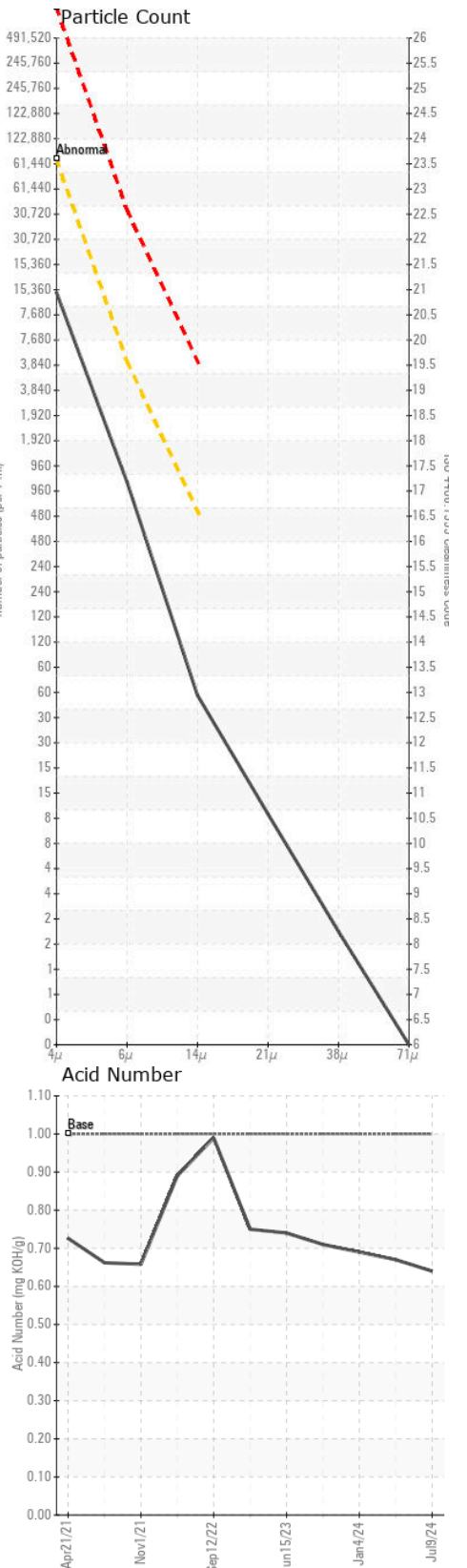
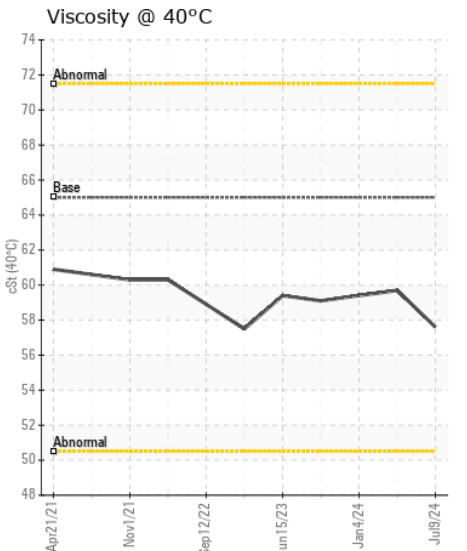
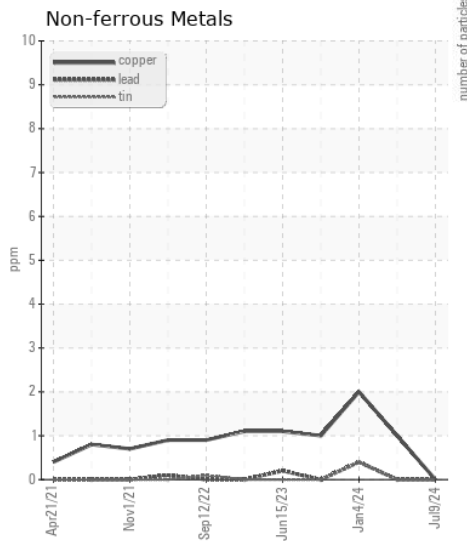
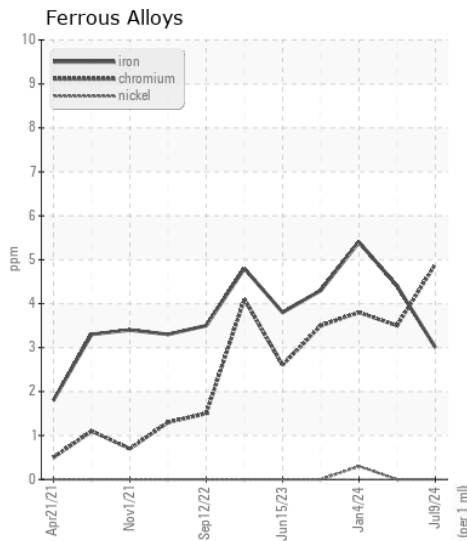
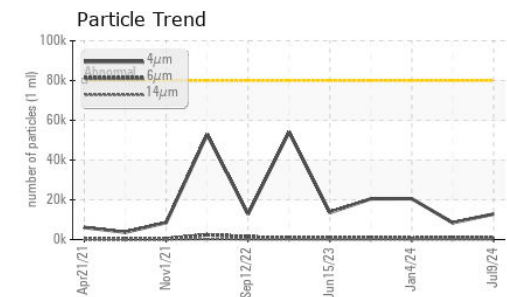
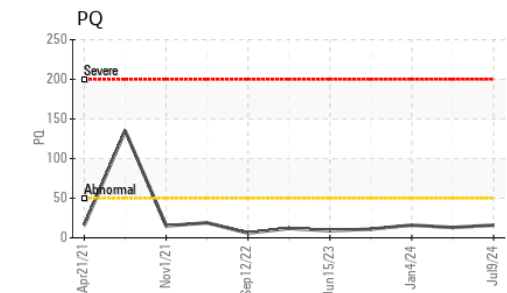
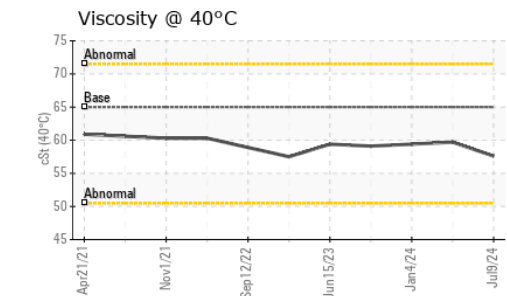
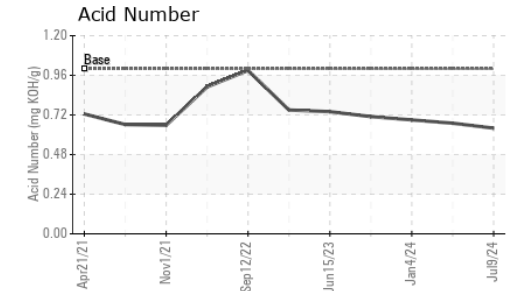
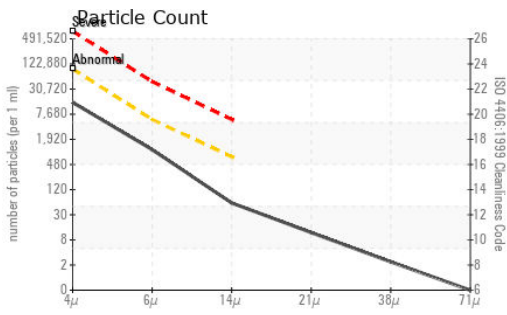
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185m	>24	2	1	2
Potassium	ppm	ASTM D5185m	>20	0	0	3
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	12829	8458	20560
Particles >6µm		ASTM D7647	>5000	954	996	581
Particles >14µm		ASTM D7647	>640	51	83	49
Particles >21µm		ASTM D7647	>160	10	26	14
Particles >38µm		ASTM D7647	>40	2	2	1
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/19/16	21/17/13	20/17/14	22/16/13
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	3	3	0
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	8
Molybdenum	ppm	ASTM D5185m		0	0	1
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m		16	5	15
Calcium	ppm	ASTM D5185m	87	518	469	528
Phosphorus	ppm	ASTM D5185m	727	767	686	690
Zinc	ppm	ASTM D5185m	900	973	880	943
Sulfur	ppm	ASTM D5185m	1500	2411	2118	2054
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.64	0.67	0.69
Visc @ 40°C	cSt	ASTM D445	65	57.6	59.7	59.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : JR0218497

Lab Number : 06233182

Unique Number : 11116675

Test Package : CONST (Additional Tests: PQ)

Received : 11 Jul 2024

Tested : 12 Jul 2024

Diagnosed : 12 Jul 2024 - Wes Davis

JRE - MANASSAS PARK

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US 20111

Contact: DON VEST

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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)