



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 310E 1DW310EXVMF710644
Component
Hydraulic System
Fluid
JOHN DEERE HYDRAU (50 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0214974	JR0205361	JR0206358
Sample Date		Client Info		07 May 2024	26 Mar 2024	14 Mar 2024
Machine Age	hrs	Client Info		3470	3322	3302
Oil Age	hrs	Client Info		716	588	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	14	11	16
Iron	ppm	ASTM D5185m	>71	0	11	8
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>6	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>11	2	4	4
Lead	ppm	ASTM D5185m	>13	<1	0	0
Copper	ppm	ASTM D5185m	>21	<1	3	2
Tin	ppm	ASTM D5185m	>5	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

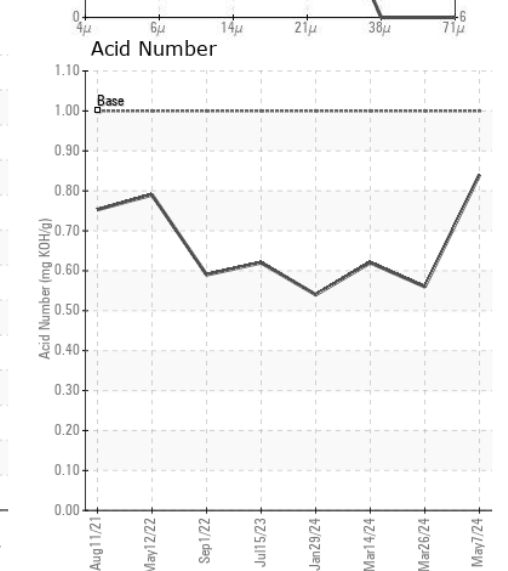
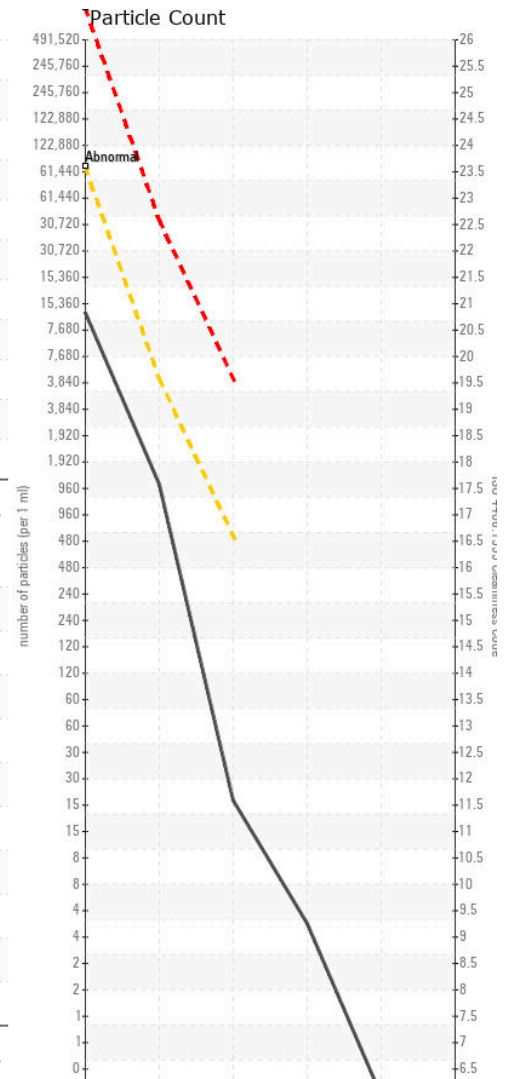
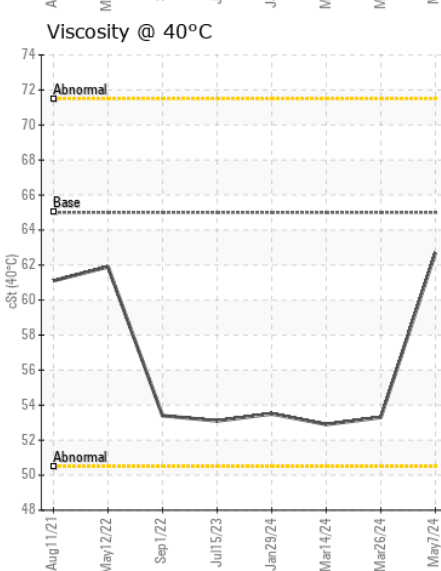
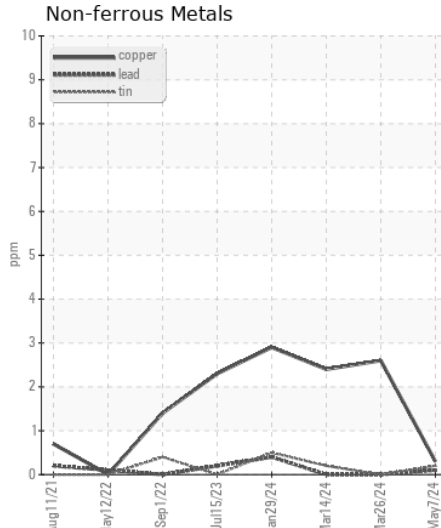
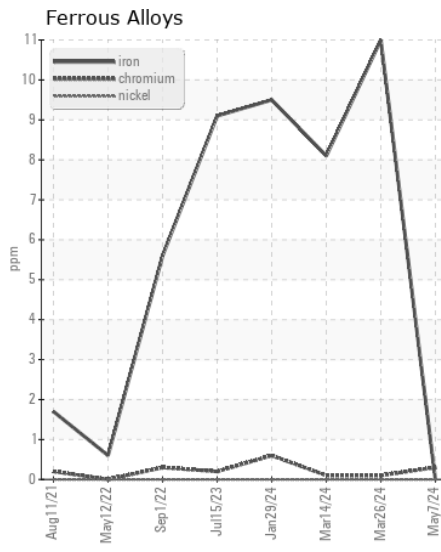
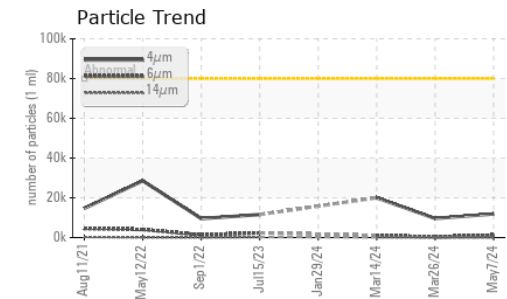
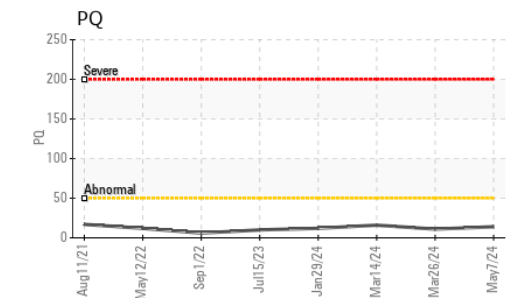
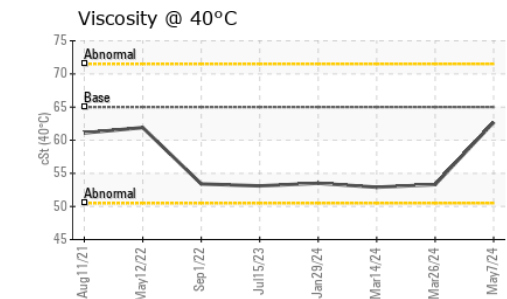
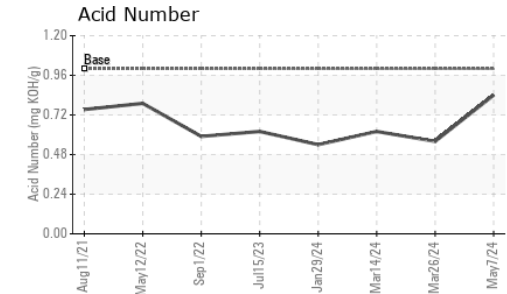
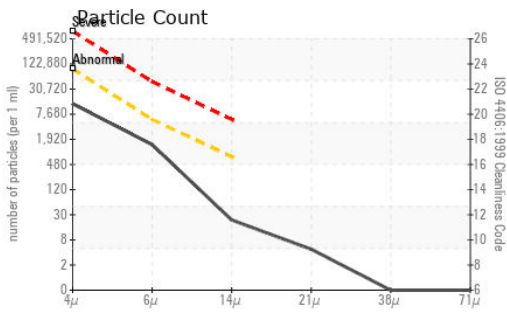
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185m	>24	<1	4	4
Potassium	ppm	ASTM D5185m	>20	1	0	0
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	11880	9603	20051
Particles >6µm		ASTM D7647	>5000	1255	289	987
Particles >14µm		ASTM D7647	>640	20	15	40
Particles >21µm		ASTM D7647	>160	4	4	12
Particles >38µm		ASTM D7647	>40	0	1	1
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/19/16	21/17/11	20/15/11	22/17/12
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	0	2	<1
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		<1	0	0
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		5	0	0
Calcium	ppm	ASTM D5185m	87	137	70	63
Phosphorus	ppm	ASTM D5185m	727	698	496	504
Zinc	ppm	ASTM D5185m	900	860	634	666
Sulfur	ppm	ASTM D5185m	1500	1737	4079	4202
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.84	0.56	0.62
Visc @ 40°C	cSt	ASTM D445	65	62.7	53.3	52.9



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0214974 **Received** : 10 May 2024
Lab Number : 06175383 **Tested** : 13 May 2024
Unique Number : 11021436 **Diagnosed** : 13 May 2024 - Wes Davis
Test Package : CONST (Additional Tests: PQ)

CARLTON'S BACKHOE
 9550 STATESVILLE ROAD
 CHARLOTTE, NC
 US 28269
 Contact: LEO

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)547-0211

F: