



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 310E 1DW310EXKHF682023

Component
Hydraulic System

Fluid
JOHN DEERE HYDRAU (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0205524	JR0161231	JR0142336
Sample Date		Client Info		13 Mar 2024	03 May 2023	07 Mar 2023
Machine Age	hrs	Client Info		7306	5460	5093
Oil Age	hrs	Client Info		1846	500	500
Filter Age	hrs	Client Info		0	500	500
Oil Changed		Client Info		Not Chngd	Changed	Changed
Filter Changed		Client Info		Not Chngd	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	15	15	12
Iron	ppm	ASTM D5185m	>71	0	11	6
Chromium	ppm	ASTM D5185m	>11	0	1	<1
Nickel	ppm	ASTM D5185m	>6	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>11	<1	2	1
Lead	ppm	ASTM D5185m	>13	0	0	0
Copper	ppm	ASTM D5185m	>21	0	<1	1
Tin	ppm	ASTM D5185m	>5	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

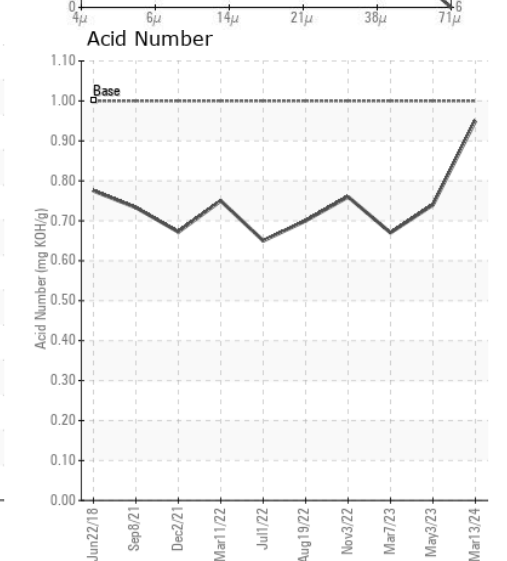
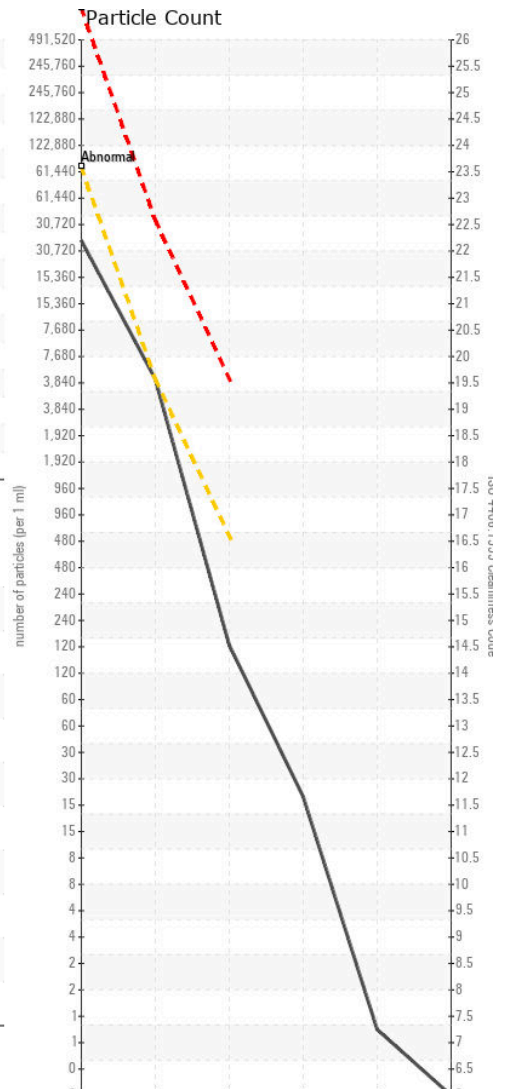
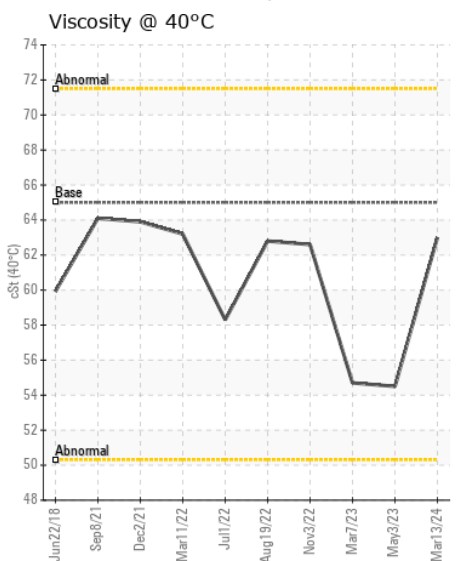
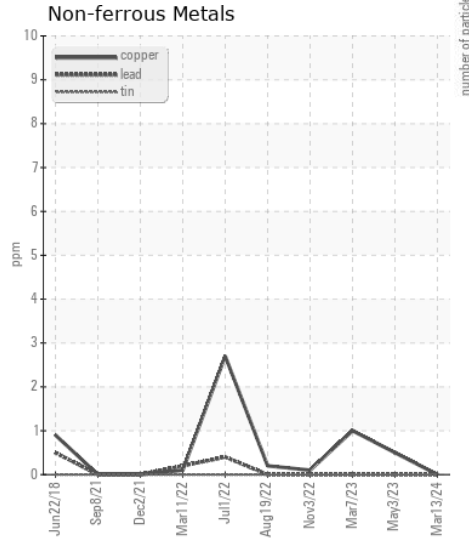
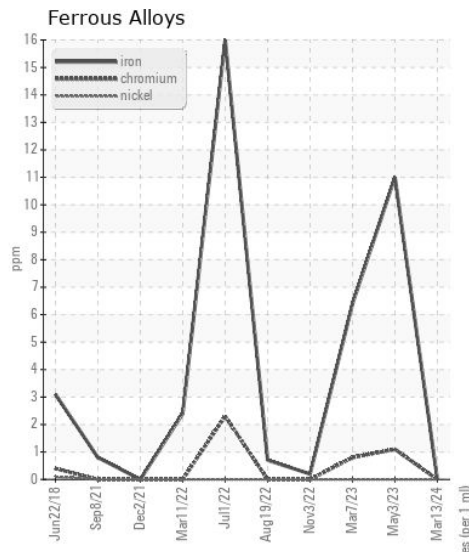
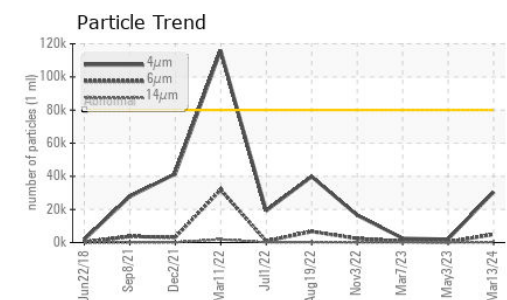
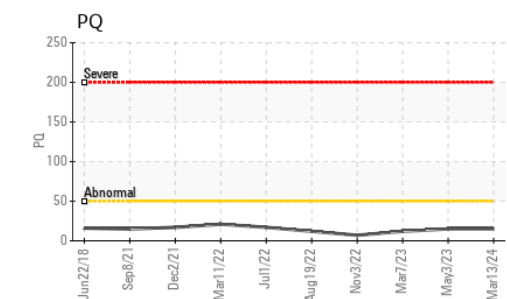
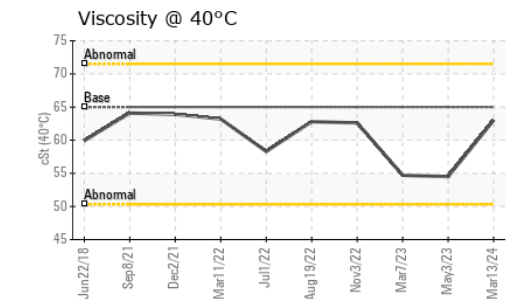
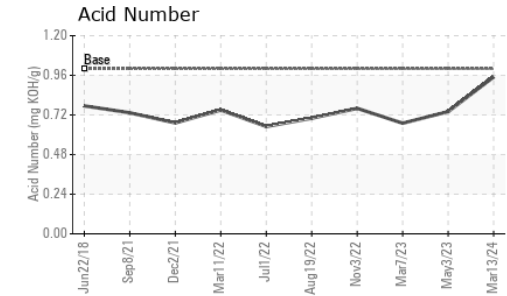
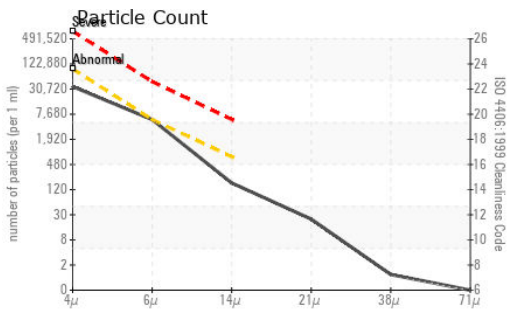
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185m	>24	<1	2	2
Potassium	ppm	ASTM D5185m	>20	0	<1	0
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	30541	2006	2549
Particles >6µm		ASTM D7647	>5000	4970	421	768
Particles >14µm		ASTM D7647	>640	153	44	76
Particles >21µm		ASTM D7647	>160	21	10	16
Particles >38µm		ASTM D7647	>40	1	1	2
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/19/16	22/19/14	18/16/13	19/17/13
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	VLITE
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	1	2
Boron	ppm	ASTM D5185m		2	1	2
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		3	3	3
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		<1	34	31
Calcium	ppm	ASTM D5185m	87	100	489	503
Phosphorus	ppm	ASTM D5185m	727	683	637	544
Zinc	ppm	ASTM D5185m	900	856	809	711
Sulfur	ppm	ASTM D5185m	1500	1803	1660	1487
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.95	0.74	0.67
Visc @ 40°C	cSt	ASTM D445	65	63.0	54.5	54.7



Certificate L2367

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

Sample No. : JR0205524

Lab Number : 06122257

Unique Number : 10936408

Test Package : CONST (Additional Tests: PQ)

Received : 19 Mar 2024

Tested : 20 Mar 2024

Diagnosed : 20 Mar 2024 - Wes Davis

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)

JRE - CHARLOTTE

9550 STATESVILLE ROAD

CHARLOTTE, NC

US 28269

Contact: CHARLOTTE SHOP

myoung@jamesriverequipment.com

T: (704)597-0211

F: (704)596-6198