



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 310SK 1T0310SKJFE276862

Component
Hydraulic System

Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (10 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0215438	JR0188303	JR0119068
Sample Date		Client Info		10 May 2024	13 Sep 2023	08 Apr 2022
Machine Age	hrs	Client Info		2450	1862	1862
Oil Age	hrs	Client Info		2450	1862	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	15	13	22
Iron	ppm	ASTM D5185m	>71	0	12	17
Chromium	ppm	ASTM D5185m	>11	0	<1	<1
Nickel	ppm	ASTM D5185m	>6	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>11	<1	2	3
Lead	ppm	ASTM D5185m	>13	0	<1	<1
Copper	ppm	ASTM D5185m	>21	3	4	6
Tin	ppm	ASTM D5185m	>5	<1	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

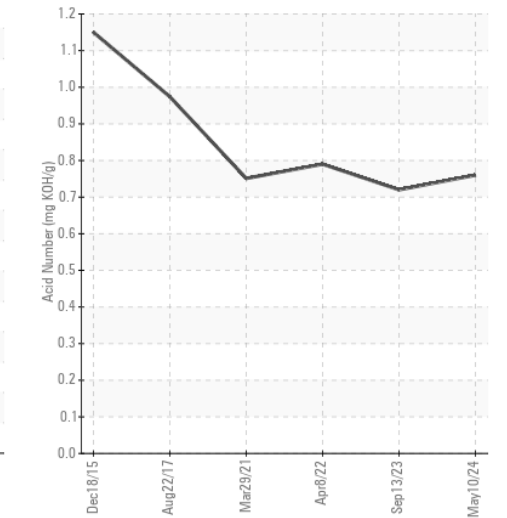
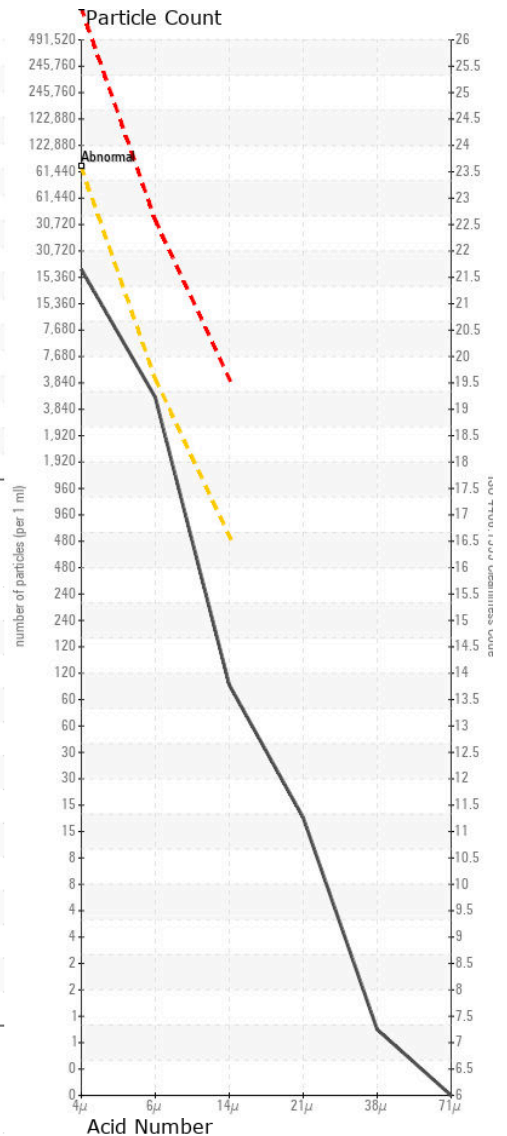
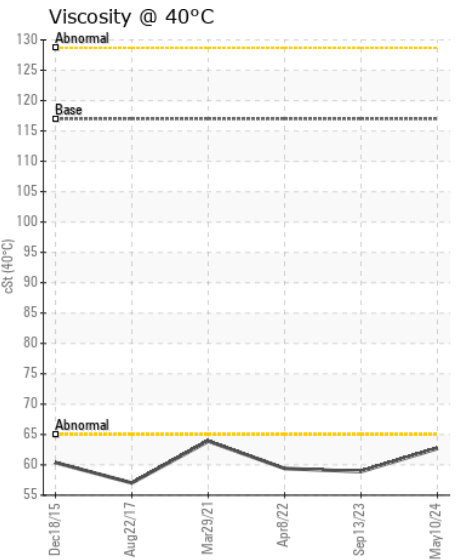
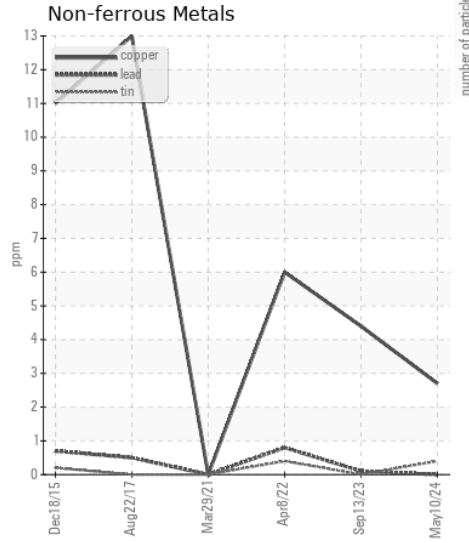
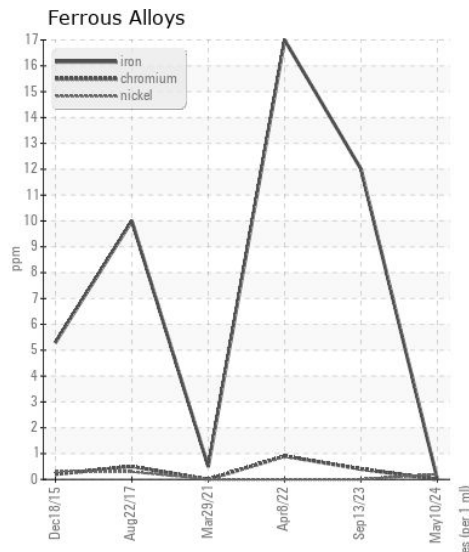
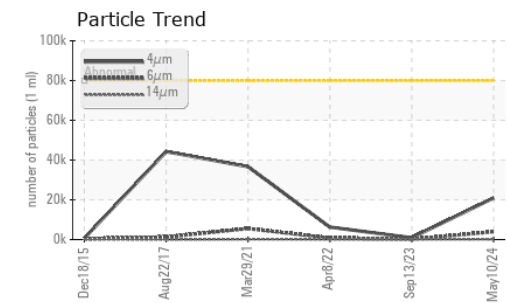
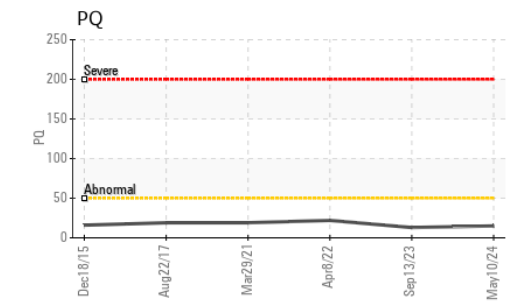
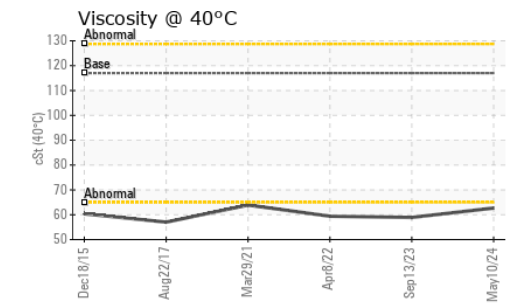
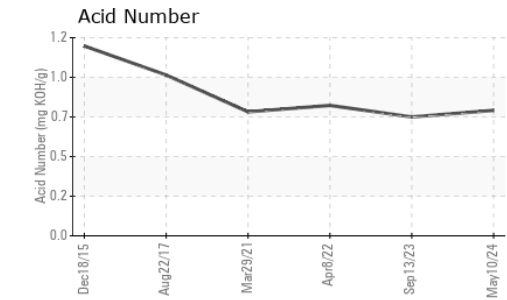
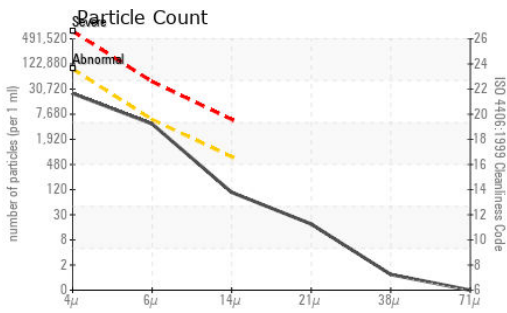
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>24	<1	5	6
Potassium	ppm	ASTM D5185m	>20	0	2	5
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	20940	894	6275
Particles >6µm		ASTM D7647	>5000	3915	214	786
Particles >14µm		ASTM D7647	>640	91	20	58
Particles >21µm		ASTM D7647	>160	16	4	10
Particles >38µm		ASTM D7647	>40	1	0	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/19/16	22/19/14	17/15/11	20/17/13
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	1	2	2
Boron	ppm	ASTM D5185m		0	33	62
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		<1	30	52
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		2	95	164
Calcium	ppm	ASTM D5185m		91	252	368
Phosphorus	ppm	ASTM D5185m		681	666	672
Zinc	ppm	ASTM D5185m		880	893	875
Sulfur	ppm	ASTM D5185m		1892	2181	1721
Acid Number (AN)	mg KOH/g	ASTM D8045		0.76	0.72	0.79
Visc @ 40°C	cSt	ASTM D445	117	62.7	58.9	59.4



Certificate L2367

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

Sample No. : JR0215438

Lab Number : 06177032

Unique Number : 11023085

Test Package : CONST (Additional Tests: PQ)

Received : 13 May 2024

Tested : 14 May 2024

Diagnosed : 14 May 2024 - Don Baldrige

JRE - CHARLOTTE

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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)