



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

[MILLS BROS LOGGING]

Machine Id
JOHN DEERE 437E 1T0437EDLMF402056

Component
Hydraulic System

Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0209677	JR0164577	---
Sample Date		Client Info		17 Apr 2024	08 Nov 2023	---
Machine Age	hrs	Client Info		5210	4314	---
Oil Age	hrs	Client Info		0	4314	---
Filter Age	hrs	Client Info		0	4314	---
Oil Changed		Client Info		N/A	N/A	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	8	8	---
Chromium	ppm	ASTM D5185m	>10	15	12	---
Nickel	ppm	ASTM D5185m	>10	0	<1	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>10	<1	3	---
Lead	ppm	ASTM D5185m	>10	0	<1	---
Copper	ppm	ASTM D5185m	>75	10	12	---
Tin	ppm	ASTM D5185m	>10	<1	0	---
Vanadium	ppm	ASTM D5185m		0	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

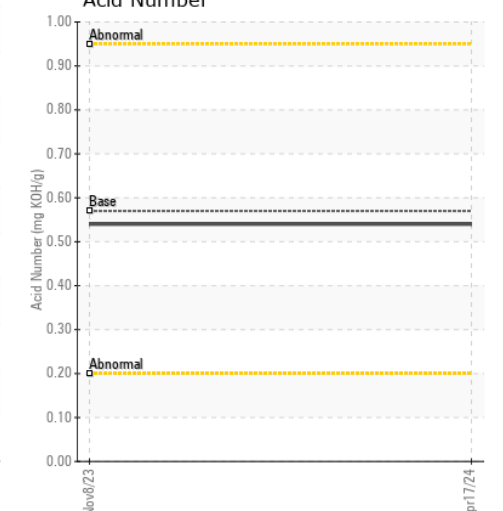
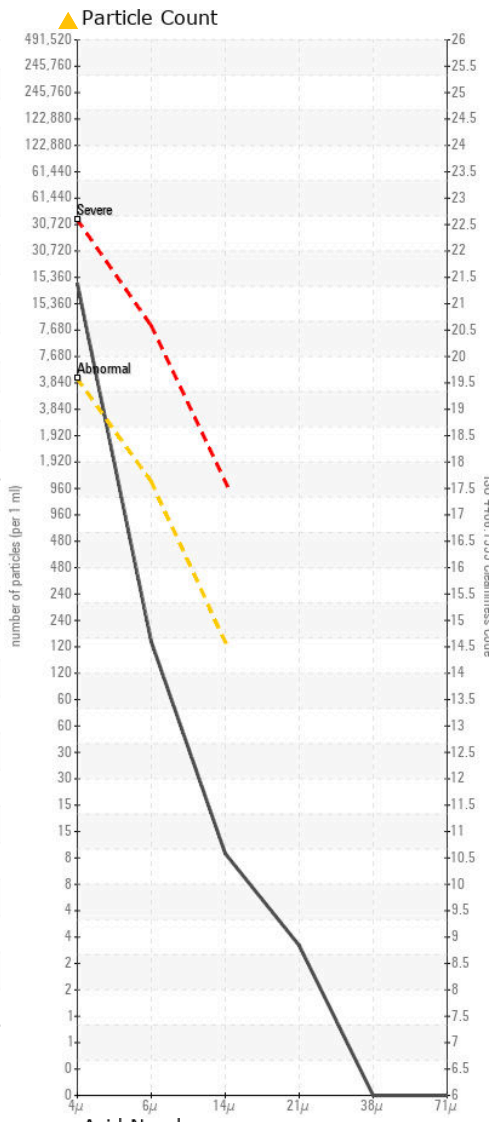
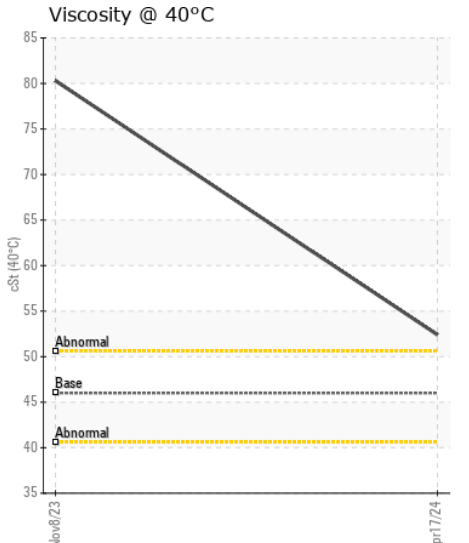
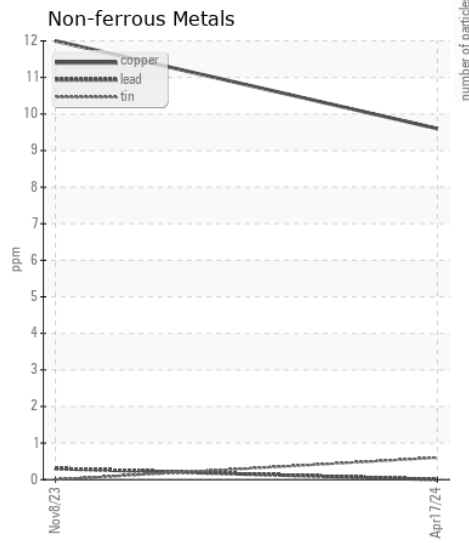
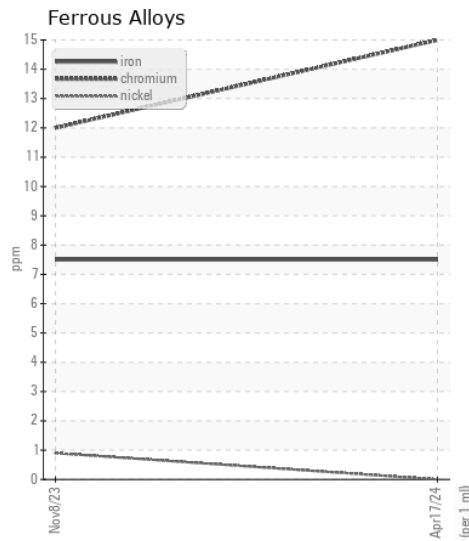
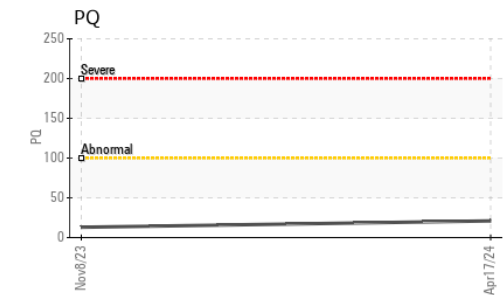
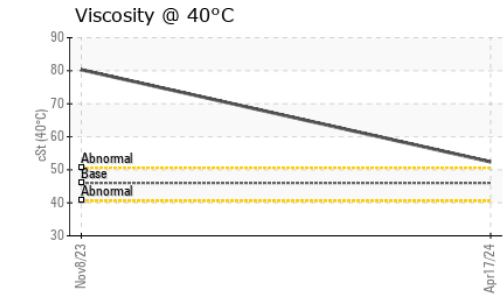
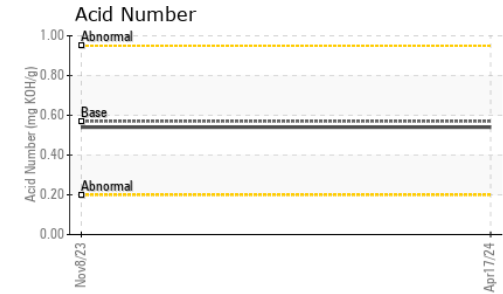
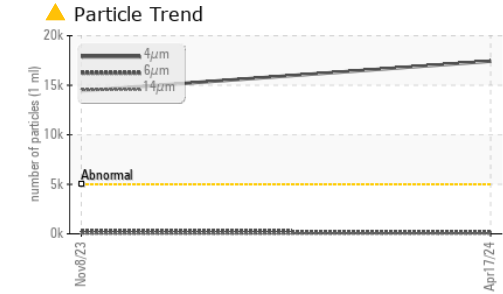
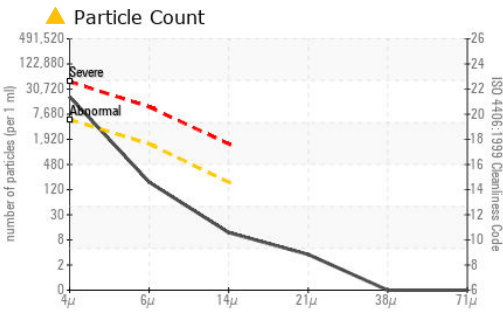
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	12	4	---
Potassium	ppm	ASTM D5185m	>20	4	5	---
Water		WC Method	>0.1	NEG	NEG	---
Particles >4µm		ASTM D7647	>5000	▲ 17430	▲ 14437	---
Particles >6µm		ASTM D7647	>1300	160	315	---
Particles >14µm		ASTM D7647	>160	10	18	---
Particles >21µm		ASTM D7647	>40	3	6	---
Particles >38µm		ASTM D7647	>10	0	1	---
Particles >71µm		ASTM D7647	>3	0	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 21/14/10	▲ 21/15/11	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	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		5	0	---
Boron	ppm	ASTM D5185m	5	9	8	---
Barium	ppm	ASTM D5185m	5	0	0	---
Molybdenum	ppm	ASTM D5185m	5	5	5	---
Manganese	ppm	ASTM D5185m		<1	0	---
Magnesium	ppm	ASTM D5185m	25	25	26	---
Calcium	ppm	ASTM D5185m	200	354	430	---
Phosphorus	ppm	ASTM D5185m	300	442	397	---
Zinc	ppm	ASTM D5185m	370	515	506	---
Sulfur	ppm	ASTM D5185m	2500	2098	2061	---
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.54	0.54	---
Visc @ 40°C	cSt	ASTM D445	46	52.4	80.3	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0209677 **Received** : 18 Apr 2024
Lab Number : 06152968 **Tested** : 19 Apr 2024
Unique Number : 10983046 **Diagnosed** : 22 Apr 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PQ)

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)

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