



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 437E 1T0437EDVL430018
 Component
Hydraulic System
 Fluid
JOHN DEERE HYDRAU (--- QTS)

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WE0002339	WE0002340	WE0005228
Sample Date		Client Info		22 May 2024	05 Dec 2023	11 Oct 2023
Machine Age	hrs	Client Info		1496	500	335
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	SEVERE	ATTENTION

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	4	2	0
Chromium	ppm	ASTM D5185m	>10	<1	<1	0
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>10	<1	<1	0
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>75	2	2	0
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

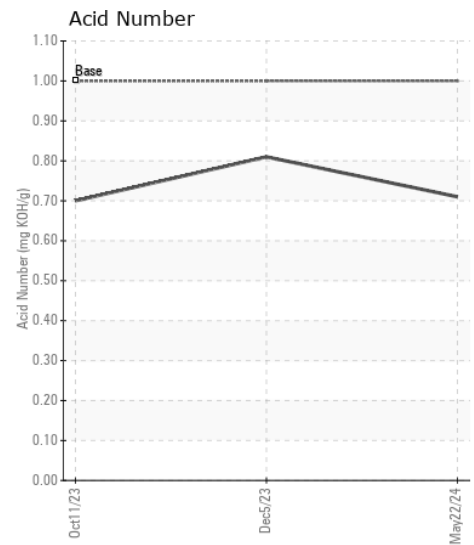
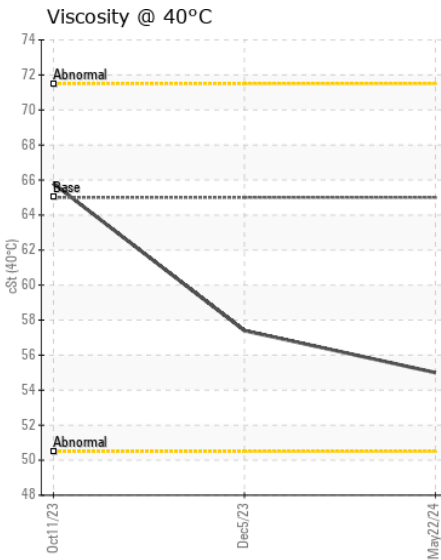
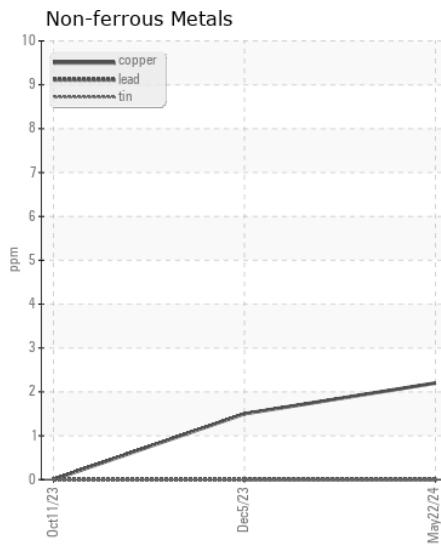
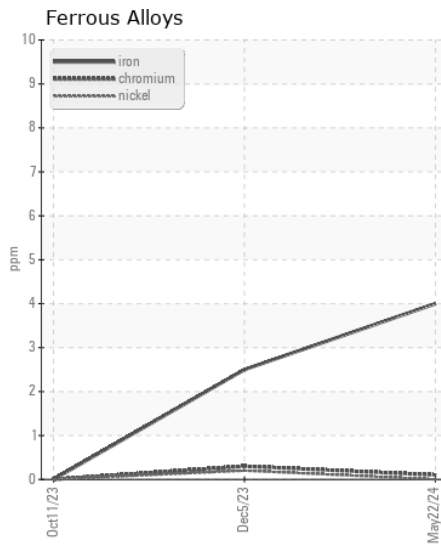
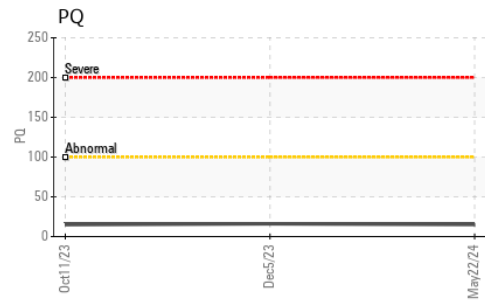
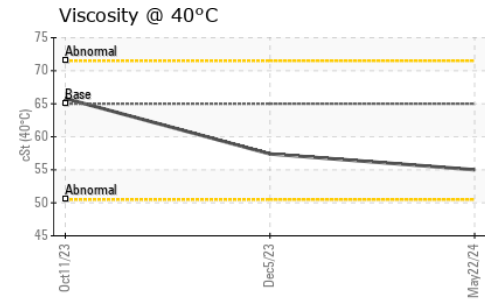
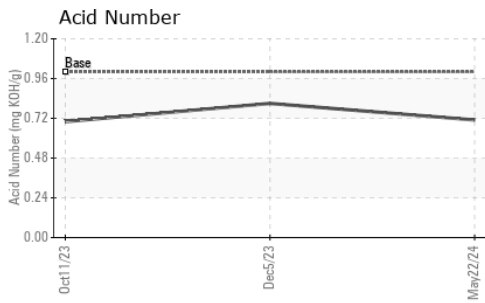
Moderate concentration of visible dirt/debris present in the oil.

Silicon	ppm	ASTM D5185m	>20	2	2	2
Potassium	ppm	ASTM D5185m	>20	<1	2	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	---	▲ 29641	● 6315
Particles >6µm		ASTM D7647	>1300	---	▲ 15971	● 2412
Particles >14µm		ASTM D7647	>160	---	▲ 4413	● 235
Particles >21µm		ASTM D7647	>40	---	▲ 1696	● 55
Particles >38µm		ASTM D7647	>10	---	▲ 82	● 2
Particles >71µm		ASTM D7647	>3	---	▲ 6	● 0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	---	▲ 22/21/19	● 20/18/15
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	LIGHT	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	>0.1	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		<1	0	2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	1
Molybdenum	ppm	ASTM D5185m		<1	<1	0
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		<1	3	4
Calcium	ppm	ASTM D5185m	87	112	92	90
Phosphorus	ppm	ASTM D5185m	727	658	558	625
Zinc	ppm	ASTM D5185m	900	879	750	830
Sulfur	ppm	ASTM D5185m	1500	1995	1618	1771
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.71	0.81	0.70
Visc @ 40°C	cSt	ASTM D445	65	55.0	57.4	65.8



Certificate L2367

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

Sample No. : WE0002339

Lab Number : 06190376

Unique Number : 11047128

Test Package : CONST (Additional Tests: PQ)

Received : 24 May 2024

Tested : 29 May 2024

Diagnosed : 29 May 2024 - Don Baldrige

WARRIOR TRACTOR AND EQUIPMENT - NORTHPORT

P.O. BOX 412

NORTHPORT, AL

US 35476

Contact: PAMELA CLARK

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F:

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)