James River Equipment

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 1023E 110831
Component
Hydraulic System
Fluid
JOHN DEERE HY-GARD HYD/TRANS LOW VIS (--- GAL)

RECOMMENDATION

We recommend you service the filters on this component. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

WEAR

The copper level is severe. The iron level is abnormal.

CONTAMINATION

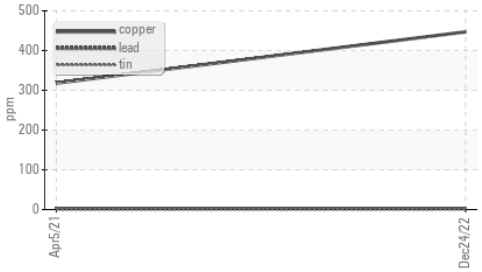
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

FLUID CONDITION

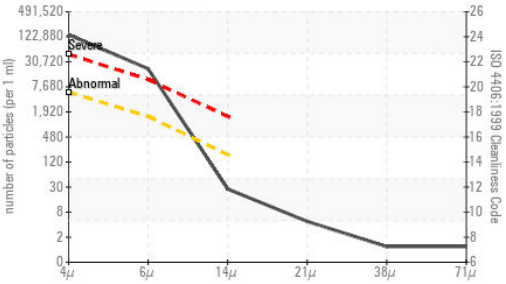
The AN level is acceptable for this fluid. The condition of the oils additive package is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0150730	JR0079517	---
Sample Date		Client Info		24 Dec 2022	05 Apr 2021	---
Machine Age	hrs	Client Info		761	642	---
Oil Age	hrs	Client Info		0	642	---
Filter Age	hrs	Client Info		0	642	---
Oil Changed		Client Info		Not Changd	Not Changd	---
Filter Changed		Client Info		Not Changd	Not Changd	---
Sample Status				SEVERE	SEVERE	---
PQ		ASTM D8184		24	29	---
Iron	ppm	ASTM D5185m	>20	▲ 50	▲ 39	---
Chromium	ppm	ASTM D5185m	>10	<1	<1	---
Nickel	ppm	ASTM D5185m	>10	<1	0	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m		<1	<1	---
Aluminum	ppm	ASTM D5185m	>10	5	4	---
Lead	ppm	ASTM D5185m	>10	3	2	---
Copper	ppm	ASTM D5185m	>75	⬢ 447	⬢ 318	---
Tin	ppm	ASTM D5185m	>10	<1	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185m	>20	17	16	---
Potassium	ppm	ASTM D5185m	>20	4	1	---
Water		WC Method	>0.1	NEG	NEG	---
Particles >4µm		ASTM D7647	>5000	▲ 117706	▲ 142209	---
Particles >6µm		ASTM D7647	>1300	▲ 18080	▲ 37109	---
Particles >14µm		ASTM D7647	>160	24	▲ 248	---
Particles >21µm		ASTM D7647	>40	4	21	---
Particles >38µm		ASTM D7647	>10	1	0	---
Particles >71µm		ASTM D7647	>3	1	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 24/21/12	▲ 24/22/15	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	LIGHT	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	---
Sodium	ppm	ASTM D5185m		2	3	---
Boron	ppm	ASTM D5185m		3	6	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		<1	<1	---
Manganese	ppm	ASTM D5185m		1	1	---
Magnesium	ppm	ASTM D5185m		88	88	---
Calcium	ppm	ASTM D5185m		3517	3355	---
Phosphorus	ppm	ASTM D5185m		1021	1005	---
Zinc	ppm	ASTM D5185m		1255	1206	---
Sulfur	ppm	ASTM D5185m		3526	3057	---
Acid Number (AN)	mg KOH/g	ASTM D8045		0.950	1.066	---
Visc @ 40°C	cSt	ASTM D445	32	45.5	45.5	---

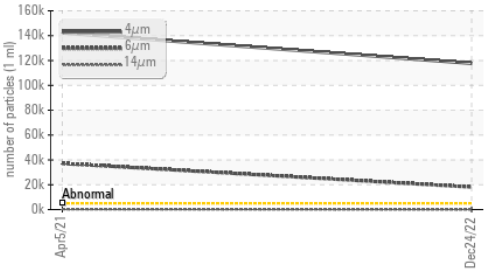
Non-ferrous Metals



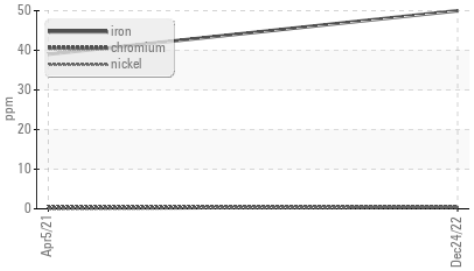
Particle Count



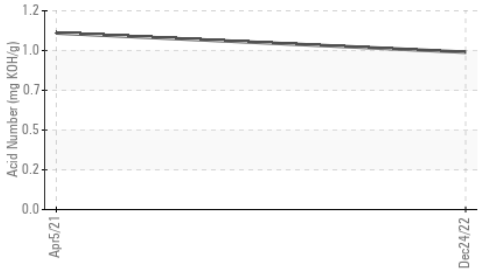
Particle Trend



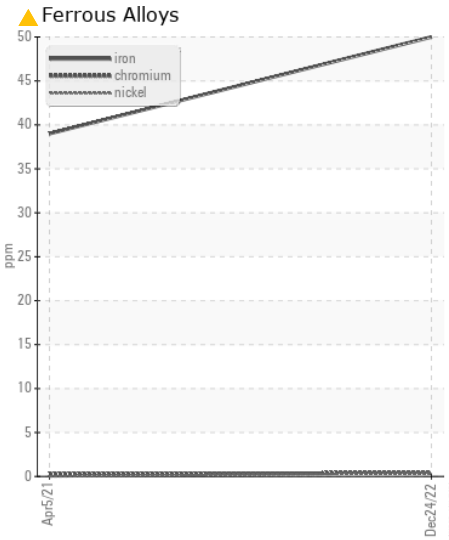
Ferrous Alloys



Acid Number



Ferrous Alloys



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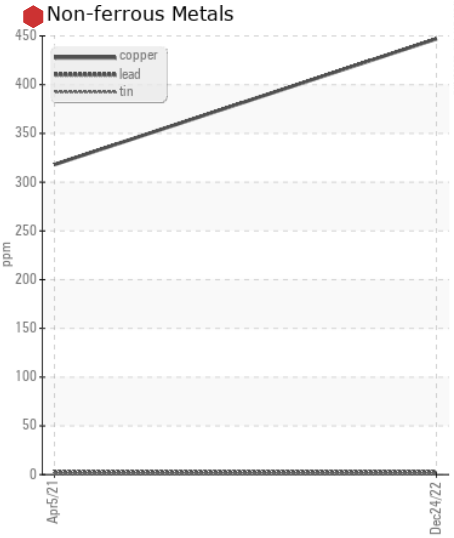
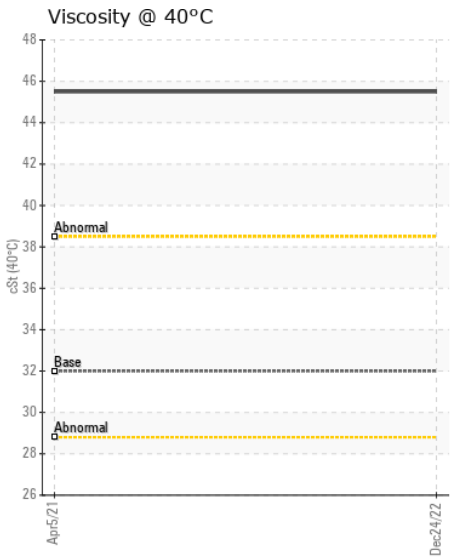
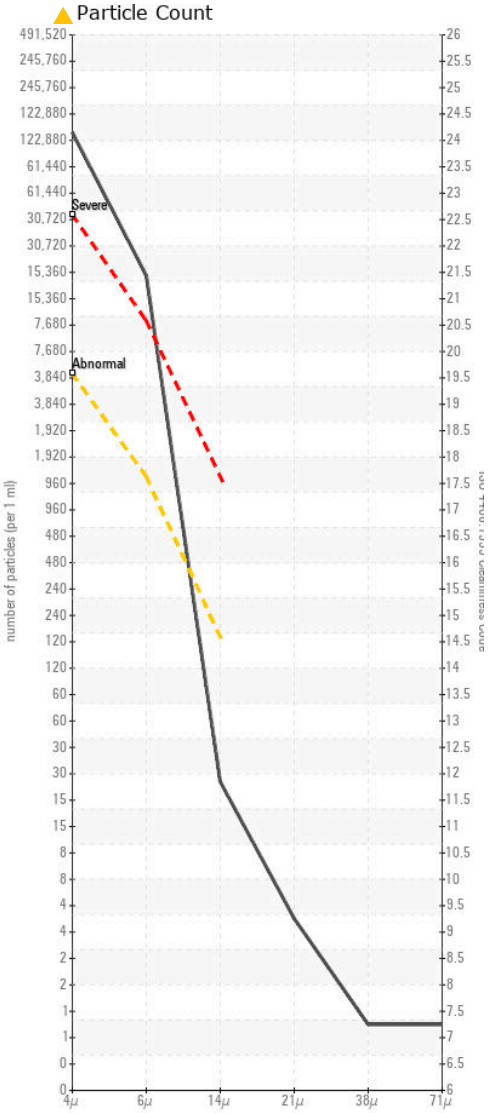


Viscosity @ 40°C



Particle Count



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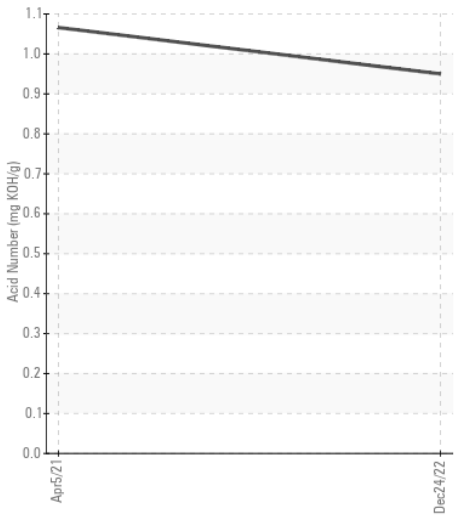

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0150730 **Received** : 06 Mar 2023
Lab Number : 05783737 **Tested** : 07 Mar 2023
Unique Number : 10363407 **Diagnosed** : 07 Mar 2023 - Don Baldridge
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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