James River Equipment

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
JOHN DEERE 50G 1FF050GXTMH295442
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

Piston, ring and cylinder wear is indicated. Valve wear is indicated.

CONTAMINATION

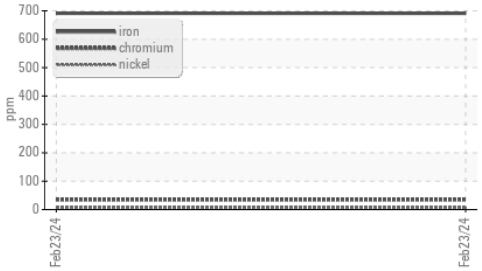
Sodium and/or potassium levels are high. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

FLUID CONDITION

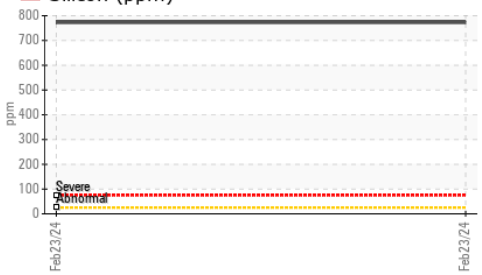
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0202230	---	---
Sample Date		Client Info		23 Feb 2024	---	---
Machine Age	hrs	Client Info		1209	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				SEVERE	---	---
Iron	ppm	ASTM D5185m	>100	▲ 691	---	---
Chromium	ppm	ASTM D5185m	>20	▲ 35	---	---
Nickel	ppm	ASTM D5185m	>4	▲ 7	---	---
Titanium	ppm	ASTM D5185m		15	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>20	● 405	---	---
Lead	ppm	ASTM D5185m	>40	8	---	---
Copper	ppm	ASTM D5185m	>330	53	---	---
Tin	ppm	ASTM D5185m	>15	5	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Silicon	ppm	ASTM D5185m	>25	▲ 773	---	---
Potassium	ppm	ASTM D5185m	>20	▲ 183	---	---
Fuel		WC Method	>5	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol	%	*ASTM D2982		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.7	---	---
Nitration	Abs/cm	*ASTM D7624	>20	12.3	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.9	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---
Sodium	ppm	ASTM D5185m		▲ 38	---	---
Boron	ppm	ASTM D5185m		104	---	---
Barium	ppm	ASTM D5185m		6	---	---
Molybdenum	ppm	ASTM D5185m		119	---	---
Manganese	ppm	ASTM D5185m		8	---	---
Magnesium	ppm	ASTM D5185m		299	---	---
Calcium	ppm	ASTM D5185m		2371	---	---
Phosphorus	ppm	ASTM D5185m		978	---	---
Zinc	ppm	ASTM D5185m		1210	---	---
Sulfur	ppm	ASTM D5185m		2680	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.2	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.2	---	---
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	---	---

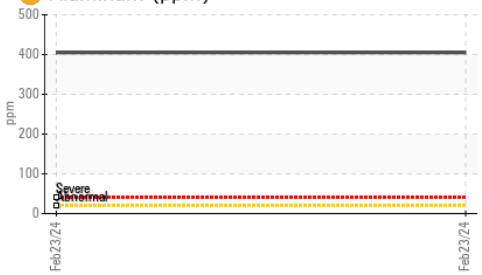
Ferrous Alloys



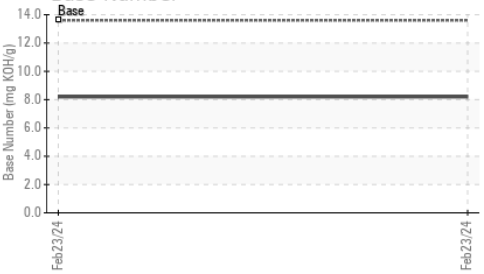
Silicon (ppm)



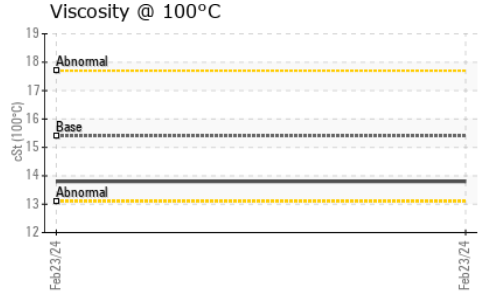
Aluminum (ppm)



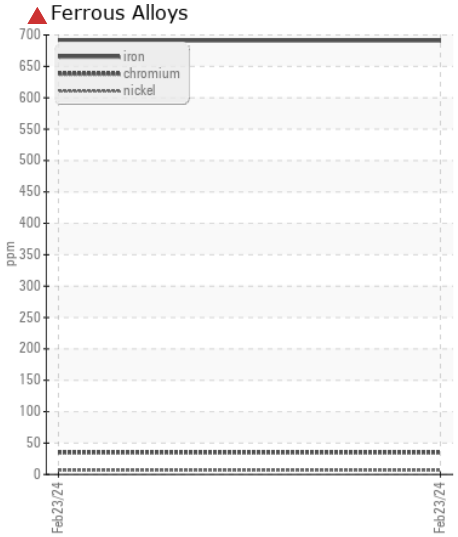
Base Number



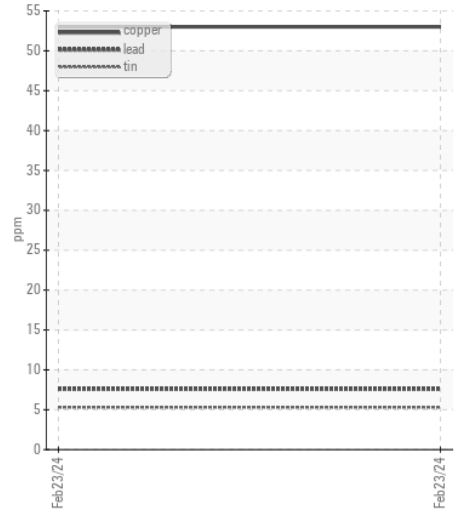
Viscosity @ 100°C



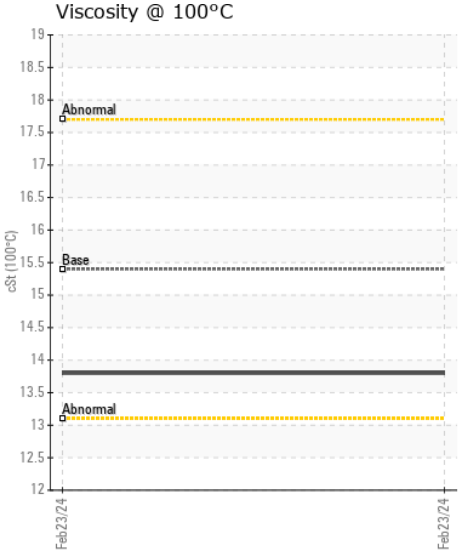
Ferrous Alloys



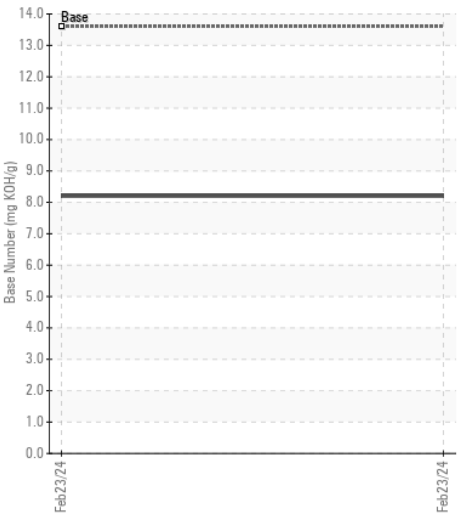
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0202230 **Received** : 26 Feb 2024
Lab Number : 06100644 **Tested** : 28 Feb 2024
Unique Number : 10898874 **Diagnosed** : 28 Feb 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: Glycol, TBN)

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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