James River Equipment

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
JOHN DEERE 317G
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 0W40 (8 QTS)

RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other metal levels are typical for a new component breaking in.

CONTAMINATION

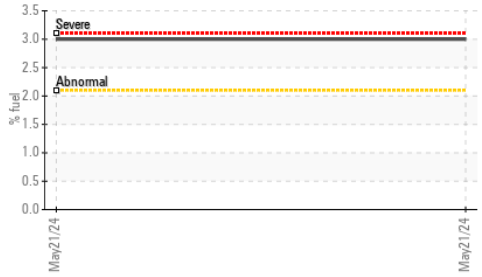
There is a moderate amount of fuel present in the oil.

FLUID CONDITION

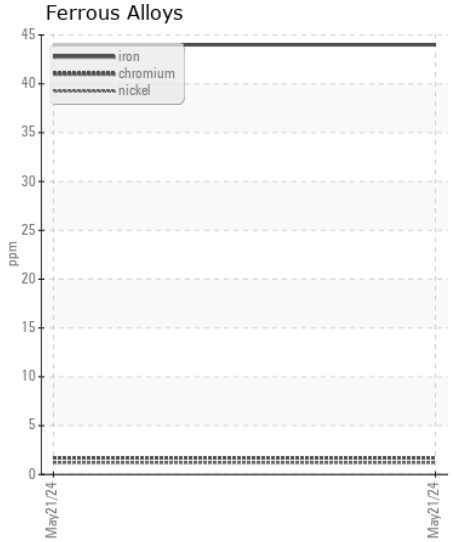
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0217724	---	---
Sample Date		Client Info		21 May 2024	---	---
Machine Age	hrs	Client Info		462	---	---
Oil Age	hrs	Client Info		462	---	---
Filter Age	hrs	Client Info		462	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---
Iron	ppm	ASTM D5185m	>51	44	---	---
Chromium	ppm	ASTM D5185m	>11	2	---	---
Nickel	ppm	ASTM D5185m	>5	1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	1	---	---
Aluminum	ppm	ASTM D5185m	>31	21	---	---
Lead	ppm	ASTM D5185m	>26	3	---	---
Copper	ppm	ASTM D5185m	>26	▲ 117	---	---
Tin	ppm	ASTM D5185m	>4	2	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Silicon	ppm	ASTM D5185m	>22	42	---	---
Potassium	ppm	ASTM D5185m	>20	3	---	---
Fuel	%	ASTM D3524	>2.1	▲ 3.0	---	---
Water		WC Method	>0.21	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.5	---	---
Nitration	Abs/cm	*ASTM D7624	>20	8.3	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.1	---	---
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	>0.21	NEG	---	---
Sodium	ppm	ASTM D5185m	>31	11	---	---
Boron	ppm	ASTM D5185m		207	---	---
Barium	ppm	ASTM D5185m		4	---	---
Molybdenum	ppm	ASTM D5185m		258	---	---
Manganese	ppm	ASTM D5185m		1	---	---
Magnesium	ppm	ASTM D5185m		692	---	---
Calcium	ppm	ASTM D5185m		1717	---	---
Phosphorus	ppm	ASTM D5185m		880	---	---
Zinc	ppm	ASTM D5185m		1119	---	---
Sulfur	ppm	ASTM D5185m		3523	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.7	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	7.6	---	---
Visc @ 100°C	cSt	ASTM D445	14	▲ 11.8	---	---

Fuel Dilution

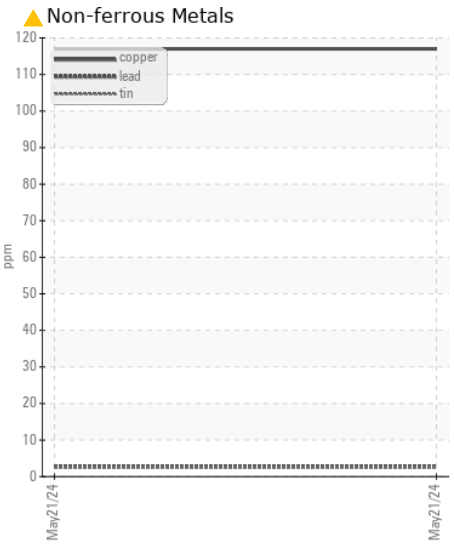


Ferrous Alloys

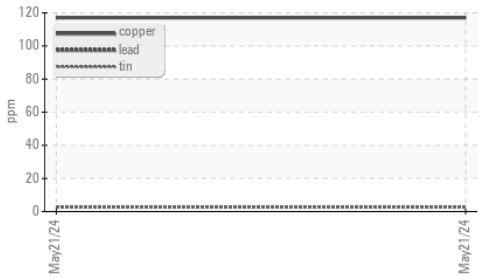


Viscosity @ 100°C

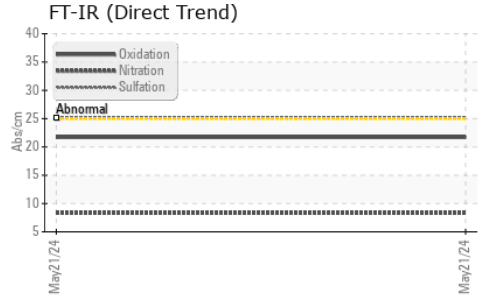
Non-ferrous Metals



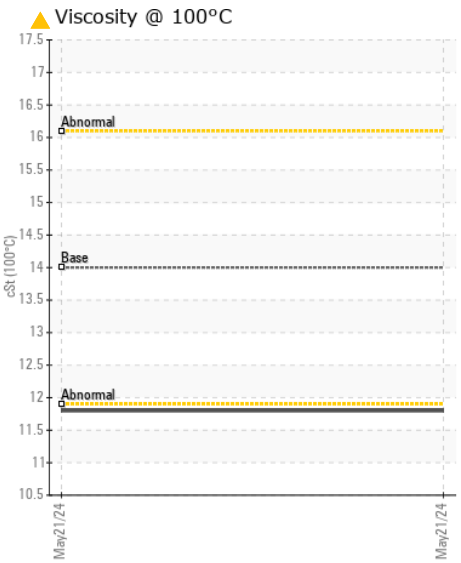
Non-ferrous Metals



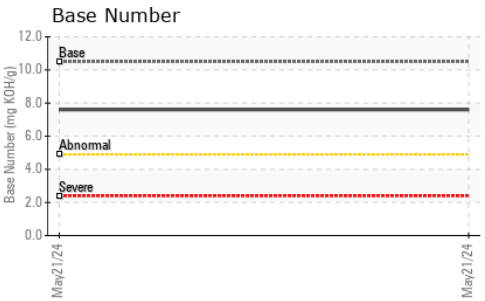
FT-IR (Direct Trend)



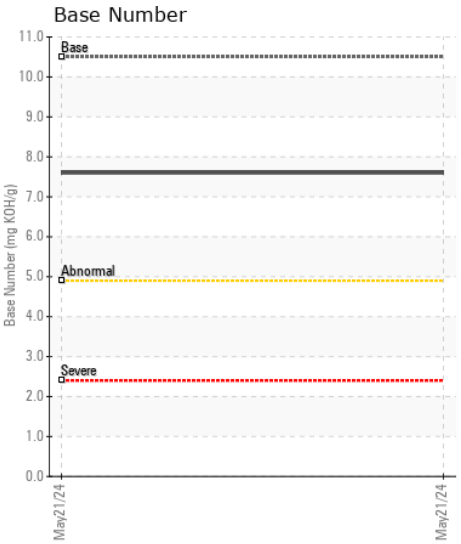
Viscosity @ 100°C



Base Number



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0217724
Lab Number : 06189957
Unique Number : 11046709
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

Received : 23 May 2024
Tested : 29 May 2024
Diagnosed : 29 May 2024 - Sean Felton

Certificate L2367

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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