CONST

James River Equipment

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
[DAVE LUTMAN]
Machine Id
JOHN DEERE 655K C234057 (S/N 1T0655KXEGE291463)
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

The copper level is abnormal. Exhaust valve wear is indicated. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core).

CONTAMINATION

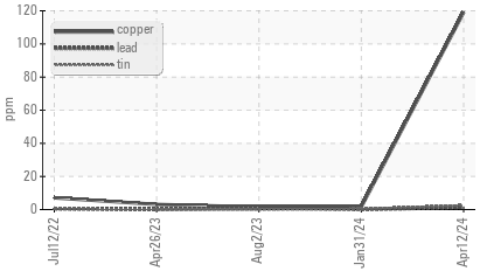
There is no indication of any contamination in the oil.

FLUID CONDITION

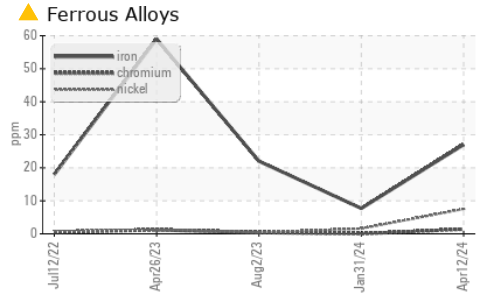
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0210537	JR0195451	JR0170305
Sample Date		Client Info		12 Apr 2024	31 Jan 2024	02 Aug 2023
Machine Age	hrs	Client Info		3556	3385	3000
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>51	27	8	22
Chromium	ppm	ASTM D5185m	>11	1	0	<1
Nickel	ppm	ASTM D5185m	>5	▲ 8	2	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>31	6	4	6
Lead	ppm	ASTM D5185m	>26	1	0	1
Copper	ppm	ASTM D5185m	>26	▲ 119	2	2
Tin	ppm	ASTM D5185m	>4	3	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>22	9	6	8
Potassium	ppm	ASTM D5185m	>20	3	2	5
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0.1	0.6
Nitration	Abs/cm	*ASTM D7624	>20	9.3	6.7	9.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.4	20.2	22.3
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	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	>0.21	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m	>31	6	3	4
Boron	ppm	ASTM D5185m		257	293	213
Barium	ppm	ASTM D5185m		<1	0	<1
Molybdenum	ppm	ASTM D5185m		270	264	263
Manganese	ppm	ASTM D5185m		2	<1	<1
Magnesium	ppm	ASTM D5185m		805	924	923
Calcium	ppm	ASTM D5185m		1420	1492	1603
Phosphorus	ppm	ASTM D5185m		970	1006	952
Zinc	ppm	ASTM D5185m		1088	1173	1210
Sulfur	ppm	ASTM D5185m		3265	3404	3886
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.9	14.6	16.8
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	9.1	9.3	8.7
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	13.7	14.01

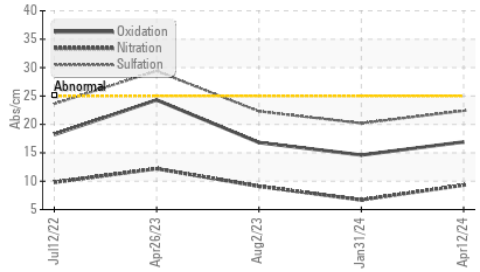
Non-ferrous Metals



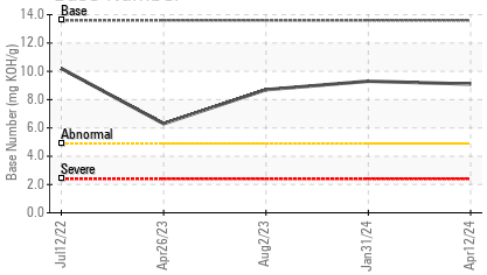
Ferrous Alloys



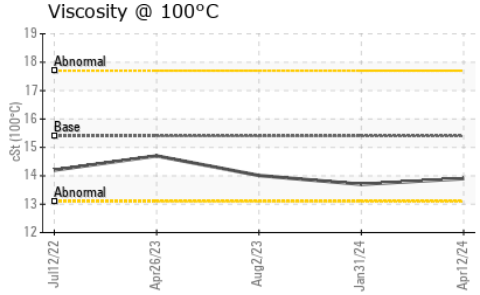
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C



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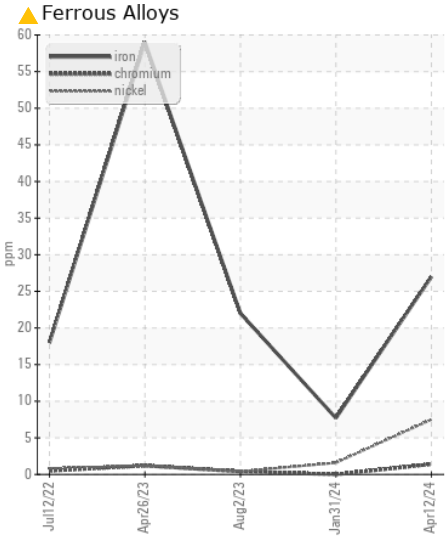

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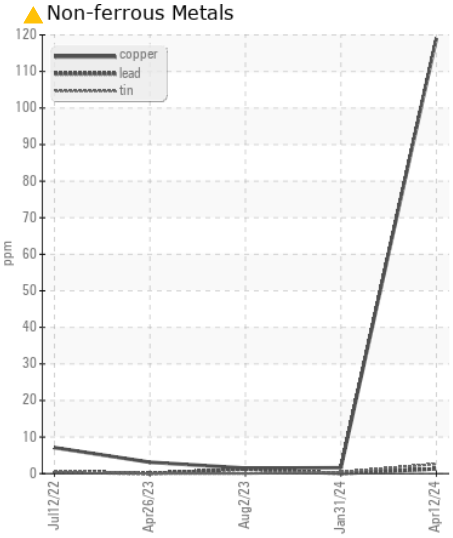
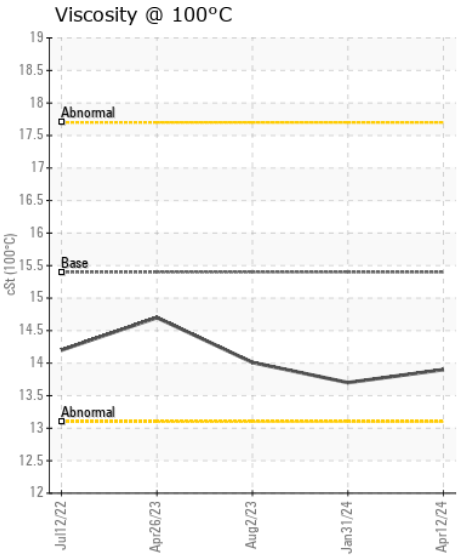


Viscosity @ 100°C



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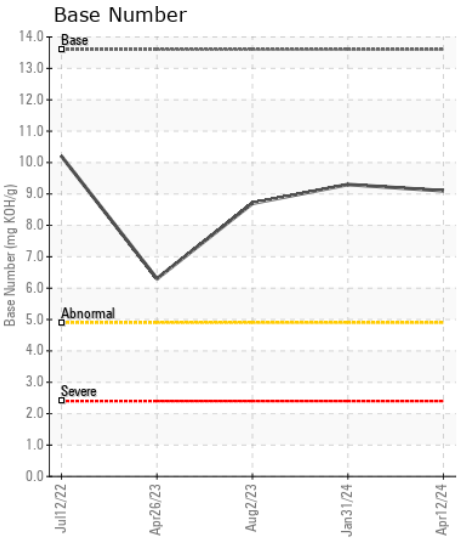

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0210537
Lab Number : 06152894
Unique Number : 10982972
Test Package : CONST (Additional Tests: TBN)

Received : 18 Apr 2024
Tested : 19 Apr 2024
Diagnosed : 22 Apr 2024 - Sean Felton

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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