James River Equipment

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
[48107]
Machine Id
JOHN DEERE 310E 1DW310EXJPF716428
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (34 QTS)

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

Valve wear is indicated.

CONTAMINATION

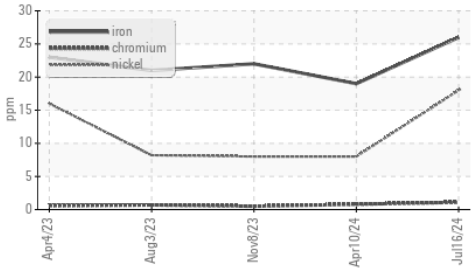
There is no indication of any contamination in the oil.

FLUID CONDITION

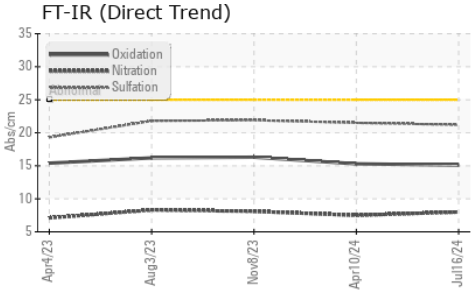
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0225531	JR0211181	JR0192249
Sample Date		Client Info		16 Jul 2024	10 Apr 2024	08 Nov 2023
Machine Age	hrs	Client Info		2465	1950	1475
Oil Age	hrs	Client Info		515	1437	513
Filter Age	hrs	Client Info		0	1437	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	NORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>51	26	19	22
Chromium	ppm	ASTM D5185m	>11	1	<1	<1
Nickel	ppm	ASTM D5185m	>5	▲ 18	8	8
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	5	4	4
Lead	ppm	ASTM D5185m	>26	<1	1	2
Copper	ppm	ASTM D5185m	>26	3	8	▲ 44
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>22	8	5	6
Potassium	ppm	ASTM D5185m	>20	3	1	0
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	0.3	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	8.0	7.5	8.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2	21.5	21.9
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	0	2	2
Boron	ppm	ASTM D5185m		228	210	229
Barium	ppm	ASTM D5185m		2	<1	<1
Molybdenum	ppm	ASTM D5185m		255	219	259
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		786	775	842
Calcium	ppm	ASTM D5185m		1463	1821	1498
Phosphorus	ppm	ASTM D5185m		912	976	906
Zinc	ppm	ASTM D5185m		1106	1187	1097
Sulfur	ppm	ASTM D5185m		3200	3853	2987
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.1	15.3	16.3
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	9.1	9.1	9.0
Visc @ 100°C	cSt	ASTM D445	15.4	13.1	12.6	13.6

Ferrous Alloys



FT-IR (Direct Trend)



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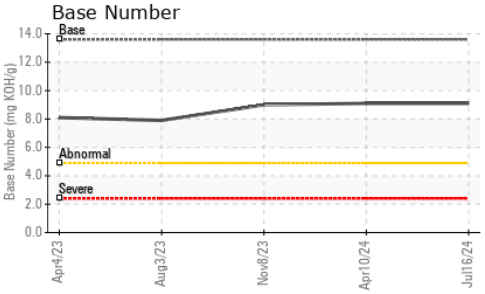
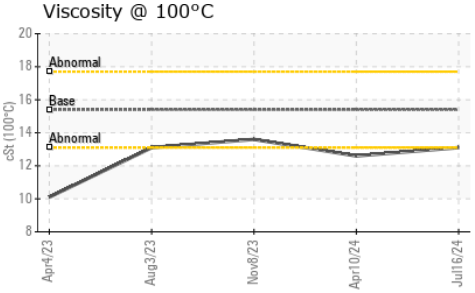
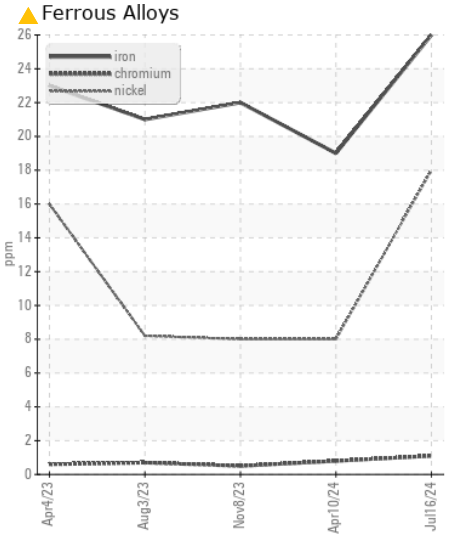


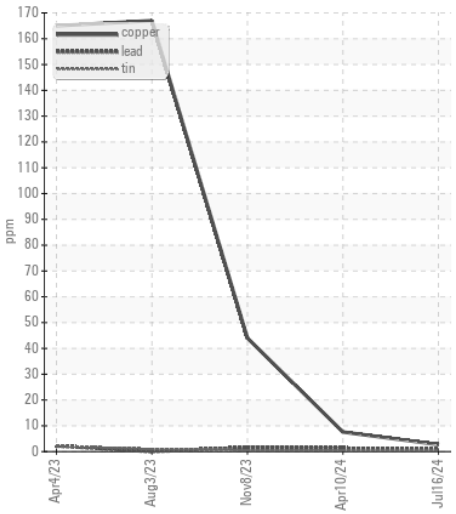
Viscosity @ 100°C



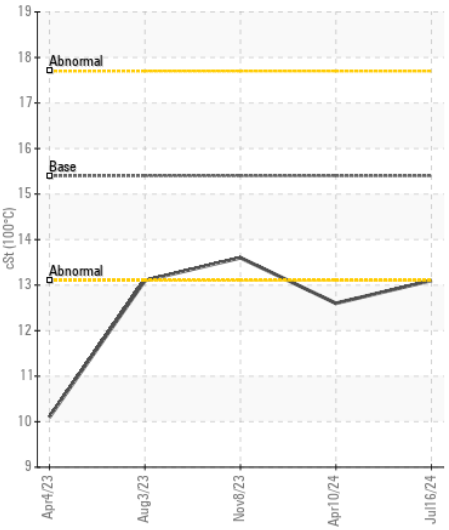
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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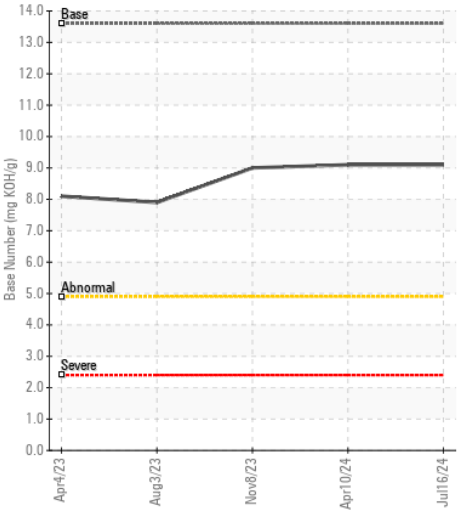

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0225531
Lab Number : 06239011
Unique Number : 11127845
Test Package : CONST (Additional Tests: TBN)

Received : 17 Jul 2024
Tested : 18 Jul 2024
Diagnosed : 19 Jul 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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