James River Equipment

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 310E 1DW310EXEMF711881
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- 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

Cylinder, crank, or cam shaft wear is indicated. All other component wear rates are normal.

CONTAMINATION

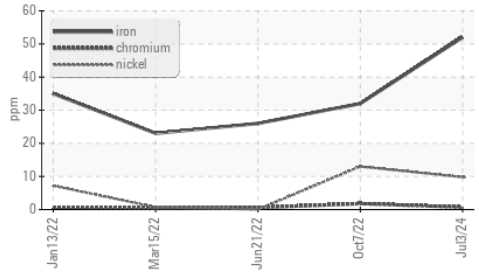
There is no indication of any contamination in the oil.

FLUID CONDITION

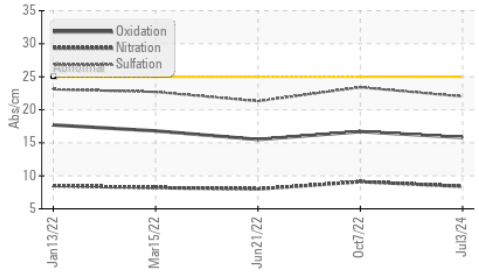
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0224471	JR0132838	JR0132055
Sample Date		Client Info		03 Jul 2024	07 Oct 2022	21 Jun 2022
Machine Age	hrs	Client Info		3057	1952	1453
Oil Age	hrs	Client Info		0	499	416
Filter Age	hrs	Client Info		0	499	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>51	▲ 52	32	26
Chromium	ppm	ASTM D5185m	>11	<1	2	<1
Nickel	ppm	ASTM D5185m	>5	10	13	0
Titanium	ppm	ASTM D5185m		0	1	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>31	7	4	4
Lead	ppm	ASTM D5185m	>26	0	1	<1
Copper	ppm	ASTM D5185m	>26	<1	2	2
Tin	ppm	ASTM D5185m	>4	<1	2	<1
Vanadium	ppm	ASTM D5185m		<1	2	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>22	8	10	6
Potassium	ppm	ASTM D5185m	>20	2	<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	0.4	0.5	0.3
Nitration	Abs/cm	*ASTM D7624	>20	8.4	9.1	8.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.0	23.4	21.3
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	2	3	<1
Boron	ppm	ASTM D5185m		213	193	250
Barium	ppm	ASTM D5185m		0	<1	<1
Molybdenum	ppm	ASTM D5185m		250	224	246
Manganese	ppm	ASTM D5185m		2	2	<1
Magnesium	ppm	ASTM D5185m		865	788	791
Calcium	ppm	ASTM D5185m		1484	1379	1442
Phosphorus	ppm	ASTM D5185m		932	891	833
Zinc	ppm	ASTM D5185m		1132	1060	1070
Sulfur	ppm	ASTM D5185m		3594	3230	3038
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.8	16.7	15.5
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.5	10.0	8.5
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	13.7	13.6

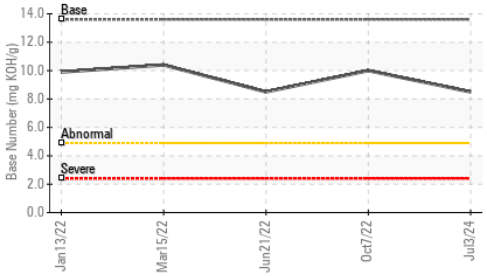
Ferrous Alloys



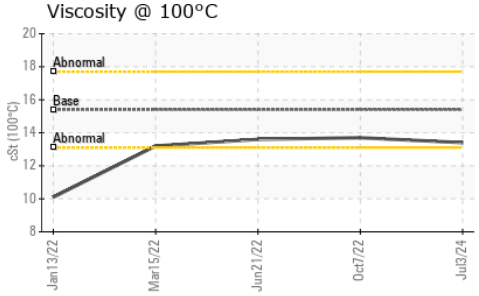
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C



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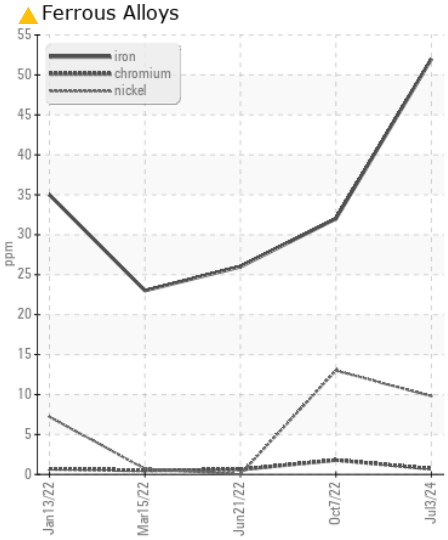
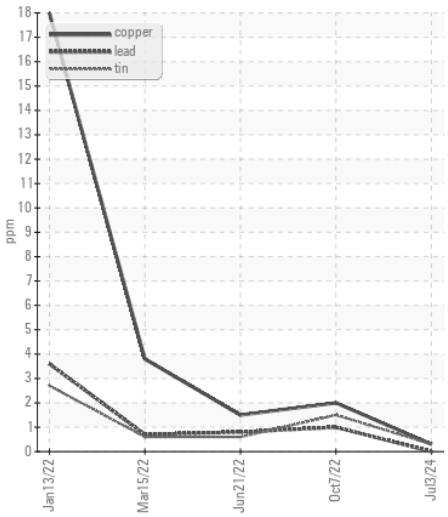


Non-ferrous Metals



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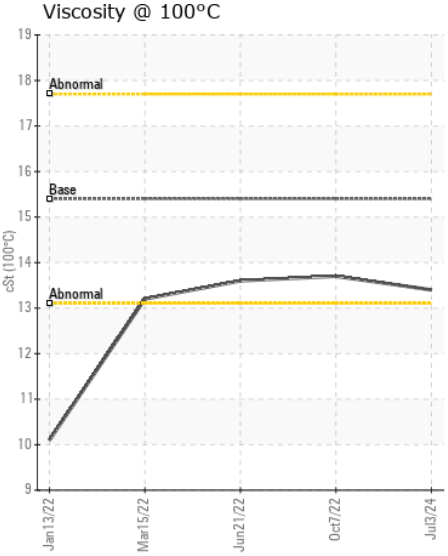

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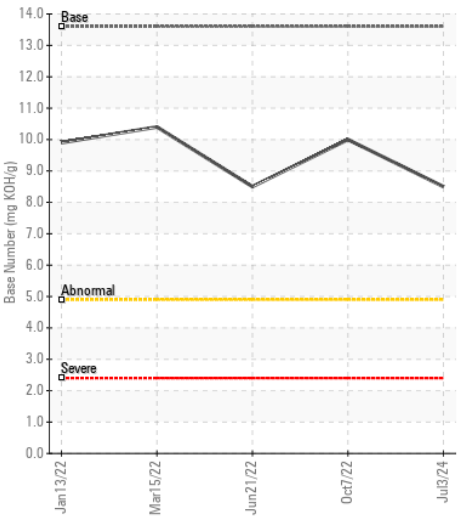

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0224471 **Received** : 05 Jul 2024
Lab Number : 06228259 **Tested** : 08 Jul 2024
Unique Number : 11111752 **Diagnosed** : 08 Jul 2024 - Don Baldridge
Test Package : CONST (Additional Tests: 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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