James River Equipment

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
[WATERWAY RECYCLING]
Machine Id
JOHN DEERE 230C FF230CX603672
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. 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

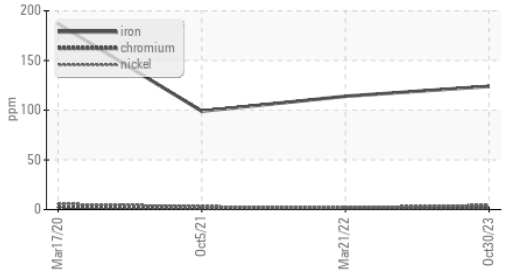
There is no indication of any contamination in the oil.

FLUID CONDITION

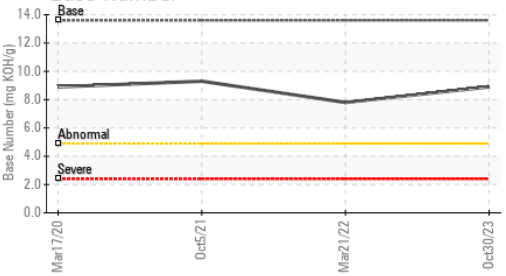
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0165739	JR0115662	JR0103804
Sample Date		Client Info		30 Oct 2023	21 Mar 2022	05 Oct 2021
Machine Age	hrs	Client Info		20116	19228	18868
Oil Age	hrs	Client Info		500	500	500
Filter Age	hrs	Client Info		500	500	500
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>51	▲ 124	▲ 114	▲ 99
Chromium	ppm	ASTM D5185m	>11	2	2	1
Nickel	ppm	ASTM D5185m	>5	4	2	3
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>31	16	6	6
Lead	ppm	ASTM D5185m	>26	3	2	1
Copper	ppm	ASTM D5185m	>26	3	2	2
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>22	11	17	8
Potassium	ppm	ASTM D5185m	>20	4	2	1
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	1	0.9	1
Nitration	Abs/cm	*ASTM D7624	>20	12.9	12.0	10.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.1	25.8	24.2
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	<1	<1	1
Boron	ppm	ASTM D5185m		146	228	171
Barium	ppm	ASTM D5185m		3	0	<1
Molybdenum	ppm	ASTM D5185m		257	295	269
Manganese	ppm	ASTM D5185m		1	1	1
Magnesium	ppm	ASTM D5185m		740	909	894
Calcium	ppm	ASTM D5185m		2081	1840	1613
Phosphorus	ppm	ASTM D5185m		1100	1088	957
Zinc	ppm	ASTM D5185m		1390	1372	1098
Sulfur	ppm	ASTM D5185m		3693	3046	2625
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.5	22.6	19.7
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.9	7.8	9.3
Visc @ 100°C	cSt	ASTM D445	15.4	16.8	16.7	16.2

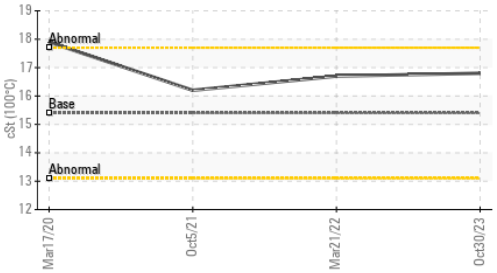
Ferrous Alloys



Base Number



Viscosity @ 100°C



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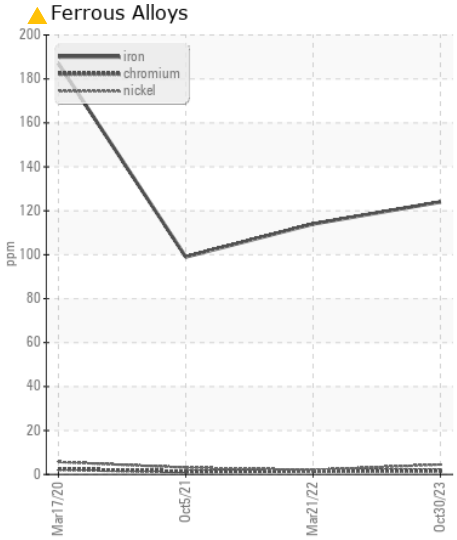
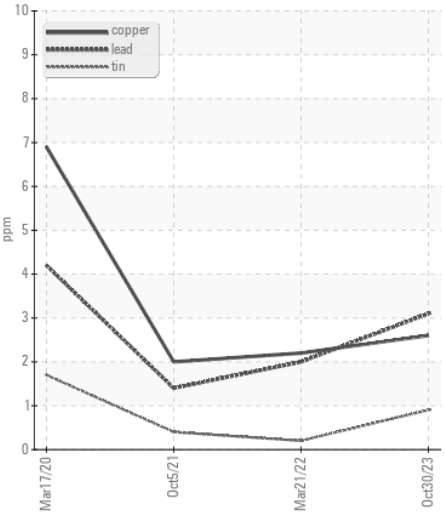


Non-ferrous Metals



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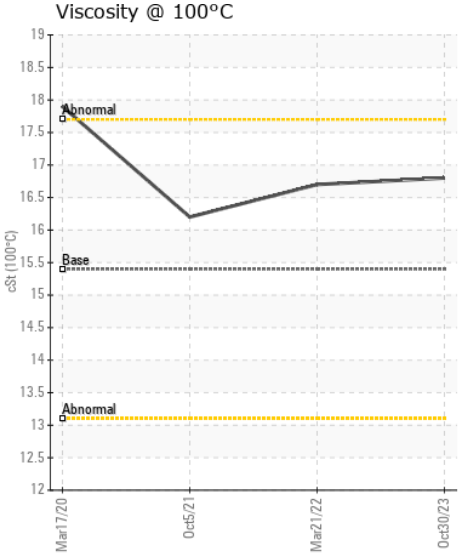

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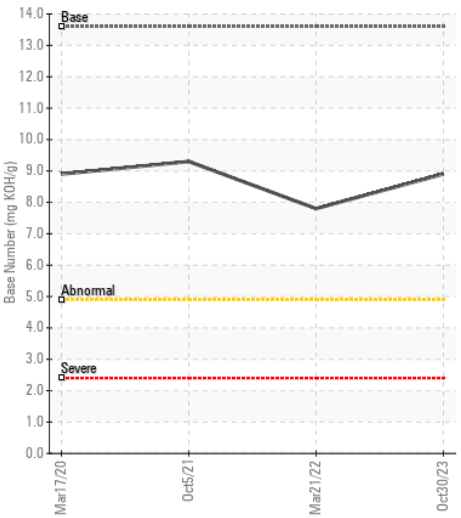

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0165739 **Recieved** : 12 Jan 2024
Lab Number : 06059134 **Diagnosed** : 15 Jan 2024
Unique Number : 10830516 **Diagnostician** : 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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