



ASCENDUM

OIL ANALYSIS REPORT

WEAR

NORMAL

CONTAMINATION

SEVERE

FLUID CONDITION

ABNORMAL



Area

Ascendum Machinery/250 Hour CSA

Machine Id

JOHN DEERE 550K 1863 (S/N 308332)

Component

Diesel Engine

Fluid

VOLVO VDS-4.5 Premium Motor Oil 15W40 (5 GAL)

RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ASC0002531	VCP0005415	VCP0006121
Sample Date		Client Info		13 Dec 2023	16 Mar 2023	12 Jan 2023
Machine Age	hrs	Client Info		7072	6484	6240
Oil Age	hrs	Client Info		588	244	252
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	17	21	19
Chromium	ppm	ASTM D5185m	>11	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	3	2	3
Lead	ppm	ASTM D5185m	>26	5	14	5
Copper	ppm	ASTM D5185m	>26	<1	2	1
Tin	ppm	ASTM D5185m	>4	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

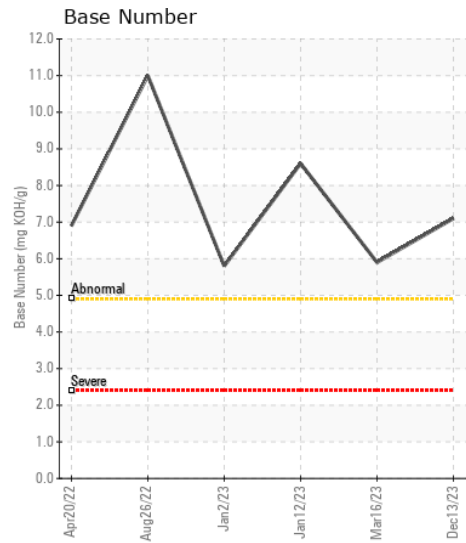
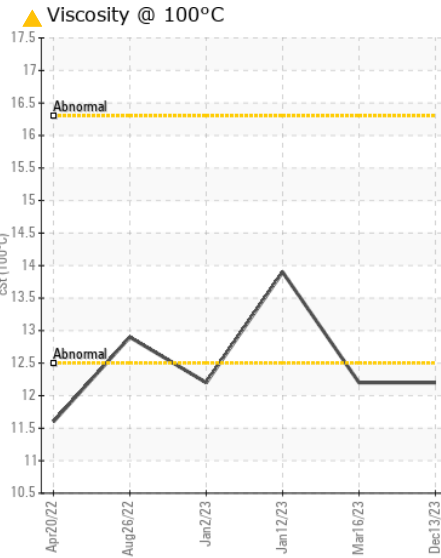
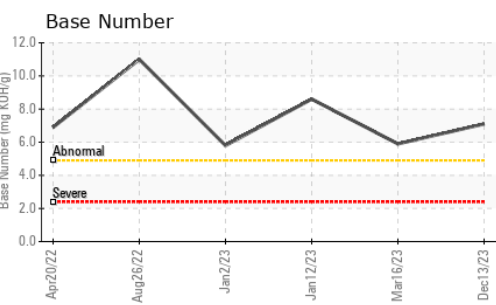
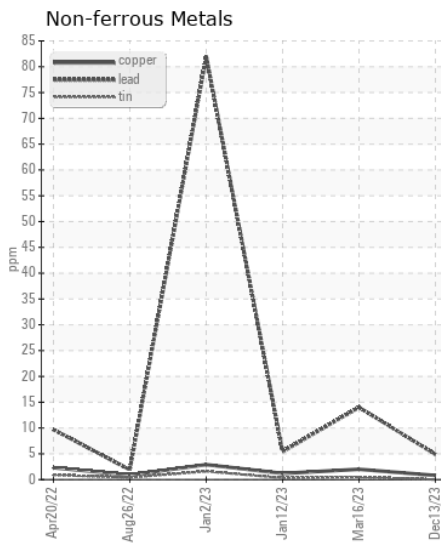
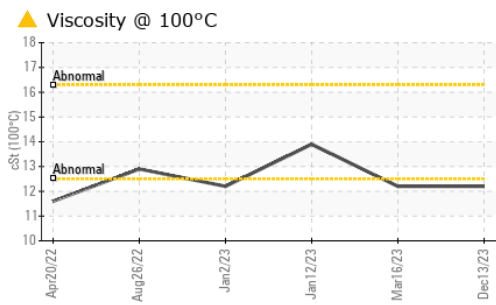
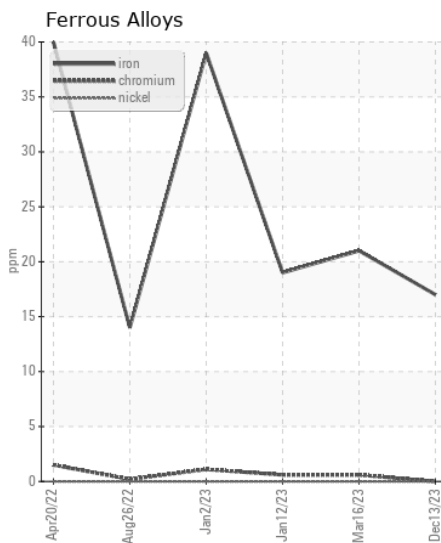
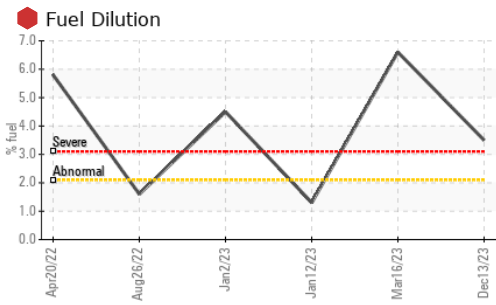
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>22	4	3	5
Potassium	ppm	ASTM D5185m	>20	<1	1	1
Fuel	%	ASTM D3524	>2.1	3.5	6.6	1.3
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.7	0.7	0.8
Nitration	Abs/cm	*ASTM D7624	>20	12.5	11.8	9.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.2	22.5	19.4
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

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m	>31	2	0	<1
Boron	ppm	ASTM D5185m		19	5	6
Barium	ppm	ASTM D5185m		0	0	1
Molybdenum	ppm	ASTM D5185m		41	54	57
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		443	716	824
Calcium	ppm	ASTM D5185m		1488	1067	1153
Phosphorus	ppm	ASTM D5185m		794	806	952
Zinc	ppm	ASTM D5185m		1065	1057	1137
Sulfur	ppm	ASTM D5185m		2630	2455	2880
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.6	21.9	16.6
Base Number (BN)	mg KOH/g	ASTM D2896		7.1	5.9	8.6
Visc @ 100°C	cSt	ASTM D445		12.2	12.2	13.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0002531 **Received** : 11 Jan 2024
Lab Number : 06057662 **Diagnosed** : 12 Jan 2024
Unique Number : 10823611 **Diagnostician** : Wes Davis
Test Package : CONST (Additional Tests: PercentFuel, TBN)

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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)