



# ASCENDUM

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area

**Ascendum Machinery/250 Hour CSA**

Machine Id

**JOHN DEERE 550K 1862 (S/N 309170)**

Component

**Diesel Engine**

Fluid

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

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>ASC0007481</b>	ASC0005120	ASC0000237
Sample Date		Client Info		<b>22 Apr 2024</b>	06 Dec 2023	03 Aug 2023
Machine Age	hrs	Client Info		<b>7773</b>	7534	5472
Oil Age	hrs	Client Info		<b>239</b>	2062	250
Filter Age	hrs	Client Info		<b>0</b>	0	250
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>13</b>	63	10
Chromium	ppm	ASTM D5185m	>11	<b>0</b>	2	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	3	0
Aluminum	ppm	ASTM D5185m	>31	<b>2</b>	7	1
Lead	ppm	ASTM D5185m	>26	<b>&lt;1</b>	0	3
Copper	ppm	ASTM D5185m	>26	<b>0</b>	6	1
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

There is no indication of any contamination in the oil.

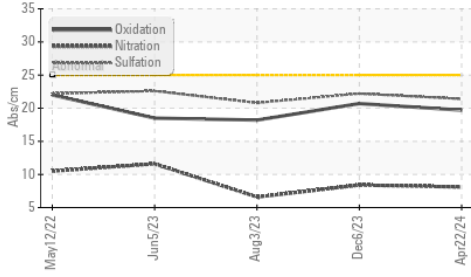
Silicon	ppm	ASTM D5185m	>22	<b>6</b>	13	6
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	<1
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.5</b>	0.7	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.1</b>	8.4	6.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.4</b>	22.2	20.8
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.21	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

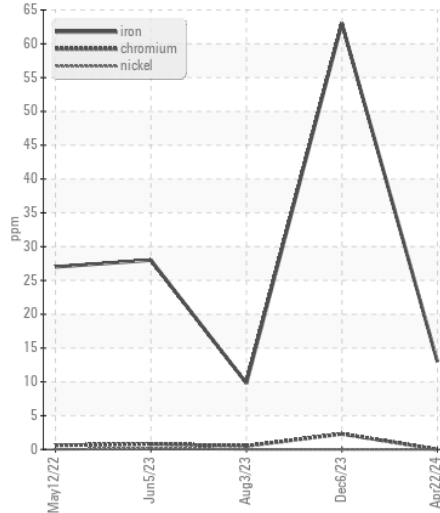
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<b>1</b>	5	3
Boron	ppm	ASTM D5185m		<b>50</b>	1	36
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>44</b>	63	41
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>486</b>	968	500
Calcium	ppm	ASTM D5185m		<b>1727</b>	1181	1671
Phosphorus	ppm	ASTM D5185m		<b>968</b>	1046	902
Zinc	ppm	ASTM D5185m		<b>1150</b>	1300	1114
Sulfur	ppm	ASTM D5185m		<b>3259</b>	2452	3315
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.7</b>	20.7	18.2
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.6</b>	10.3	8.9
Visc @ 100°C	cSt	ASTM D445		<b>12.6</b>	13.2	13.1

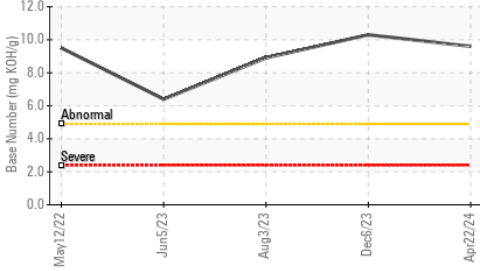
**FT-IR (Direct Trend)**



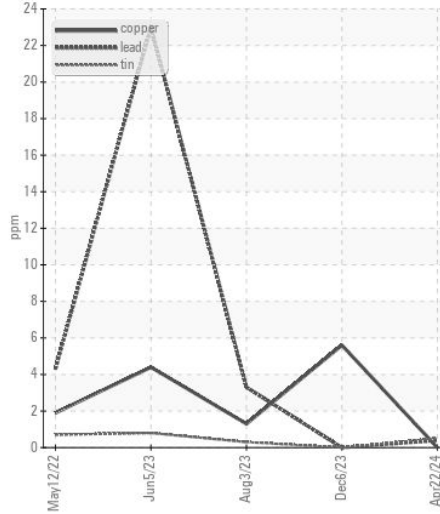
**Ferrous Alloys**



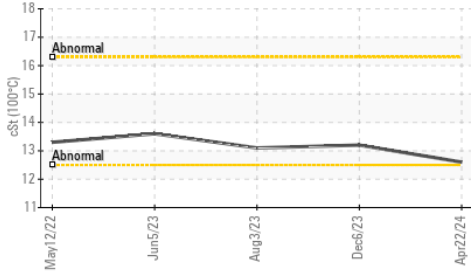
**Base Number**



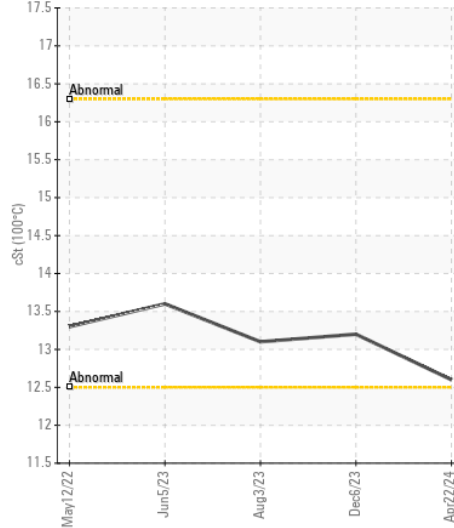
**Non-ferrous Metals**



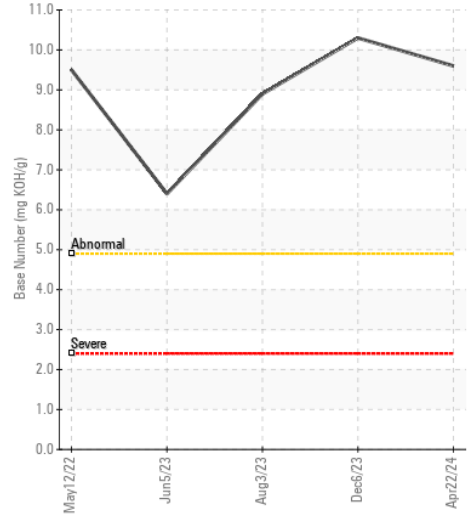
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : ASC0007481

**Lab Number** : 06160100

**Unique Number** : 10995523

**Test Package** : CONST ( Additional Tests: TBN )

**Received** : 25 Apr 2024

**Tested** : 26 Apr 2024

**Diagnosed** : 26 Apr 2024 - Wes Davis

**TRIANGLE GRADING AND PAVING INC**

1521 Huffman Mill Rd

BURLINGTON, NC

US 27216

Contact: ADAM CORBETT

wacorbett@trianglegradingpaving.com

T:

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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