



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**JOHN DEERE 624K 1DW624KZEEE657948**  
Component  
**Diesel Engine**  
Fluid  
**SHELL ROTELLA T 15W40 (5 GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0201399</b>	JR0201400	JR0160643
Sample Date		Client Info		<b>18 Jan 2024</b>	30 Dec 2023	30 Oct 2023
Machine Age	hrs	Client Info		<b>13301</b>	13104	12647
Oil Age	hrs	Client Info		<b>197</b>	234	235
Filter Age	hrs	Client Info		<b>197</b>	234	235
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	ATTENTION	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>7</b>	10	6
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>2</b>	3	2
Lead	ppm	ASTM D5185m	>26	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>26	<b>&lt;1</b>	<1	0
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
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.

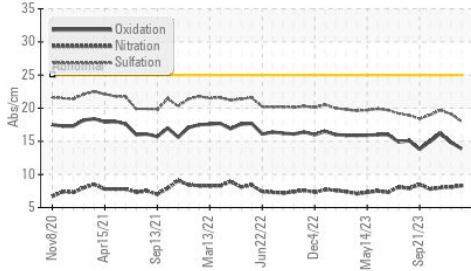
Silicon	ppm	ASTM D5185m	>22	<b>5</b>	8	10
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	6	2
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.3</b>	8.1	8.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.0</b>	19.1	19.7
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

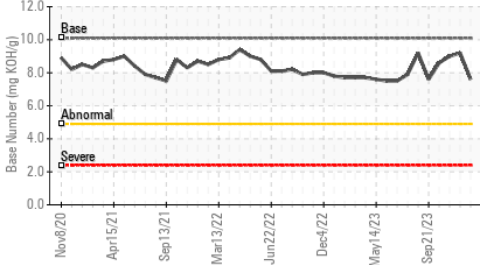
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<b>3</b>	9	5
Boron	ppm	ASTM D5185m	316	<b>64</b>	56	33
Barium	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	<1	<1
Molybdenum	ppm	ASTM D5185m	1.2	<b>90</b>	88	48
Manganese	ppm	ASTM D5185m		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m	24	<b>33</b>	90	554
Calcium	ppm	ASTM D5185m	2292	<b>2155</b>	2143	1471
Phosphorus	ppm	ASTM D5185m	1064	<b>1089</b>	1136	1050
Zinc	ppm	ASTM D5185m	1160	<b>1177</b>	1239	1231
Sulfur	ppm	ASTM D5185m	4996	<b>4030</b>	4107	3423
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.9</b>	14.8	16.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>7.6</b>	9.2	9.0
Visc @ 100°C	cSt	ASTM D445	15.7	<b>14.3</b>	14.1	14.3

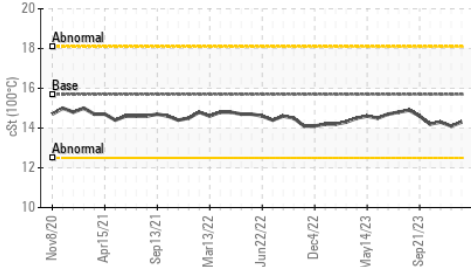
**FT-IR (Direct Trend)**



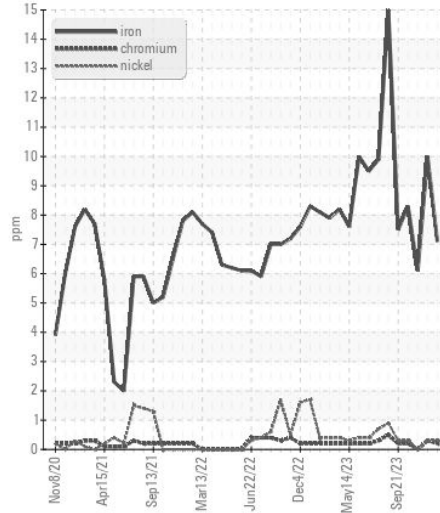
**Base Number**



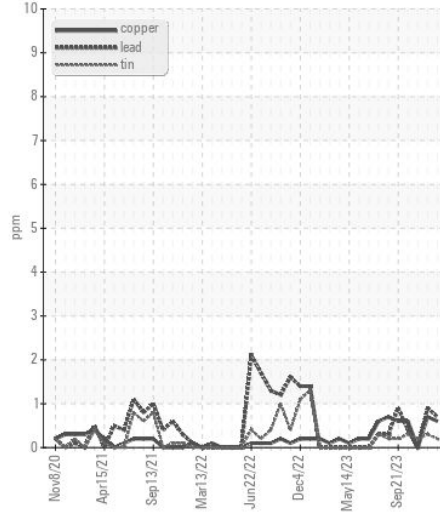
**Viscosity @ 100°C**



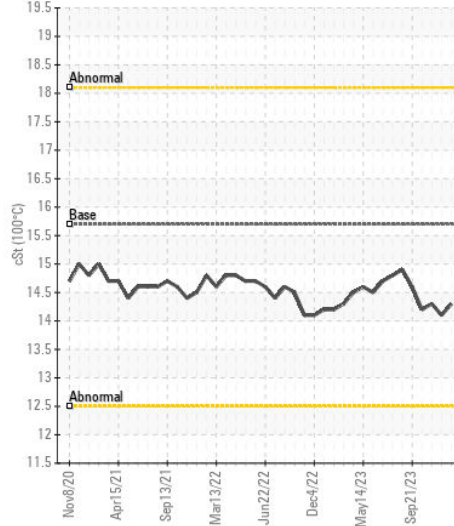
**Ferrous Alloys**



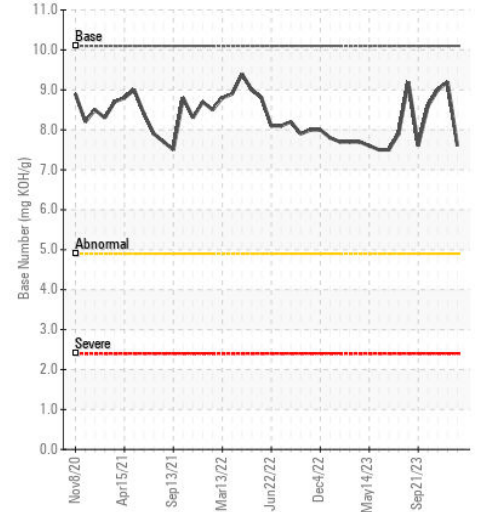
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

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

**Sample No.** : JR0201399

**Lab Number** : 06196357

**Unique Number** : 11058480

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

**Received** : 31 May 2024

**Tested** : 03 Jun 2024

**Diagnosed** : 03 Jun 2024 - Wes Davis

**Baxter Healthcare - Wood Boiler Biomass**

2859 OLD LINVILLE RD

MARION, NC

US 28752

Contact: RICKY STYLES

ricky\_styles@baxter.com

T: (828)756-4946

F:

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)