



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

Machine Id  
**JOHN DEERE 644L 1DW644LZJLL706347**

Component  
**Diesel Engine**

Fluid  
**{not provided} (28 QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0208950</b>	JR0200668	JR0186587
Sample Date		Client Info		<b>19 Apr 2024</b>	09 Feb 2024	06 Nov 2023
Machine Age	hrs	Client Info		<b>7471</b>	6993	6521
Oil Age	hrs	Client Info		<b>6993</b>	472	6521
Filter Age	hrs	Client Info		<b>0</b>	0	0
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>7</b>	10	8
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	3	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>3</b>	3	3
Lead	ppm	ASTM D5185m	>26	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>26	<b>2</b>	2	0
Tin	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<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.

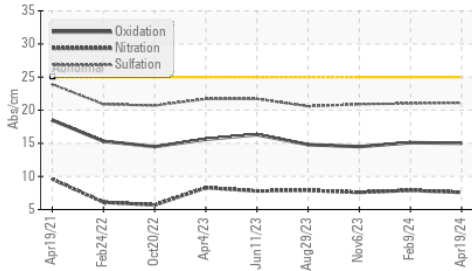
Silicon	ppm	ASTM D5185m	>22	<b>6</b>	8	9
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	0
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.6</b>	7.9	7.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.1</b>	21.0	20.9
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

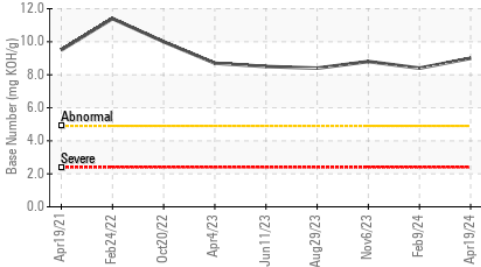
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<b>3</b>	0	2
Boron	ppm	ASTM D5185m		<b>239</b>	256	213
Barium	ppm	ASTM D5185m		<b>2</b>	14	0
Molybdenum	ppm	ASTM D5185m		<b>218</b>	255	217
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>751</b>	766	711
Calcium	ppm	ASTM D5185m		<b>1576</b>	1296	1550
Phosphorus	ppm	ASTM D5185m		<b>930</b>	911	812
Zinc	ppm	ASTM D5185m		<b>1066</b>	1044	1065
Sulfur	ppm	ASTM D5185m		<b>3481</b>	3221	2947
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.0</b>	15.1	14.5
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.0</b>	8.4	8.8
Visc @ 100°C	cSt	ASTM D445		<b>13.1</b>	13.3	13.0

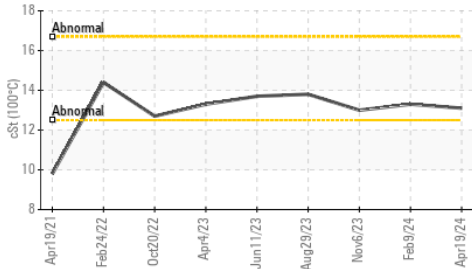
**FT-IR (Direct Trend)**



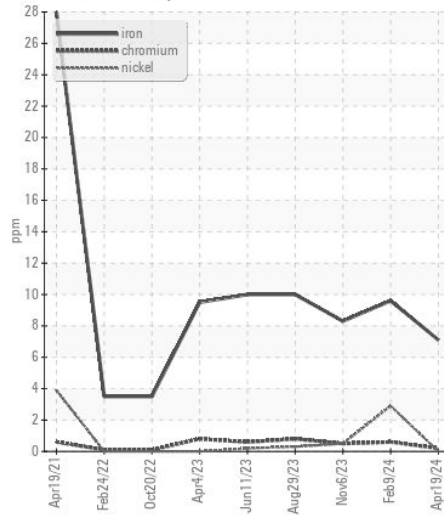
**Base Number**



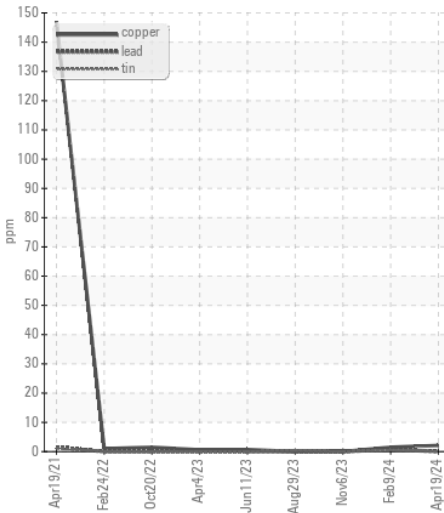
**Viscosity @ 100°C**



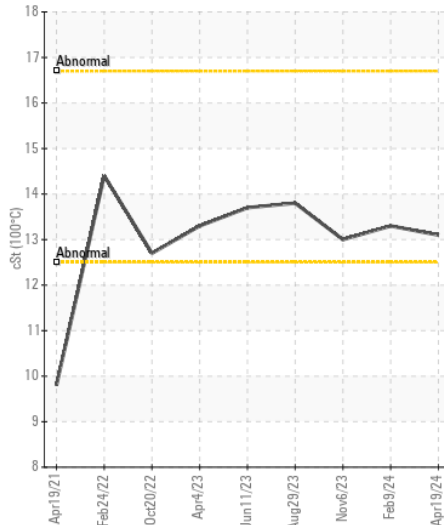
**Ferrous Alloys**



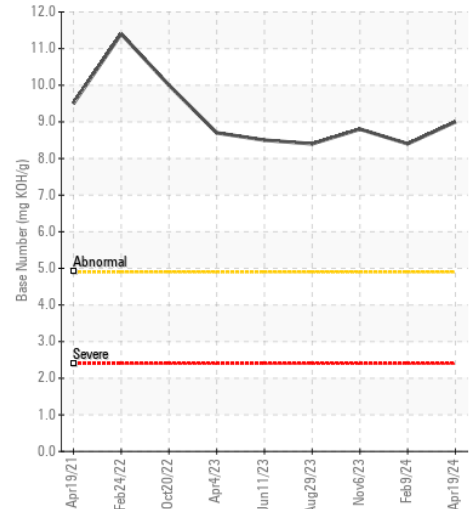
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0208950 **Received** : 22 Apr 2024  
**Lab Number** : 06155661 **Tested** : 23 Apr 2024  
**Unique Number** : 10991084 **Diagnosed** : 23 Apr 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

**JRE - GREENVILLE**  
 3604 HIGHWAY 264 E  
 GREENVILLE, NC  
 US 27834-5800

Contact: GREENVILLE SHOP  
 christopher.martin@jamesriverequipment.com

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)

T:  
F: