



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

Machine Id  
**JOHN DEERE 524L 1DW524LTPMF708707**  
 Component  
**Diesel Engine**  
 Fluid  
**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (22 QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0220969</b>	JR0214083	JR0201127
Sample Date		Client Info		<b>25 Jun 2024</b>	13 May 2024	08 Mar 2024
Machine Age	hrs	Client Info		<b>18541</b>	18106	17467
Oil Age	hrs	Client Info		<b>435</b>	639	856
Filter Age	hrs	Client Info		<b>435</b>	639	856
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>8</b>	17	21
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>5</b>	3	3
Lead	ppm	ASTM D5185m	>26	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>26	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	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.

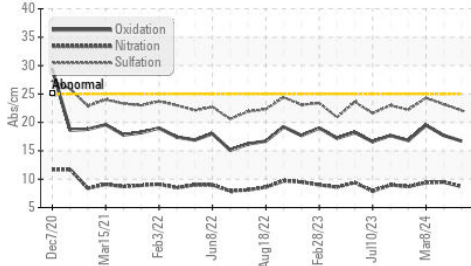
Silicon	ppm	ASTM D5185m	>22	<b>6</b>	6	6
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	1	0
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.3	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.7</b>	9.5	9.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.1</b>	23.2	24.3
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

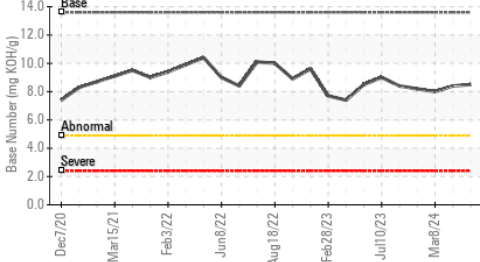
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<b>2</b>	3	4
Boron	ppm	ASTM D5185m		<b>205</b>	189	140
Barium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185m		<b>257</b>	249	241
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>818</b>	823	796
Calcium	ppm	ASTM D5185m		<b>1402</b>	1450	1410
Phosphorus	ppm	ASTM D5185m		<b>874</b>	880	888
Zinc	ppm	ASTM D5185m		<b>1158</b>	1084	991
Sulfur	ppm	ASTM D5185m		<b>2989</b>	3301	3038
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.7</b>	17.7	19.5
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>8.5</b>	8.4	8.0
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.5</b>	13.3	13.3

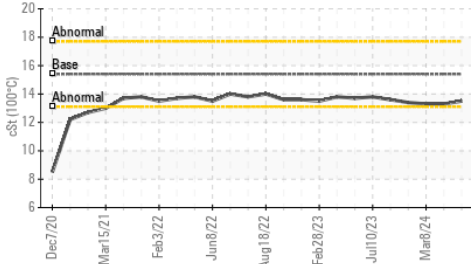
**FT-IR (Direct Trend)**



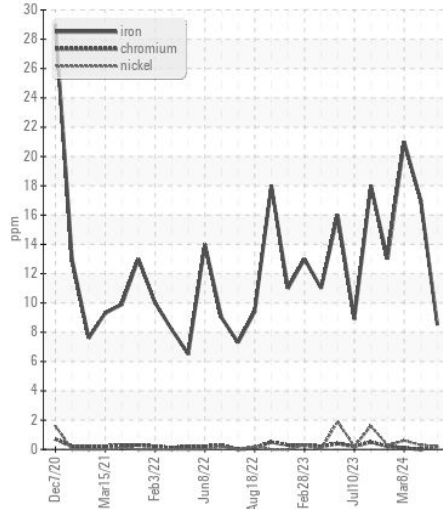
**Base Number**



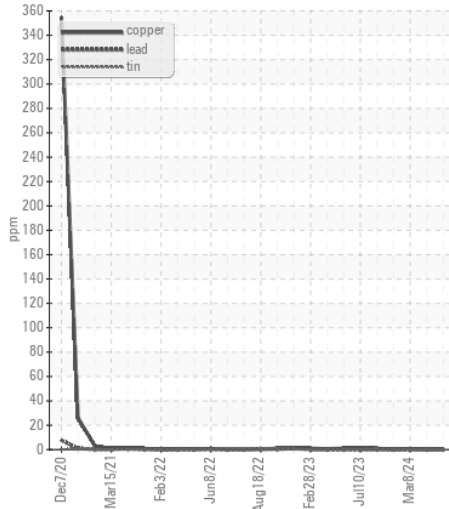
**Viscosity @ 100°C**



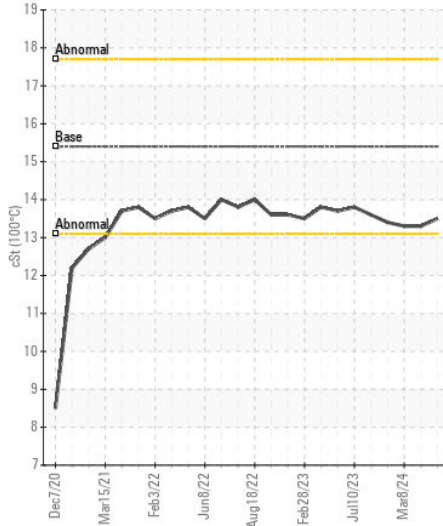
**Ferrous Alloys**



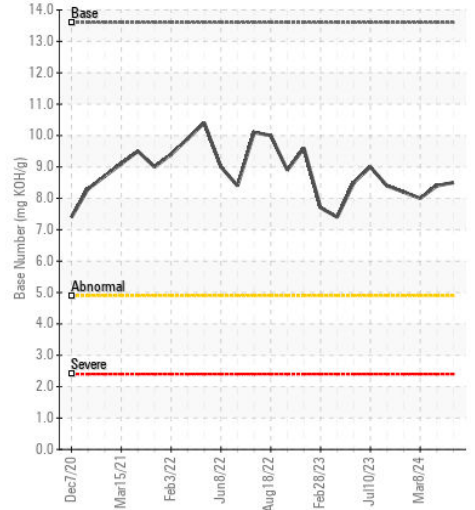
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

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

**Sample No.** : JR0220969

**Lab Number** : 06220809

**Unique Number** : 11099006

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

**Received** : 26 Jun 2024

**Tested** : 26 Jun 2024

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

**JRE - NEW BERN**

3816 MARTIN LUTHER KING BLVD

NEW BERN, NC

US 28562

Contact: NEW BERN SHOP

nick.etherdridge@jamesriverequipment.com;canastasio@wearcheckusa.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: