



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



Machine Id  
**JOHN DEERE 210G 1FF210GXCLF528978**  
 Component  
**Diesel Engine**  
 Fluid  
**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0207821</b>	JR0176968	JR0149404
Sample Date		Client Info		<b>03 May 2024</b>	08 Sep 2023	13 Oct 2022
Machine Age	hrs	Client Info		<b>2489</b>	1962	1571
Oil Age	hrs	Client Info		<b>527</b>	391	0
Filter Age	hrs	Client Info		<b>527</b>	391	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>27</b>	23	16
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>1</b>	2	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>5</b>	<1	2
Lead	ppm	ASTM D5185m	>26	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>26	<b>5</b>	6	7
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</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.

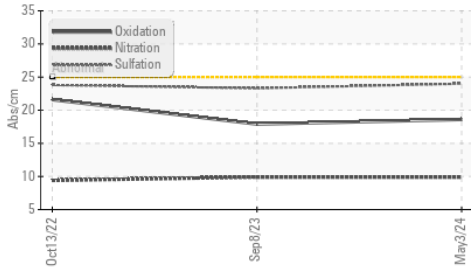
Silicon	ppm	ASTM D5185m	>22	<b>9</b>	8	5
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	2	0
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.8</b>	0.7	0.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.9</b>	9.9	9.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.0</b>	23.3	23.8
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

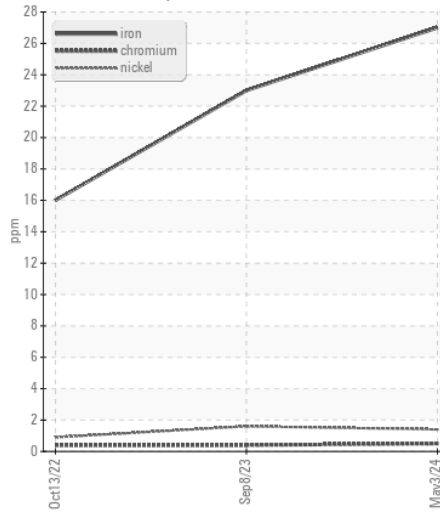
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<b>3</b>	4	3
Boron	ppm	ASTM D5185m		<b>156</b>	168	46
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>246</b>	228	38
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>820</b>	829	534
Calcium	ppm	ASTM D5185m		<b>1536</b>	1630	1728
Phosphorus	ppm	ASTM D5185m		<b>967</b>	876	744
Zinc	ppm	ASTM D5185m		<b>1123</b>	1109	895
Sulfur	ppm	ASTM D5185m		<b>2940</b>	3471	2983
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.6</b>	17.9	21.6
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>8.2</b>	8.3	10.9
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.9</b>	13.9	13.1

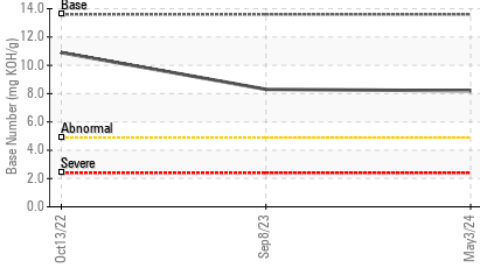
**FT-IR (Direct Trend)**



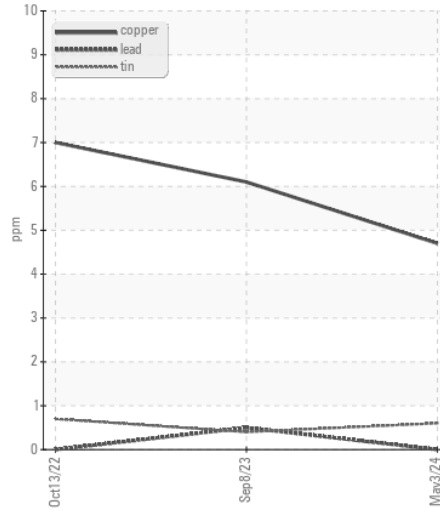
**Ferrous Alloys**



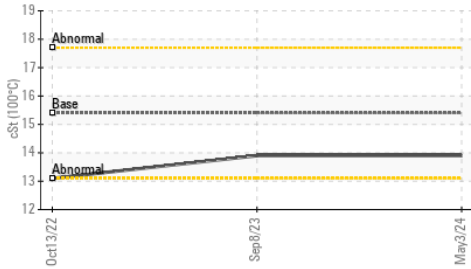
**Base Number**



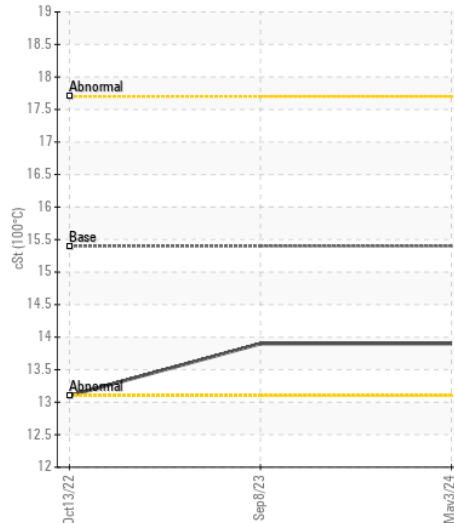
**Non-ferrous Metals**



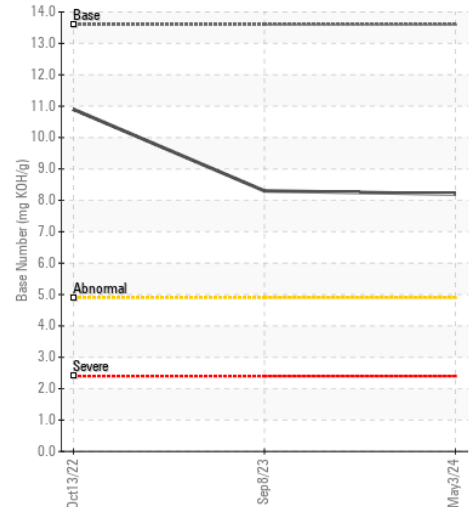
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

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

**Sample No.** : JR0207821

**Lab Number** : 06174921

**Unique Number** : 11020974

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

**Received** : 09 May 2024

**Tested** : 10 May 2024

**Diagnosed** : 10 May 2024 - Wes Davis

**JRE - ASHEVILLE**

101 BRUCE DRIVE

ASHEVILLE, NC

US 28806

Contact: Randy Warren

randy.warren@jamesriverequipment.com

T: (528)667-0176

F: (828)667-4865

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)