



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

Area  
**[W21730-SYNAGRO]**  
 Machine Id  
**JOHN DEERE 8R310 1RW8310DAMC186173**  
 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>JR0204408</b>	JR0175012	JR0164014
Sample Date		Client Info		<b>12 Apr 2024</b>	15 Sep 2023	29 Mar 2023
Machine Age	hrs	Client Info		<b>1632</b>	1151	854
Oil Age	hrs	Client Info		<b>0</b>	600	854
Filter Age	hrs	Client Info		<b>0</b>	600	854
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>23</b>	25	37
Chromium	ppm	ASTM D5185m	>11	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m	>5	<b>0</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	4
Lead	ppm	ASTM D5185m	>26	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>26	<b>3</b>	4	16
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
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.

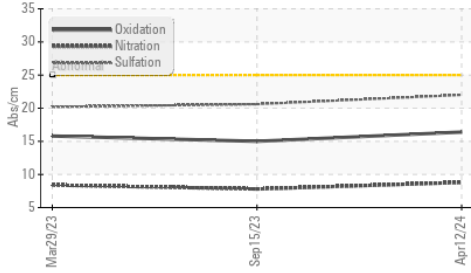
Silicon	ppm	ASTM D5185m	>22	<b>7</b>	7	7
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	2	<1
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.8</b>	7.8	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.0</b>	20.6	20.2
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

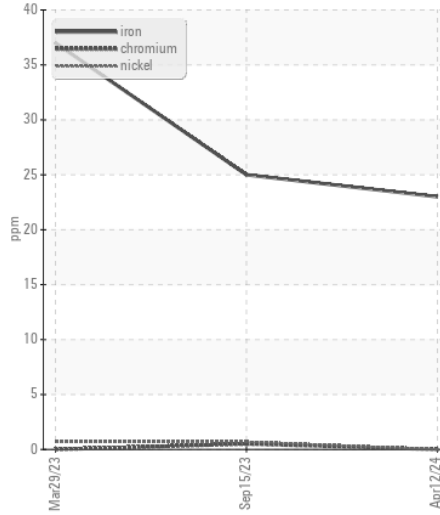
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<b>3</b>	2	1
Boron	ppm	ASTM D5185m		<b>288</b>	255	238
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>260</b>	252	248
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m		<b>837</b>	847	855
Calcium	ppm	ASTM D5185m		<b>1372</b>	1428	1481
Phosphorus	ppm	ASTM D5185m		<b>956</b>	908	866
Zinc	ppm	ASTM D5185m		<b>1093</b>	1099	1113
Sulfur	ppm	ASTM D5185m		<b>3449</b>	3624	3225
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.4</b>	15.0	15.8
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>9.1</b>	8.6	7.5
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.9</b>	13.2	13.8

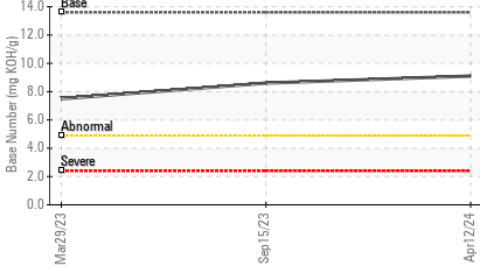
**FT-IR (Direct Trend)**



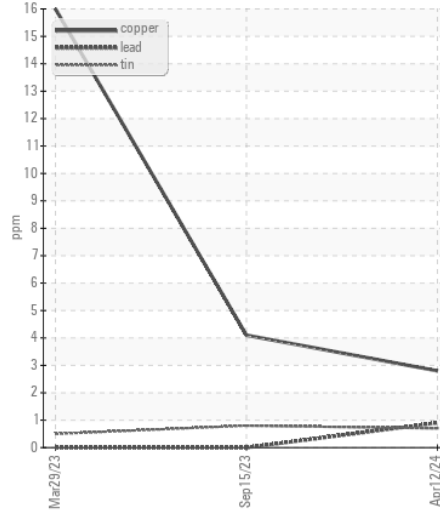
**Ferrous Alloys**



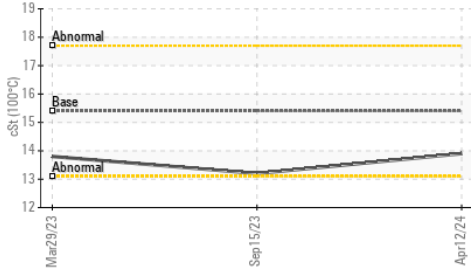
**Base Number**



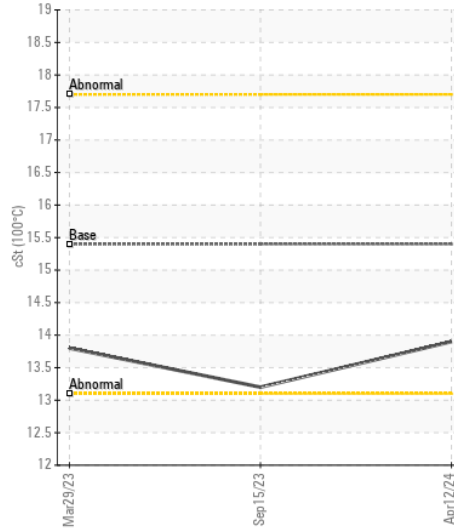
**Non-ferrous Metals**



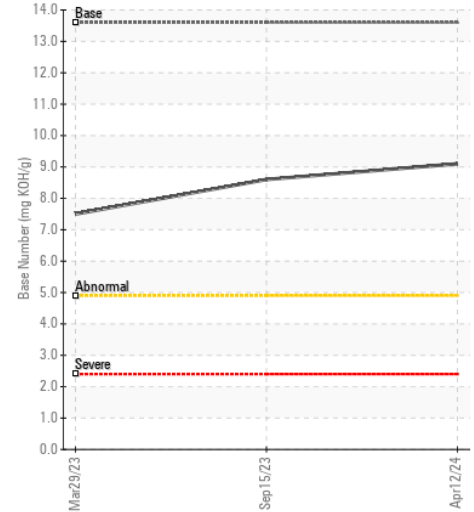
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0204408 **Received** : 18 Apr 2024  
**Lab Number** : 06153596 **Tested** : 19 Apr 2024  
**Unique Number** : 10983674 **Diagnosed** : 19 Apr 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

**JRE - BURKEVILLE**  
 510 WEST COLONIAL DR  
 BURKEVILLE, VA  
 US 23922

Contact: BRANDON BOLLING  
 bbolling@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)

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