



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

Machine Id  
**JOHN DEERE 410E 1DW410ELLPF716386**  
 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>JR0212086</b>	JR0199608	JR0180595
Sample Date		Client Info		<b>13 Jun 2024</b>	02 Apr 2024	02 Jan 2024
Machine Age	hrs	Client Info		<b>3477</b>	2967	2445
Oil Age	hrs	Client Info		<b>0</b>	0	0
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	>100	<b>13</b>	11	10
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>4</b>	3	4
Lead	ppm	ASTM D5185m	>40	<b>9</b>	2	2
Copper	ppm	ASTM D5185m	>330	<b>7</b>	6	10
Tin	ppm	ASTM D5185m	>15	<b>3</b>	2	2
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.

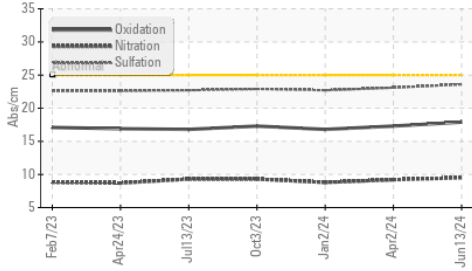
Silicon	ppm	ASTM D5185m	>25	<b>7</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	<1	<1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.5</b>	9.2	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.6</b>	23.1	22.7
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	>0.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

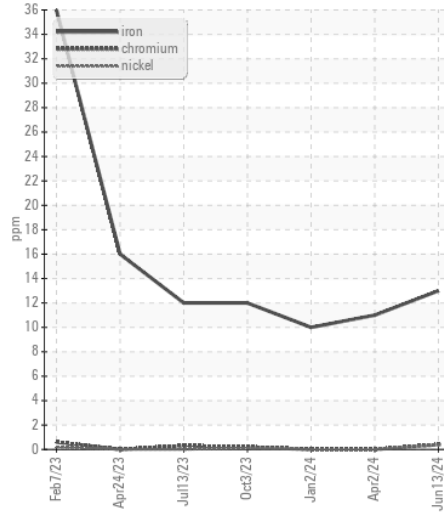
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>4</b>	4	4
Boron	ppm	ASTM D5185m		<b>104</b>	158	172
Barium	ppm	ASTM D5185m		<b>2</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>233</b>	253	255
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m		<b>640</b>	870	860
Calcium	ppm	ASTM D5185m		<b>1474</b>	1560	1472
Phosphorus	ppm	ASTM D5185m		<b>750</b>	959	908
Zinc	ppm	ASTM D5185m		<b>967</b>	1120	1123
Sulfur	ppm	ASTM D5185m		<b>2863</b>	3933	3211
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.9</b>	17.3	16.8
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>7.4</b>	8.0	8.0
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.7</b>	12.8	13.1

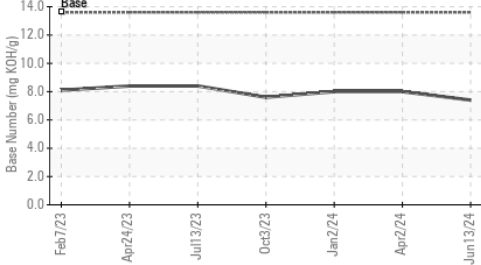
**FT-IR (Direct Trend)**



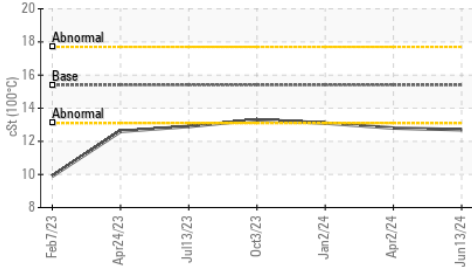
**Ferrous Alloys**



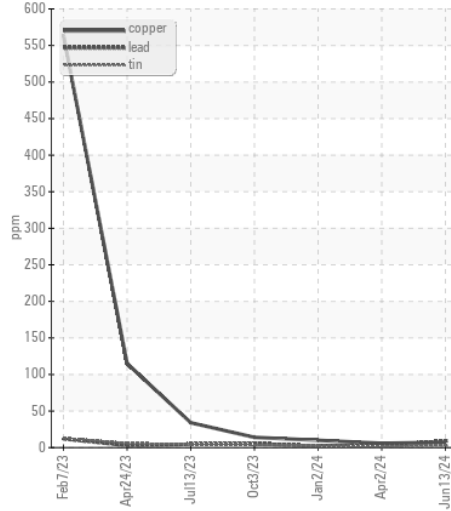
**Base Number**



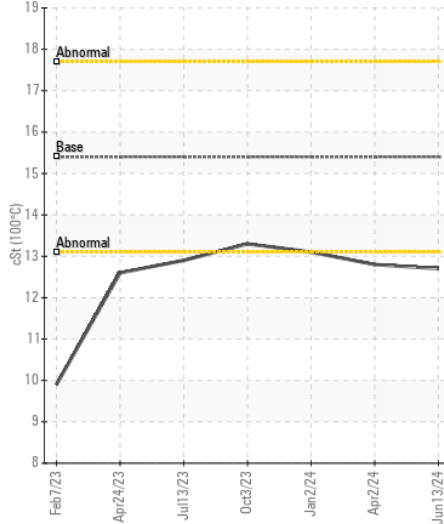
**Viscosity @ 100°C**



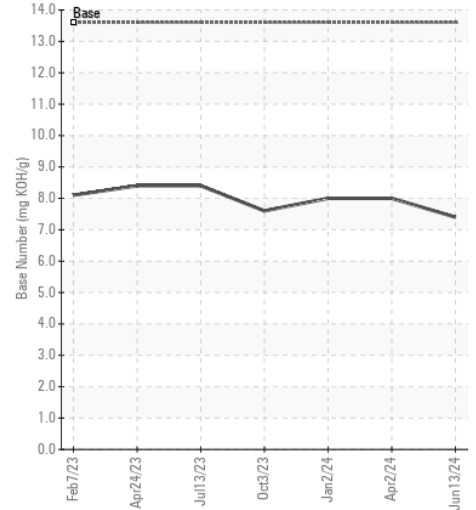
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0212086 **Received** : 18 Jun 2024  
**Lab Number** : 06213088 **Tested** : 19 Jun 2024  
**Unique Number** : 11085952 **Diagnosed** : 20 Jun 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: TBN )

**JRE - ASHLAND**  
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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)