



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

Machine Id  
**JOHN DEERE 160G 1FF160GXANF058770**  
 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>JR0215093</b>	JR0167005	---
Sample Date		Client Info		<b>11 Jul 2024</b>	22 Aug 2023	---
Machine Age	hrs	Client Info		<b>663</b>	628	---
Oil Age	hrs	Client Info		<b>663</b>	0	---
Filter Age	hrs	Client Info		<b>663</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	N/A	---
Filter Changed		Client Info		<b>N/A</b>	N/A	---
Sample Status				<b>NORMAL</b>	NORMAL	---

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>33</b>	7	---
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	2	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	2	---
Aluminum	ppm	ASTM D5185m	>31	<b>8</b>	5	---
Lead	ppm	ASTM D5185m	>26	<b>4</b>	1	---
Copper	ppm	ASTM D5185m	>26	<b>23</b>	18	---
Tin	ppm	ASTM D5185m	>4	<b>1</b>	<1	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

### CONTAMINATION

There is no indication of any contamination in the oil.

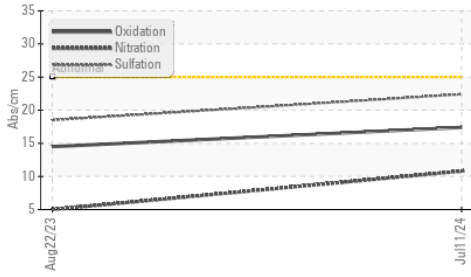
Silicon	ppm	ASTM D5185m	>22	<b>7</b>	5	---
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	1	---
Fuel	%	ASTM D3524	>2.1	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.21	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.8</b>	5.0	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.4</b>	18.5	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.21	<b>NEG</b>	NEG	---

### FLUID CONDITION

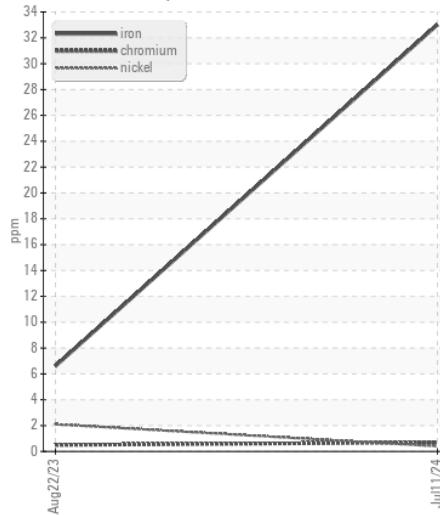
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<b>14</b>	1	---
Boron	ppm	ASTM D5185m		<b>24</b>	133	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>116</b>	74	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	---
Magnesium	ppm	ASTM D5185m		<b>178</b>	421	---
Calcium	ppm	ASTM D5185m		<b>2388</b>	1694	---
Phosphorus	ppm	ASTM D5185m		<b>1065</b>	1011	---
Zinc	ppm	ASTM D5185m		<b>1269</b>	1205	---
Sulfur	ppm	ASTM D5185m		<b>3138</b>	3646	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.4</b>	14.5	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>5.6</b>	9.3	---
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.8</b>	13.8	---

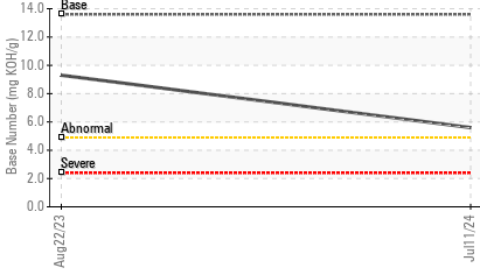
FT-IR (Direct Trend)



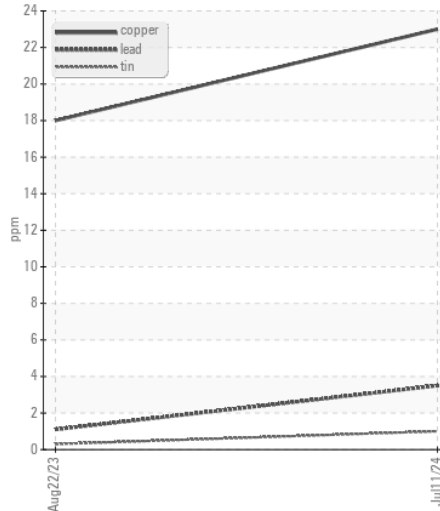
Ferrous Alloys



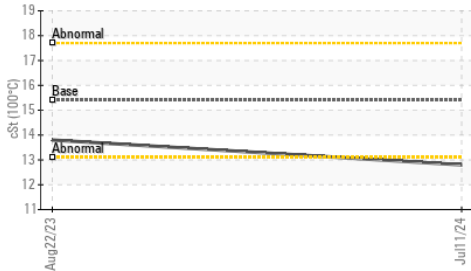
Base Number



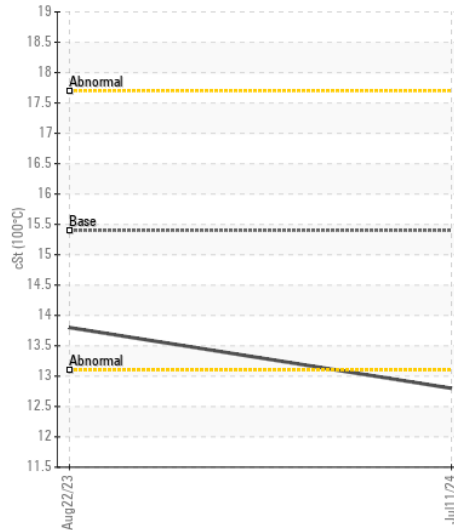
Non-ferrous Metals



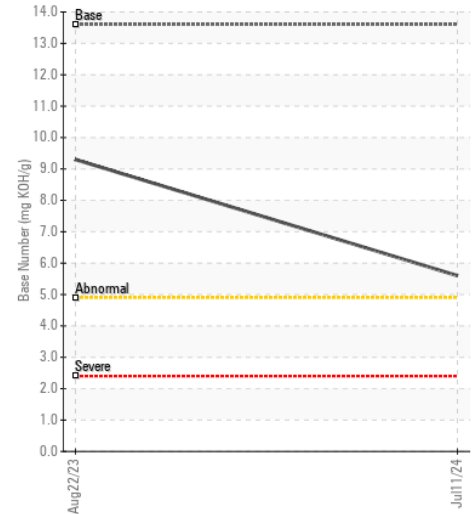
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0215093 **Received** : 12 Jul 2024  
**Lab Number** : 06234633 **Tested** : 15 Jul 2024  
**Unique Number** : 11123467 **Diagnosed** : 15 Jul 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: FuelDilution, PercentFuel, TBN )

**JRE - RICHLANDS**  
 450 FRONT ST  
 RICHLANDS, VA  
 US 24641

Contact: RONNIE MITCHELL  
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T: (540)380-2011

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)