



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



Machine Id  
**JOHN DEERE 410E-II 5465 (S/N 1DW410EBEMF709413)**  
 Component  
**Diesel Engine**  
 Fluid  
**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)**

### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0192719</b>	JR0178626	---
Sample Date		Client Info		<b>29 Nov 2023</b>	17 Aug 2023	---
Machine Age	hrs	Client Info		<b>4202</b>	3625	---
Oil Age	hrs	Client Info		<b>500</b>	3625	---
Filter Age	hrs	Client Info		<b>500</b>	500	---
Oil Changed		Client Info		<b>Changed</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>ATTENTION</b>	ABNORMAL	---

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>14</b>	22	---
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>31	<b>8</b>	4	---
Lead	ppm	ASTM D5185m	>26	<b>3</b>	22	---
Copper	ppm	ASTM D5185m	>26	<b>13</b>	▲ 32	---
Tin	ppm	ASTM D5185m	>4	<b>2</b>	▲ 5	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

### CONTAMINATION

Fuel content negligible. No other contaminants were detected in the oil.

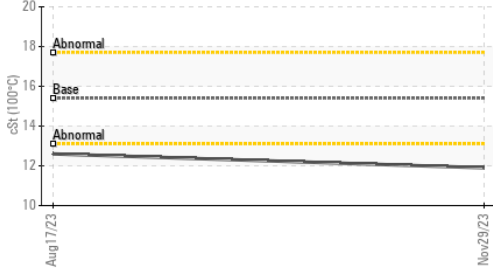
Silicon	ppm	ASTM D5185m	>22	<b>12</b>	8	---
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	3	---
Fuel	%	ASTM D3524	>8.0	<b>5.2</b>	<1.0	---
Water		WC Method	>0.21	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.5	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.8</b>	10.6	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.0</b>	25.6	---
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

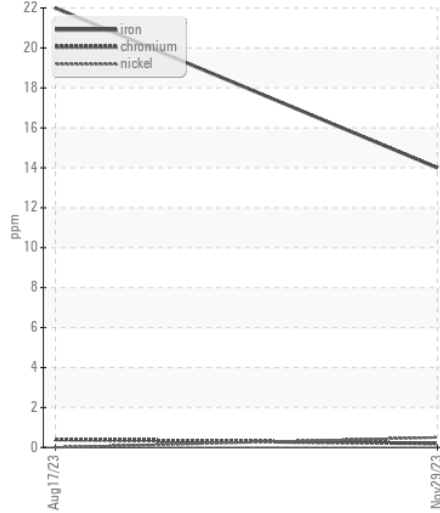
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>31	<b>3</b>	3	---
Boron	ppm	ASTM D5185m		<b>162</b>	50	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>239</b>	254	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	---
Magnesium	ppm	ASTM D5185m		<b>778</b>	796	---
Calcium	ppm	ASTM D5185m		<b>1298</b>	1493	---
Phosphorus	ppm	ASTM D5185m		<b>837</b>	788	---
Zinc	ppm	ASTM D5185m		<b>993</b>	983	---
Sulfur	ppm	ASTM D5185m		<b>2753</b>	2865	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.1</b>	20.2	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>8.1</b>	6.7	---
Visc @ 100°C	cSt	ASTM D445	15.4	▲ <b>11.9</b>	12.6	---

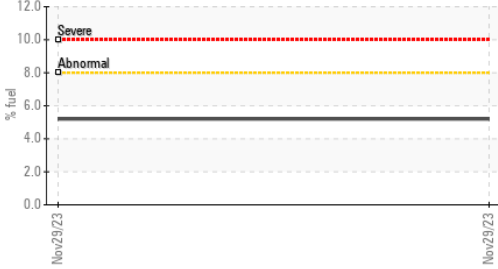
▲ Viscosity @ 100°C



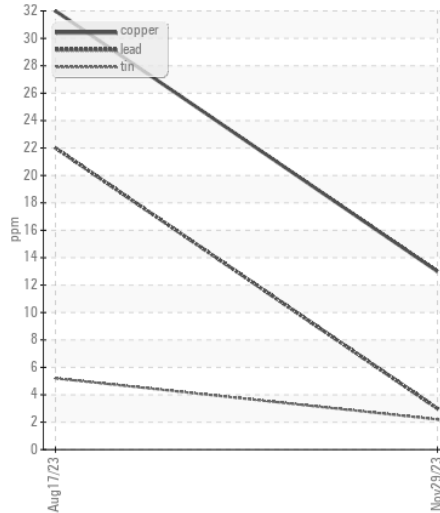
Ferrous Alloys



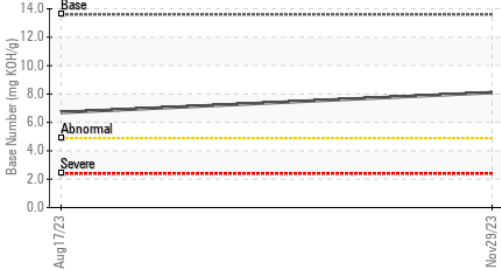
Fuel Dilution



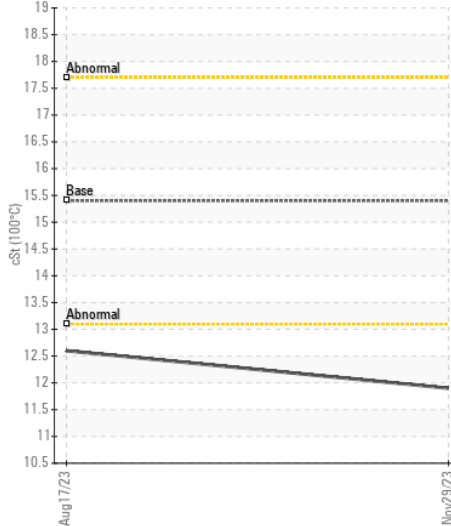
Non-ferrous Metals



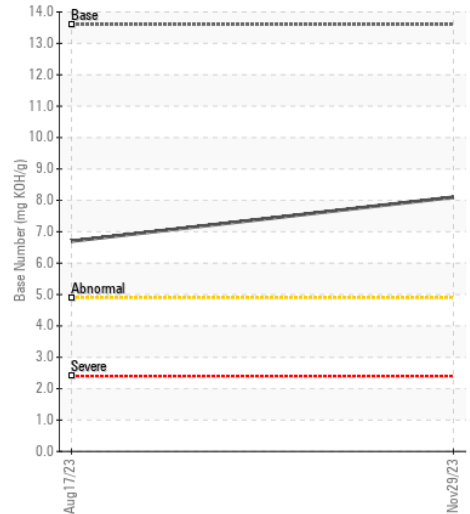
Base Number



▲ Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0192719 **Received** : 10 Jan 2024  
**Lab Number** : 06056541 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10822490 **Diagnostician** : Doug Bogart  
**Test Package** : CONST ( Additional Tests: FuelDilution, PercentFuel, TBN )

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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