



# OIL ANALYSIS REPORT

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



Area  
**Store 9 - Marietta**  
Machine Id  
**JOHN DEERE 650K 1T0650KKJPF435702**  
Component  
**Diesel Engine**  
Fluid  
**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (4 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LEC0051622</b>	LEC0044382	---
Sample Date		Client Info		<b>11 Jun 2024</b>	28 Aug 2023	---
Machine Age	hrs	Client Info		<b>1040</b>	502	---
Oil Age	hrs	Client Info		<b>538</b>	502	---
Filter Age	hrs	Client Info		<b>538</b>	502	---
Oil Changed		Client Info		<b>Changed</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>NORMAL</b>	ABNORMAL	---

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>51	<b>18</b>	35	---
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>0</b>	0	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>31	<b>7</b>	8	---
Lead	ppm	ASTM D5185m	>26	<b>1</b>	4	---
Copper	ppm	ASTM D5185m	>26	<b>15</b>	▲ 131	---
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	2	---
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

There is no indication of any contamination in the oil.

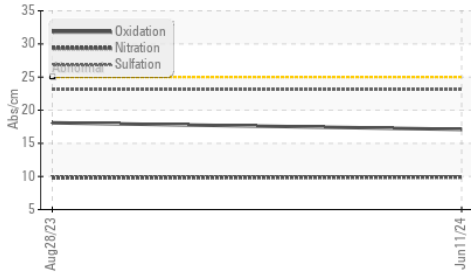
Silicon	ppm	ASTM D5185m	>120	<b>7</b>	10	---
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	3	---
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	0.5	---
Water		WC Method	>0.21	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	0.5	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.9</b>	9.8	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.1</b>	23.1	---
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

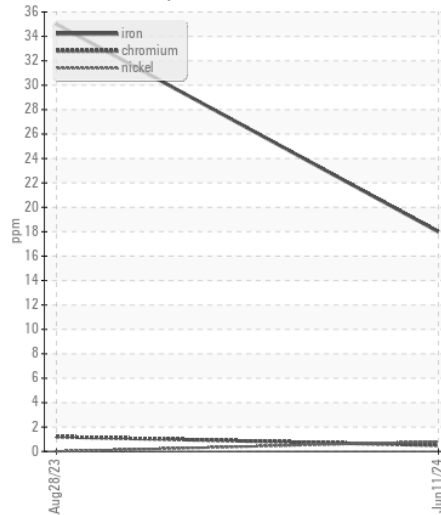
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<b>4</b>	5	---
Boron	ppm	ASTM D5185m		<b>160</b>	165	---
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	4	---
Molybdenum	ppm	ASTM D5185m		<b>212</b>	214	---
Manganese	ppm	ASTM D5185m		<b>1</b>	4	---
Magnesium	ppm	ASTM D5185m		<b>815</b>	860	---
Calcium	ppm	ASTM D5185m		<b>1528</b>	1557	---
Phosphorus	ppm	ASTM D5185m		<b>967</b>	974	---
Zinc	ppm	ASTM D5185m		<b>1166</b>	1225	---
Sulfur	ppm	ASTM D5185m		<b>3685</b>	3708	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.1</b>	18.1	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>8.4</b>	8.4	---
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.6</b>	● 11.4	---

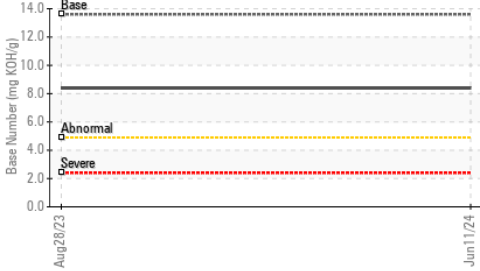
FT-IR (Direct Trend)



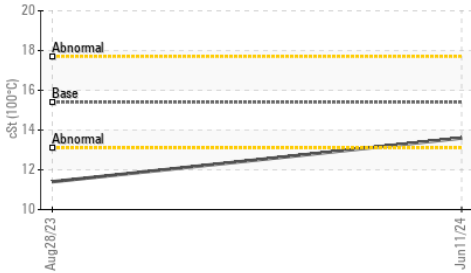
Ferrous Alloys



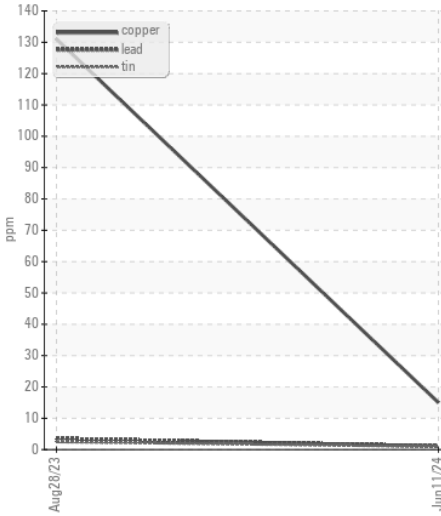
Base Number



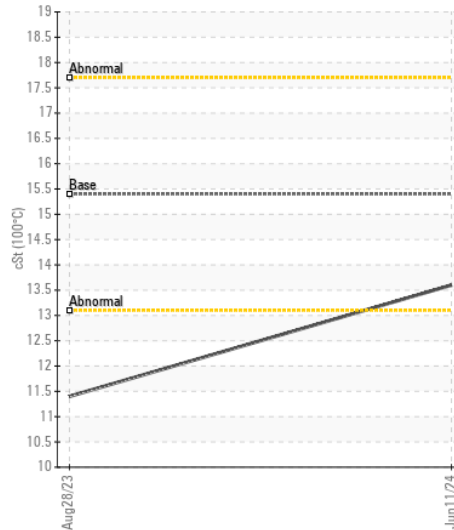
Viscosity @ 100°C



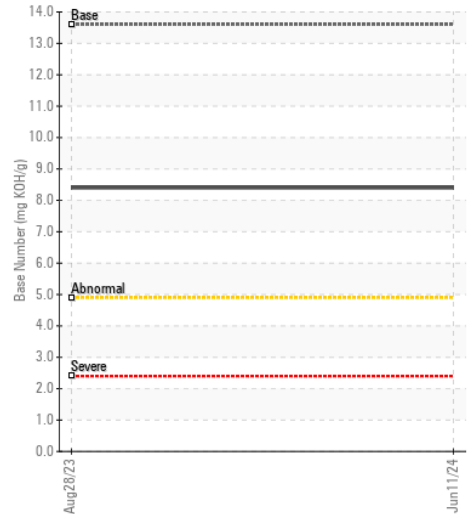
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0051622 **Received** : 17 Jun 2024  
**Lab Number** : 06211419 **Tested** : 18 Jun 2024  
**Unique Number** : 11084283 **Diagnosed** : 18 Jun 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

**LESLIE EQUIPMENT COMPANY**  
 105 TENNIS CENTER DR.  
 MARIETTA, OH  
 US 45750-9765  
 Contact: LEANNE KENDALL  
 KendalLeanne@lec1.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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