



# OIL ANALYSIS REPORT

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



Area  
**Store 9 - Marietta**  
Machine Id  
**JOHN DEERE 850L 1T0850LXHKF365119**  
Component  
**Diesel Engine**  
Fluid  
**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (7 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LEC0050182</b>	LEC0045552	LEC0037512
Sample Date		Client Info		<b>15 May 2024</b>	26 Oct 2023	18 Jan 2023
Machine Age	hrs	Client Info		<b>2017</b>	1524	980
Oil Age	hrs	Client Info		<b>493</b>	544	582
Filter Age	hrs	Client Info		<b>493</b>	544	582
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>51	<b>43</b>	63	119
Chromium	ppm	ASTM D5185m	>11	<b>1</b>	1	2
Nickel	ppm	ASTM D5185m	>5	<b>2</b>	6	▲ 20
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>7</b>	7	8
Lead	ppm	ASTM D5185m	>26	<b>2</b>	<1	4
Copper	ppm	ASTM D5185m	>26	<b>13</b>	16	20
Tin	ppm	ASTM D5185m	>4	<b>2</b>	1	3
Vanadium	ppm	ASTM D5185m		<b>&lt;1</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.

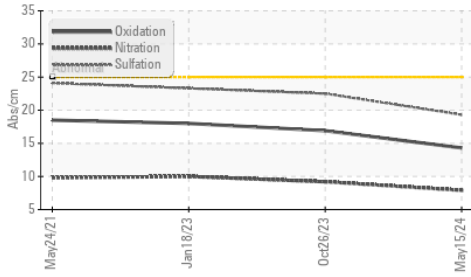
Silicon	ppm	ASTM D5185m	>120	<b>19</b>	9	11
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	2	6
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.9</b>	9.2	10.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.3</b>	22.5	23.3
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

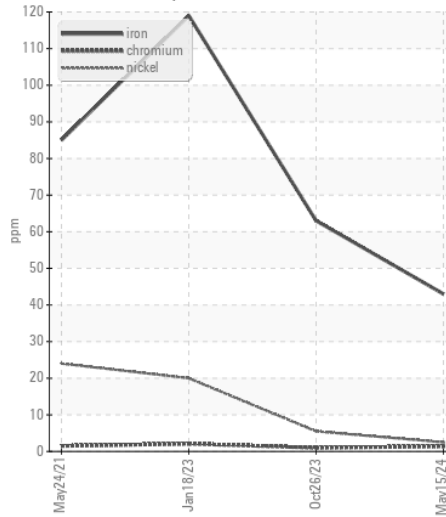
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<b>2</b>	3	4
Boron	ppm	ASTM D5185m		<b>175</b>	154	178
Barium	ppm	ASTM D5185m		<b>0</b>	0	6
Molybdenum	ppm	ASTM D5185m		<b>247</b>	243	265
Manganese	ppm	ASTM D5185m		<b>1</b>	2	3
Magnesium	ppm	ASTM D5185m		<b>830</b>	845	836
Calcium	ppm	ASTM D5185m		<b>1531</b>	1531	1484
Phosphorus	ppm	ASTM D5185m		<b>1039</b>	962	844
Zinc	ppm	ASTM D5185m		<b>1175</b>	1199	1098
Sulfur	ppm	ASTM D5185m		<b>3400</b>	2980	3117
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.3</b>	16.9	18.0
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>8.2</b>	7.5	8.6
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.3</b>	13.1	12.7

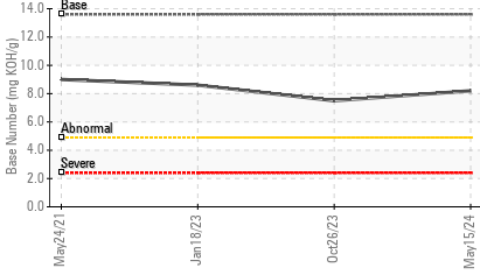
**FT-IR (Direct Trend)**



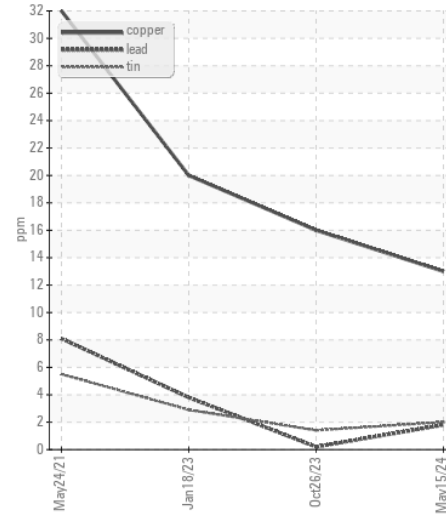
**Ferrous Alloys**



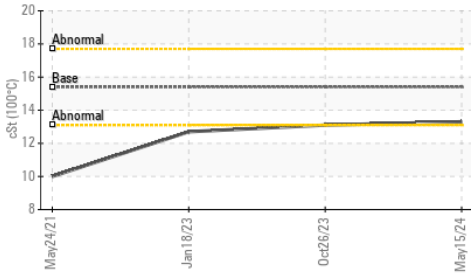
**Base Number**



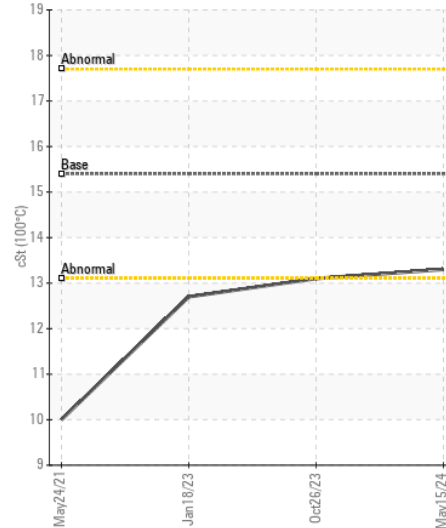
**Non-ferrous Metals**



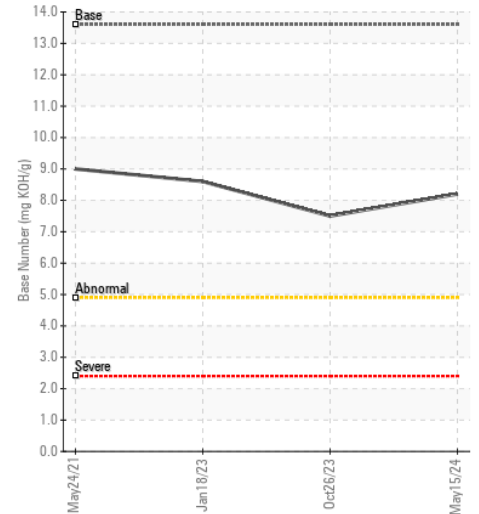
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0050182 **Received** : 21 May 2024  
**Lab Number** : 06185971 **Tested** : 22 May 2024  
**Unique Number** : 11042723 **Diagnosed** : 22 May 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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