



# OIL ANALYSIS REPORT

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



Area  
**Store 4 - Fairmont**  
Machine Id  
**JOHN DEERE 850K 1T0850KXLDE249329**  
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>LEC0049407</b>	LEC0039491	LEC0030205
Sample Date		Client Info		<b>02 Jul 2024</b>	30 May 2023	21 Jul 2022
Machine Age	hrs	Client Info		<b>3845</b>	3576	3193
Oil Age	hrs	Client Info		<b>0</b>	0	293
Filter Age	hrs	Client Info		<b>0</b>	0	293
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	>51	<b>12</b>	12	9
Chromium	ppm	ASTM D5185m	>11	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>1</b>	3	2
Lead	ppm	ASTM D5185m	>26	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>26	<b>0</b>	<1	<1
Tin	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</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.

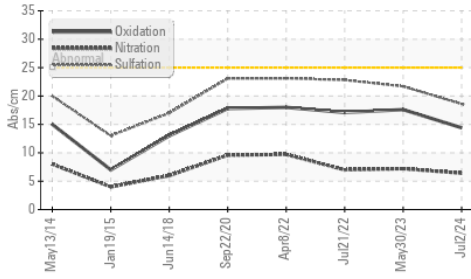
Silicon	ppm	ASTM D5185m	>120	<b>5</b>	10	7
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.4</b>	7.2	7.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.6</b>	21.7	22.8
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

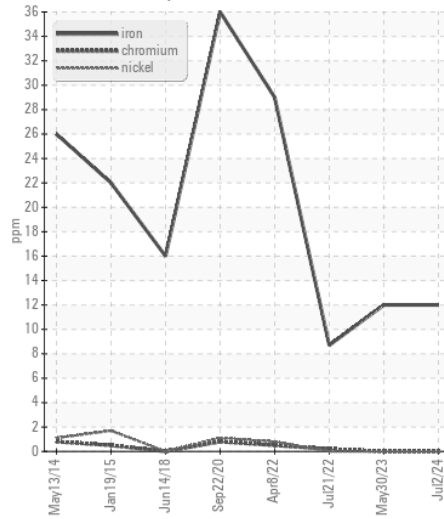
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<b>2</b>	3	1
Boron	ppm	ASTM D5185m		<b>77</b>	369	446
Barium	ppm	ASTM D5185m		<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m		<b>77</b>	121	122
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>845</b>	500	557
Calcium	ppm	ASTM D5185m		<b>1251</b>	1558	1512
Phosphorus	ppm	ASTM D5185m		<b>1028</b>	835	891
Zinc	ppm	ASTM D5185m		<b>1215</b>	1062	1053
Sulfur	ppm	ASTM D5185m		<b>3671</b>	2940	3702
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.4</b>	17.6	17.1
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>9.3</b>	8.6	10.2
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.4</b>	13.4	14.5

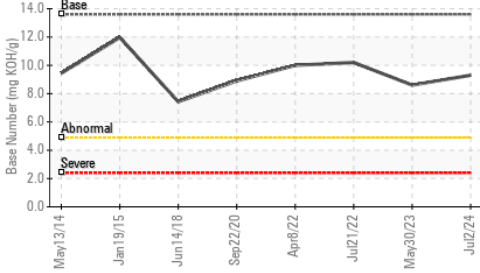
**FT-IR (Direct Trend)**



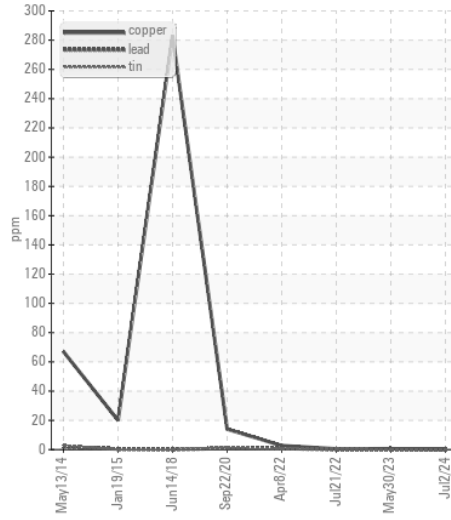
**Ferrous Alloys**



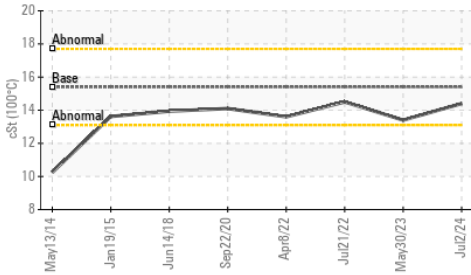
**Base Number**



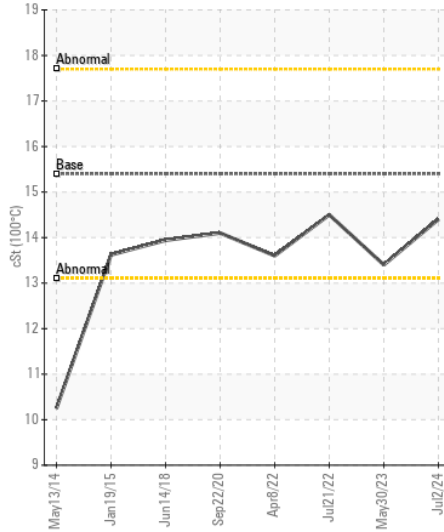
**Non-ferrous Metals**



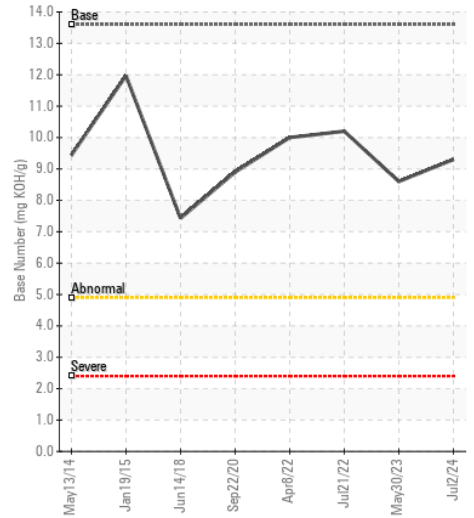
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0049407 **Received** : 15 Jul 2024  
**Lab Number** : 06235689 **Tested** : 16 Jul 2024  
**Unique Number** : 11124523 **Diagnosed** : 16 Jul 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: TBN )

**APEX PIPELINE**  
 P.O. BOX 580  
 NITRO, WV  
 US 25143  
 Contact: KELLY TUCKER

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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