



OIL ANALYSIS REPORT

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

Area  
**Store 9 - Marietta [ro#134148]**

Machine Id  
**L06210V230345**

Component  
**Diesel Engine**

Fluid  
**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (14 QTS)**

**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>LEC0034806</b>	LEC0006905	---
Sample Date		Client Info		<b>16 Nov 2022</b>	24 Oct 2019	---
Machine Age	hrs	Client Info		<b>2061</b>	0	---
Oil Age	hrs	Client Info		<b>408</b>	0	---
Filter Age	hrs	Client Info		<b>408</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>ABNORMAL</b>	ABNORMAL	---

**WEAR**

Cylinder, crank, or cam shaft wear is indicated. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>▲ 59</b>	44	---
Chromium	ppm	ASTM D5185m	>11	<b>2</b>	1	---
Nickel	ppm	ASTM D5185m	>5	<b>2</b>	2	---
Titanium	ppm	ASTM D5185m		<b>0</b>	0	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>31	<b>4</b>	2	---
Lead	ppm	ASTM D5185m	>26	<b>4</b>	0	---
Copper	ppm	ASTM D5185m	>26	<b>2</b>	15	---
Tin	ppm	ASTM D5185m	>4	<b>1</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>0</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.

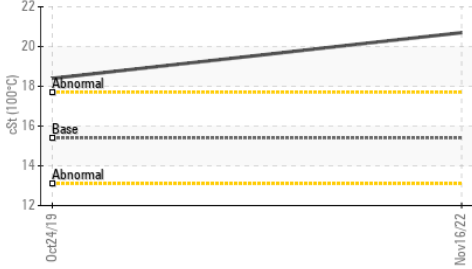
Silicon	ppm	ASTM D5185m	>120	<b>6</b>	4	---
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	11	---
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.21	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>22.4</b>	18.2	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>37.4</b>	31.6	---
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**

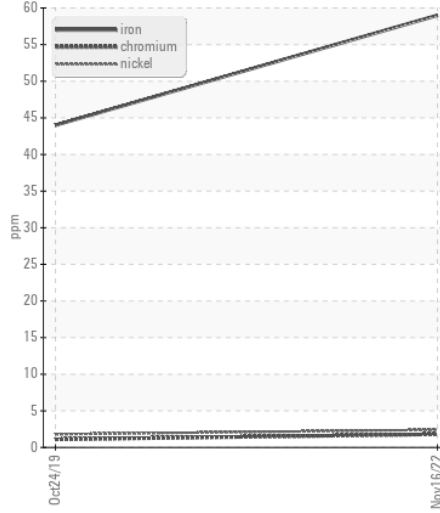
The oil viscosity is higher than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>31	<b>2</b>	5	---
Boron	ppm	ASTM D5185m		<b>168</b>	119	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>225</b>	30	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	2	---
Magnesium	ppm	ASTM D5185m		<b>724</b>	88	---
Calcium	ppm	ASTM D5185m		<b>1591</b>	2211	---
Phosphorus	ppm	ASTM D5185m		<b>843</b>	911	---
Zinc	ppm	ASTM D5185m		<b>1124</b>	1148	---
Sulfur	ppm	ASTM D5185m		<b>3435</b>	2876	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>58.2</b>	45	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>7.4</b>	5.4	---
Visc @ 100°C	cSt	ASTM D445	15.4	<b>▲ 20.7</b>	▲ 18.4	---

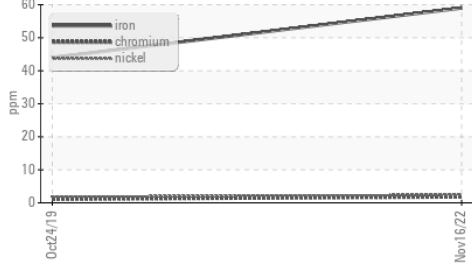
▲ Viscosity @ 100°C



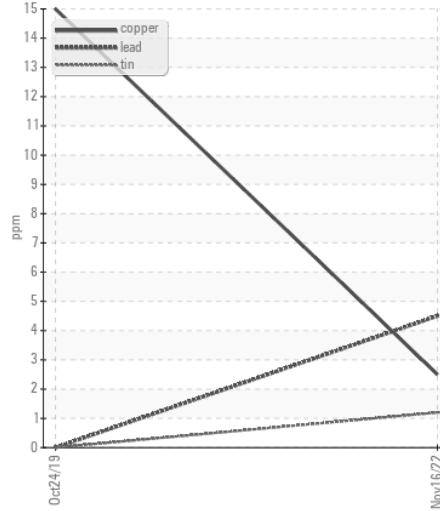
▲ Ferrous Alloys



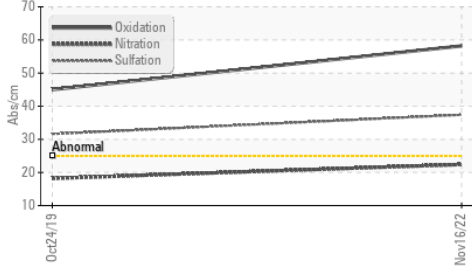
▲ Ferrous Alloys



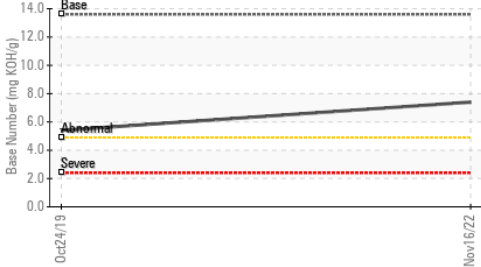
Non-ferrous Metals



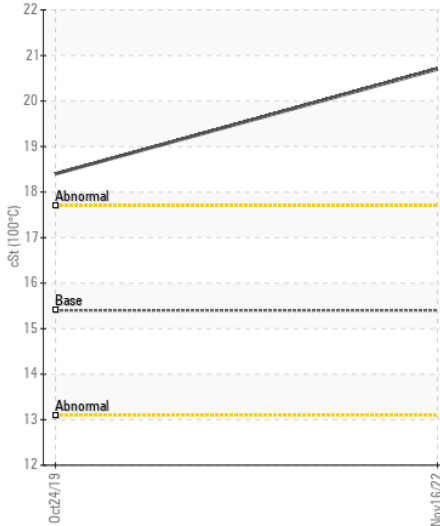
FT-IR (Direct Trend)



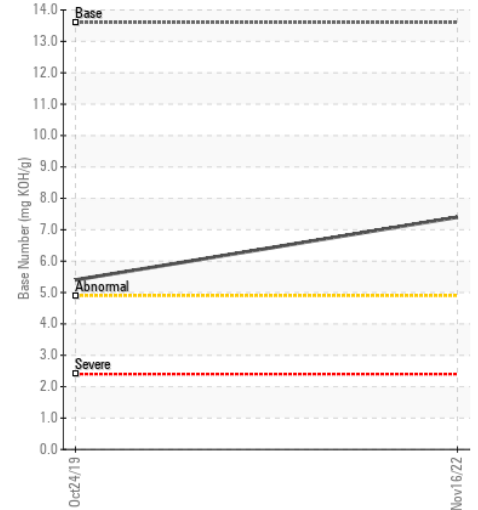
Base Number



▲ Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0034806 **Received** : 18 Nov 2022  
**Lab Number** : 05697248 **Tested** : 21 Nov 2022  
**Unique Number** : 10221821 **Diagnosed** : 21 Nov 2022 - Don Baldrige  
**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)

T: (740)373-5570