



# OIL ANALYSIS REPORT

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



Machine Id  
**JOHN DEERE 310E 74346 (S/N 1DW310EXTHF684349)**  
Component  
**Diesel Engine**  
Fluid  
**MOBIL DELVAC 1300 SUPER15W40 (9 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LEC0046623</b>	LEC0043373	LEC0031809
Sample Date		Client Info		<b>29 May 2024</b>	12 Sep 2023	10 Oct 2022
Machine Age	hrs	Client Info		<b>5000</b>	4488	3834
Oil Age	hrs	Client Info		<b>500</b>	654	600
Filter Age	hrs	Client Info		<b>500</b>	654	600
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	ABNORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>43</b>	▲ 76	▲ 62
Chromium	ppm	ASTM D5185m	>11	<b>2</b>	2	2
Nickel	ppm	ASTM D5185m	>5	<b>1</b>	2	2
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>3</b>	4	5
Lead	ppm	ASTM D5185m	>26	<b>&lt;1</b>	<1	1
Copper	ppm	ASTM D5185m	>26	<b>3</b>	7	20
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
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.

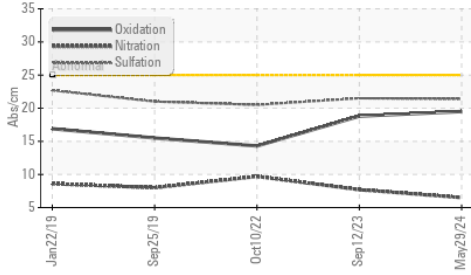
Silicon	ppm	ASTM D5185m	>120	<b>4</b>	6	5
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	0
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.3	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.5</b>	7.7	9.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.4</b>	21.5	20.5
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

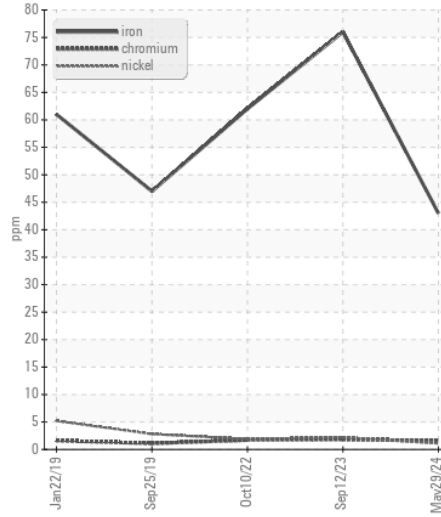
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<b>2</b>	3	2
Boron	ppm	ASTM D5185m	0	<b>55</b>	30	31
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>48</b>	51	91
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	2	1
Magnesium	ppm	ASTM D5185m	0	<b>523</b>	525	171
Calcium	ppm	ASTM D5185m		<b>1654</b>	1798	2133
Phosphorus	ppm	ASTM D5185m		<b>819</b>	819	965
Zinc	ppm	ASTM D5185m		<b>970</b>	1047	1245
Sulfur	ppm	ASTM D5185m		<b>2853</b>	3196	3808
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.5</b>	18.8	14.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.4	<b>9.7</b>	8.8	6.3
Visc @ 100°C	cSt	ASTM D445	14	<b>12.7</b>	12.7	12.6

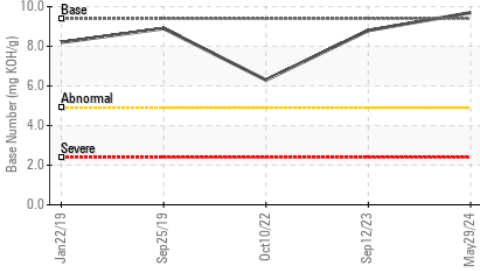
FT-IR (Direct Trend)



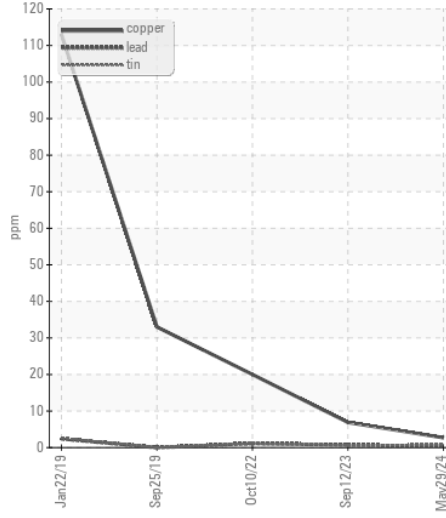
Ferrous Alloys



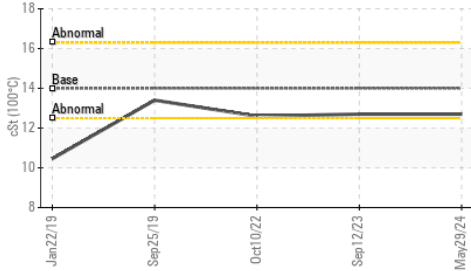
Base Number



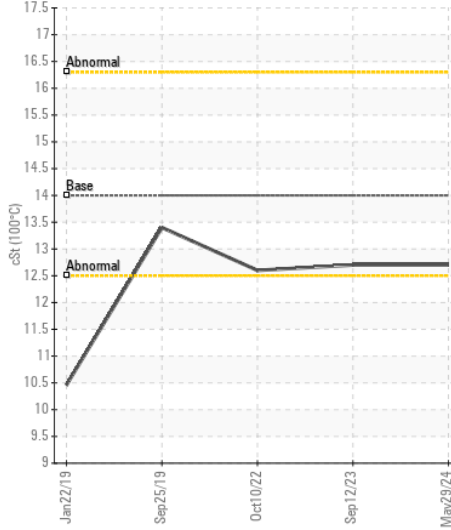
Non-ferrous Metals



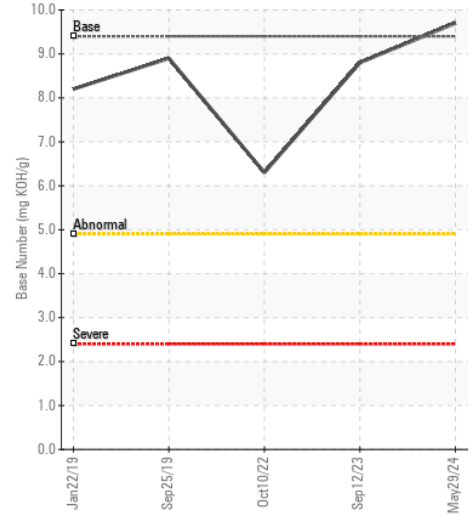
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0046623 **Received** : 03 Jun 2024  
**Lab Number** : 06197483 **Tested** : 04 Jun 2024  
**Unique Number** : 11059606 **Diagnosed** : 04 Jun 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: TBN )

**CHISLER INC.**  
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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)