



# OIL ANALYSIS REPORT

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

Area  
**Store 9 - Marietta**  
Machine Id  
**JOHN DEERE 5010**  
Component  
**Diesel Engine**  
Fluid  
**LYDEN 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LEC0044010</b>	LEC0041336	LEC0034660
Sample Date		Client Info		<b>04 Jan 2024</b>	13 Jul 2023	21 Apr 2023
Machine Age	hrs	Client Info		<b>2263</b>	1999	1765
Oil Age	hrs	Client Info		<b>264</b>	234	258
Filter Age	hrs	Client Info		<b>264</b>	234	258
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>8</b>	6	5
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>72</b>	64	57
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>2</b>	4	1
Lead	ppm	ASTM D5185m	>26	<b>0</b>	0	1
Copper	ppm	ASTM D5185m	>26	<b>&lt;1</b>	0	0
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
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

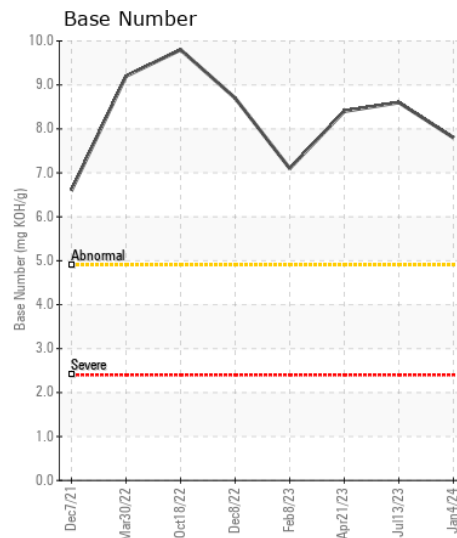
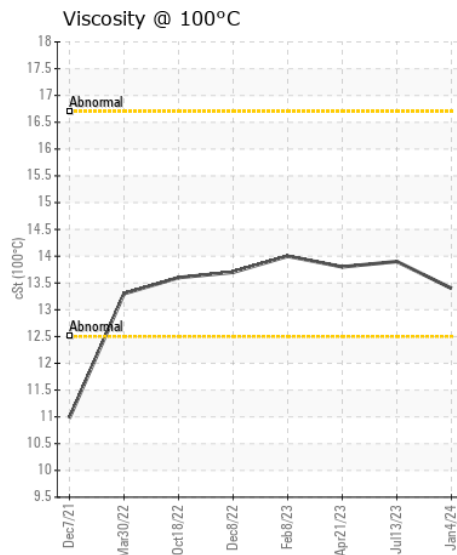
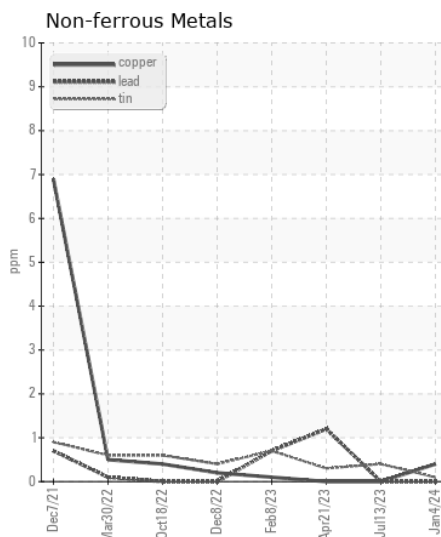
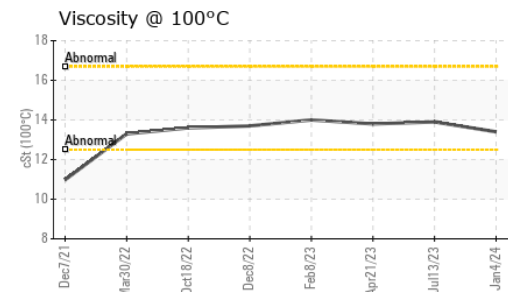
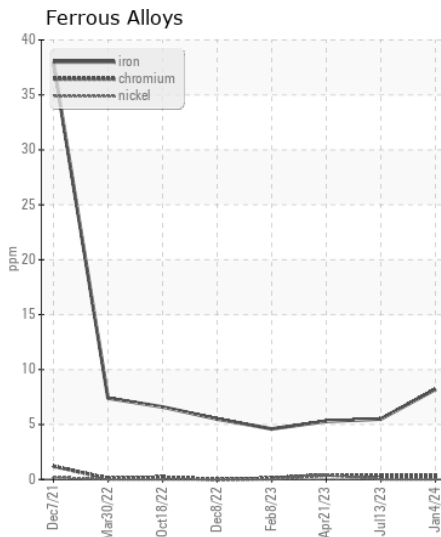
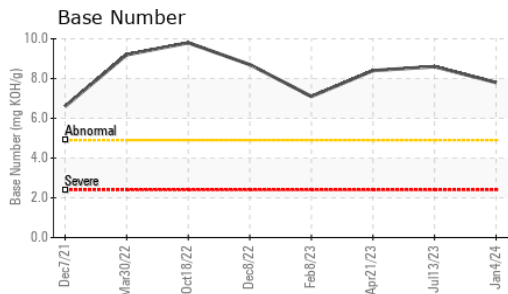
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>120	<b>8</b>	9	7
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	2	4
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>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.7</b>	7.7	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.4</b>	18.8	19.4
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>0</b>	2	2
Boron	ppm	ASTM D5185m		<b>127</b>	148	113
Barium	ppm	ASTM D5185m		<b>3</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>11</b>	4	8
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>395</b>	512	495
Calcium	ppm	ASTM D5185m		<b>1649</b>	1738	1655
Phosphorus	ppm	ASTM D5185m		<b>954</b>	1033	1018
Zinc	ppm	ASTM D5185m		<b>1153</b>	1239	1239
Sulfur	ppm	ASTM D5185m		<b>4077</b>	4659	4731
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.5</b>	14.0	14.4
Base Number (BN)	mg KOH/g	ASTM D2896		<b>7.8</b>	8.6	8.4
Visc @ 100°C	cSt	ASTM D445		<b>13.4</b>	13.9	13.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0044010 **Received** : 18 Jan 2024  
**Lab Number** : 06064047 **Diagnosed** : 20 Jan 2024  
**Unique Number** : 10835429 **Diagnostician** : Don Baldrige  
**Test Package** : CONST ( Additional Tests: TBN )

**LAROCHE TREE SERVICE**  
 7 COMMERCE PKWY  
 BELLAIRE, OH  
 US 43906  
 Contact: GLEN VARGO  
 glen.vargo@larochetree.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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F: