



# OIL ANALYSIS REPORT

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



Area  
**Store 9 - Marietta**  
Machine Id  
**JOHN DEERE 210G 5085 (S/N 1FF210GXEMF529113)**  
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>LEC0049538</b>	LEC0041253	LEC0034683
Sample Date		Client Info		<b>08 Apr 2024</b>	06 Sep 2023	16 May 2023
Machine Age	hrs	Client Info		<b>2188</b>	1691	1415
Oil Age	hrs	Client Info		<b>497</b>	276	247
Filter Age	hrs	Client Info		<b>497</b>	276	247
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>21</b>	14	10
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>5	<b>2</b>	2	<1
Titanium	ppm	ASTM D5185m		<b>63</b>	76	48
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>31	<b>2</b>	0	5
Lead	ppm	ASTM D5185m	>26	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>26	<b>4</b>	3	4
Tin	ppm	ASTM D5185m	>4	<b>1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</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.

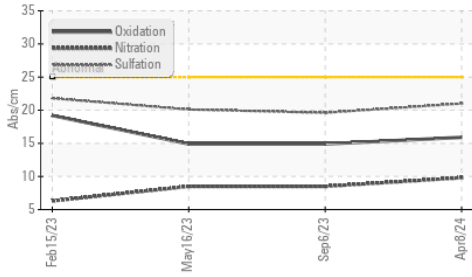
Silicon	ppm	ASTM D5185m	>120	<b>6</b>	6	4
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	2	2
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.8</b>	8.5	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.0</b>	19.6	20.1
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

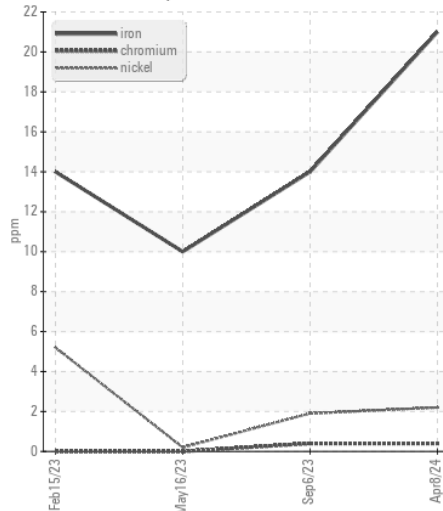
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<b>4</b>	3	2
Boron	ppm	ASTM D5185m		<b>95</b>	123	102
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>12</b>	10	30
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>357</b>	479	498
Calcium	ppm	ASTM D5185m		<b>1827</b>	1785	1640
Phosphorus	ppm	ASTM D5185m		<b>880</b>	1012	955
Zinc	ppm	ASTM D5185m		<b>1097</b>	1244	1154
Sulfur	ppm	ASTM D5185m		<b>3961</b>	3873	4207
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.9</b>	14.9	14.9
Base Number (BN)	mg KOH/g	ASTM D2896		<b>6.8</b>	8.1	8.4
Visc @ 100°C	cSt	ASTM D445		<b>13.2</b>	13.6	13.6

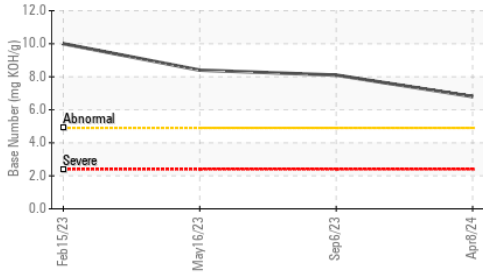
FT-IR (Direct Trend)



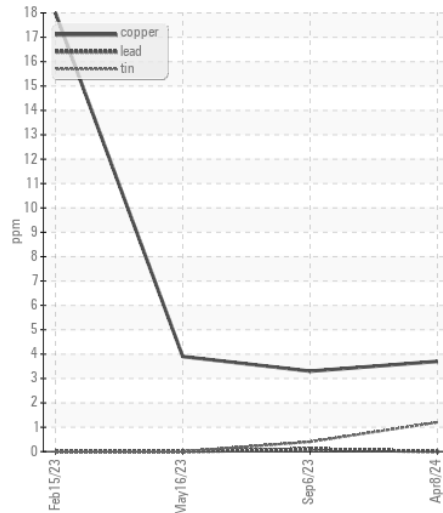
Ferrous Alloys



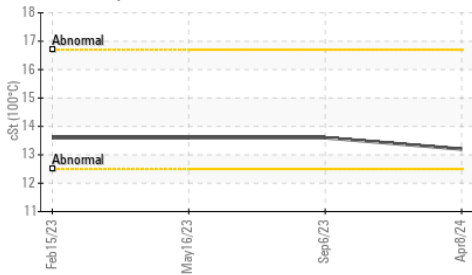
Base Number



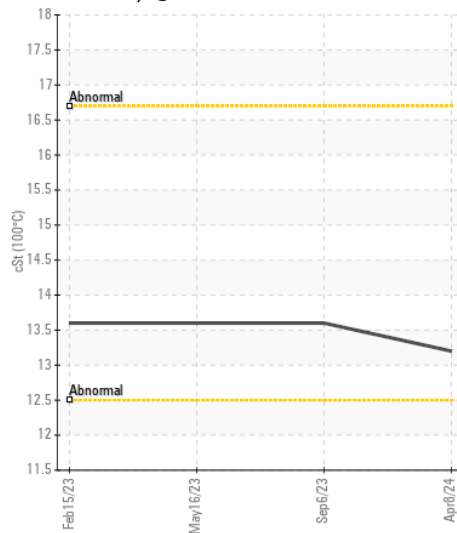
Non-ferrous Metals



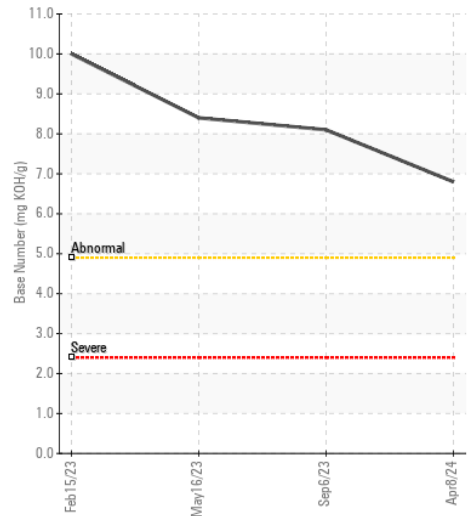
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0049538 **Received** : 16 Apr 2024  
**Lab Number** : 06150156 **Tested** : 17 Apr 2024  
**Unique Number** : 10980234 **Diagnosed** : 18 Apr 2024 - 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)

T:  
F: