



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area  
**Store 9 - Marietta**  
Machine Id  
**598**  
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>LEC0051112</b>	LEC0026275	LEC0023893
Sample Date		Client Info		<b>03 Jun 2024</b>	11 Apr 2022	14 Oct 2021
Machine Age	hrs	Client Info		<b>417</b>	173	74
Oil Age	hrs	Client Info		<b>182</b>	99	74
Filter Age	hrs	Client Info		<b>182</b>	99	74
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	>100	<b>17</b>	16	16
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	1	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>8</b>	71	14
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	2	3
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	2
Copper	ppm	ASTM D5185m	>330	<b>2</b>	2	6
Tin	ppm	ASTM D5185m	>15	<b>&lt;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.

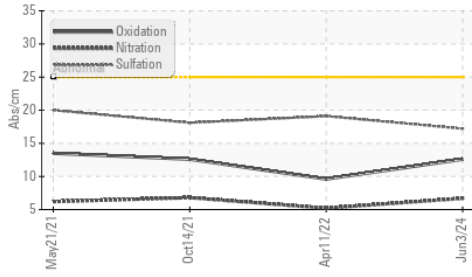
Silicon	ppm	ASTM D5185m	>120	<b>19</b>	10	23
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.7</b>	5.2	6.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.2</b>	19.1	18.1
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	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

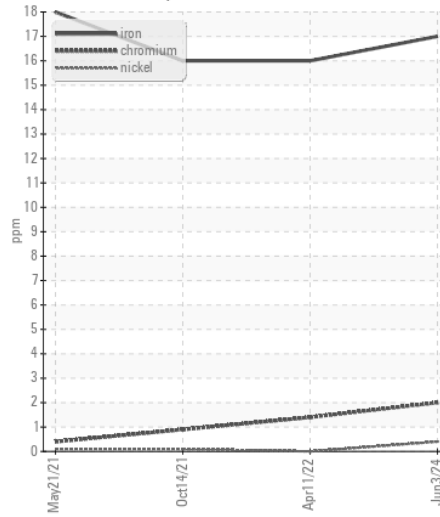
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	3	4
Boron	ppm	ASTM D5185m		<b>29</b>	133	96
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>44</b>	5	2
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	2
Magnesium	ppm	ASTM D5185m		<b>584</b>	502	646
Calcium	ppm	ASTM D5185m		<b>1505</b>	1847	1529
Phosphorus	ppm	ASTM D5185m		<b>966</b>	1072	789
Zinc	ppm	ASTM D5185m		<b>1177</b>	1160	837
Sulfur	ppm	ASTM D5185m		<b>3421</b>	3724	5094
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.6</b>	9.6	12.6
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.0</b>	4.8	9
Visc @ 100°C	cSt	ASTM D445		<b>12.6</b>	13.3	14.1

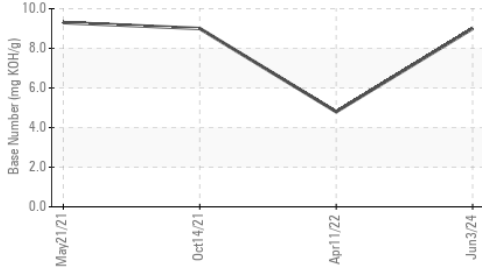
FT-IR (Direct Trend)



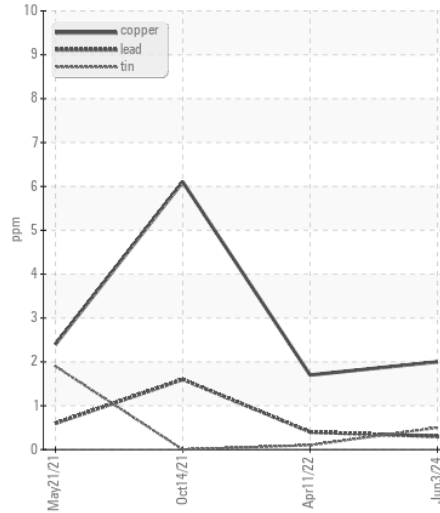
Ferrous Alloys



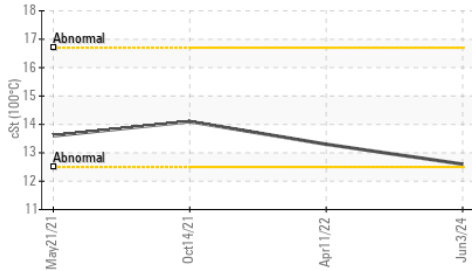
Base Number



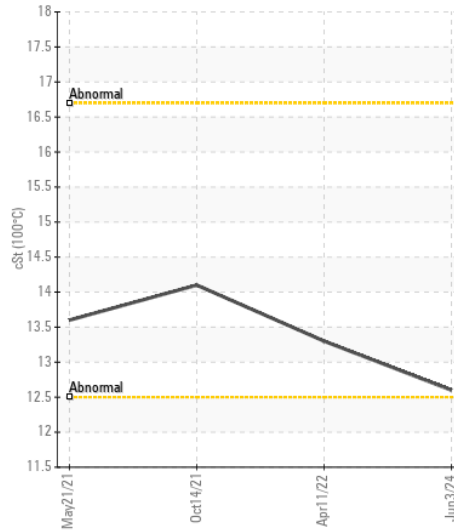
Non-ferrous Metals



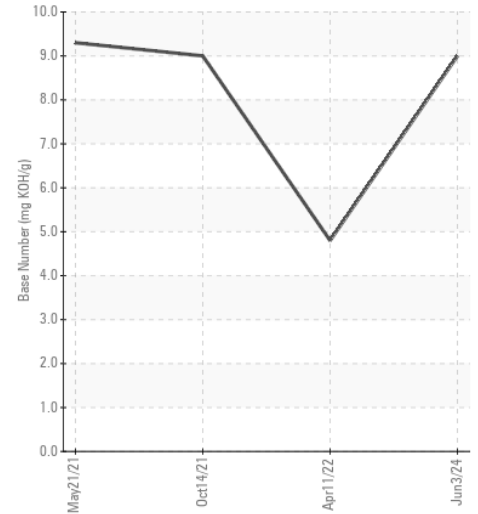
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0051112 **Received** : 18 Jun 2024  
**Lab Number** : 06213115 **Tested** : 19 Jun 2024  
**Unique Number** : 11085979 **Diagnosed** : 20 Jun 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: