



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Area  
**Store 9 - Marietta**  
 Machine Id  
**223**  
 Component  
**Diesel Engine**  
 Fluid  
**LYDEN 15W40 (--- GAL)**

## 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>LEC0047002</b>	LEC0034718	LEC0028918
Sample Date		Client Info		<b>06 Mar 2024</b>	21 Mar 2023	15 Apr 2022
Machine Age	mls	Client Info		<b>27132</b>	19658	1101
Oil Age	mls	Client Info		<b>7474</b>	8010	280
Filter Age	mls	Client Info		<b>7474</b>	8010	280
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	ATTENTION	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>87</b>	51	17
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>49</b>	11	30
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>8</b>	7	4
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>2</b>	2	5
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

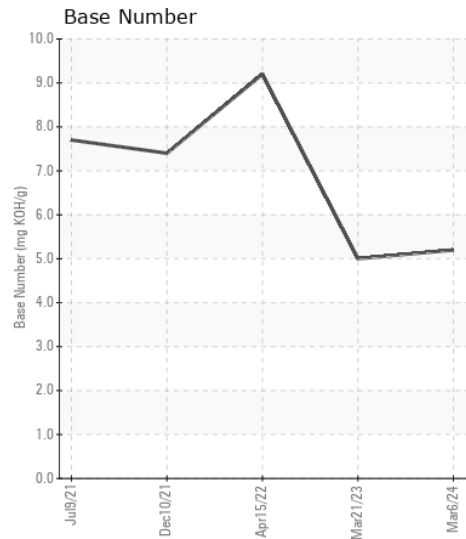
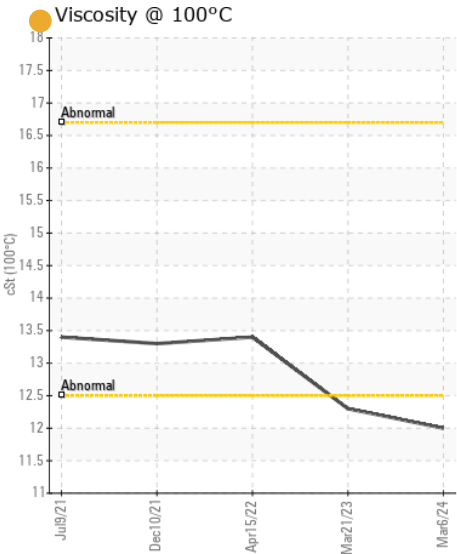
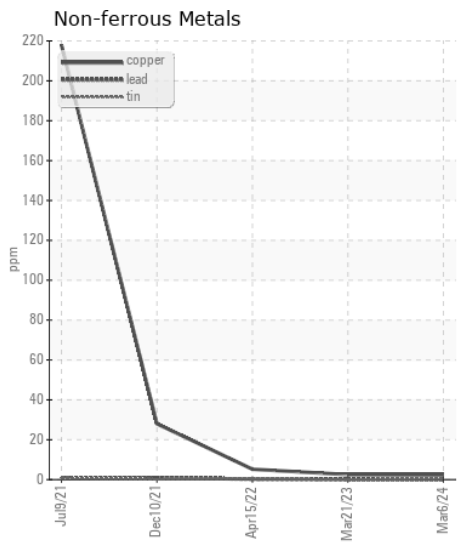
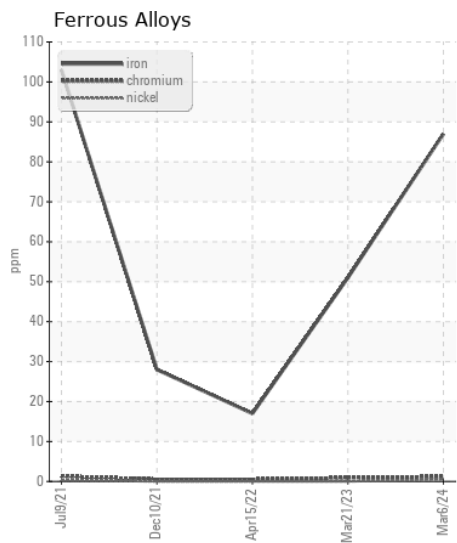
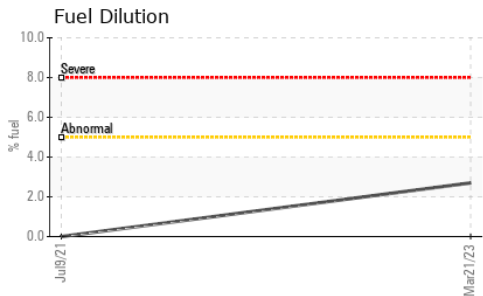
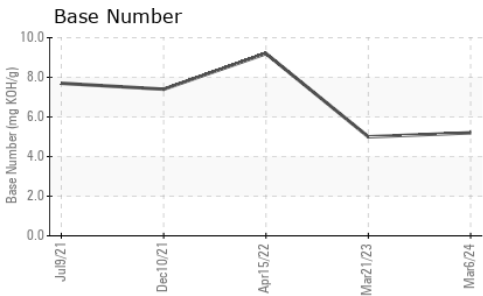
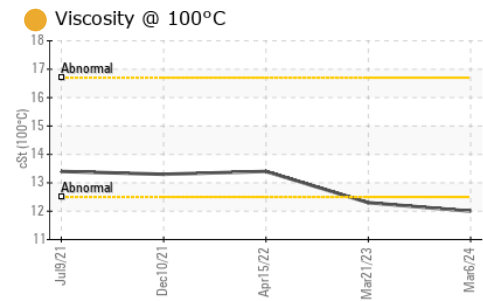
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>120	<b>12</b>	12	6
Potassium	ppm	ASTM D5185m	>20	<b>14</b>	14	9
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	▲ 2.7	<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>0.9</b>	0.7	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.2</b>	10.5	9.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.3</b>	21.1	20.4
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	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		<b>3</b>	0	1
Boron	ppm	ASTM D5185m		<b>33</b>	12	50
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>21</b>	53	41
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	<1
Magnesium	ppm	ASTM D5185m		<b>448</b>	795	742
Calcium	ppm	ASTM D5185m		<b>1693</b>	1180	1349
Phosphorus	ppm	ASTM D5185m		<b>980</b>	903	1067
Zinc	ppm	ASTM D5185m		<b>1166</b>	1183	1280
Sulfur	ppm	ASTM D5185m		<b>3851</b>	3680	3089
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.8</b>	17.8	15.8
Base Number (BN)	mg KOH/g	ASTM D2896		<b>5.2</b>	5.0	9.2
Visc @ 100°C	cSt	ASTM D445		● <b>12.0</b>	● 12.3	13.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0047002 **Received** : 19 Mar 2024  
**Lab Number** : 06122151 **Tested** : 21 Mar 2024  
**Unique Number** : 10936302 **Diagnosed** : 21 Mar 2024 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: FuelDilution, PercentFuel, TBN )

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

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)