



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



Machine Id  
**827040 MACK LR613**  
Component  
**Diesel Engine**  
Fluid  
**TIER ONE 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. ( Customer Sample Comment: Sampled only )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0102217</b>	GFL0056984	GFL0038736
Sample Date		Client Info		<b>26 Feb 2024</b>	03 Oct 2022	15 Nov 2021
Machine Age	hrs	Client Info		<b>14408</b>	12484	10798
Oil Age	hrs	Client Info		<b>300</b>	600	600
Filter Age	hrs	Client Info		<b>300</b>	600	600
Oil Changed		Client Info		<b>Not Chngd</b>	Changed	Changed
Filter Changed		Client Info		<b>Not Chngd</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>25</b>	3	11
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	2
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	2	5
Lead	ppm	ASTM D5185m	>40	<b>9</b>	<1	2
Copper	ppm	ASTM D5185m	>330	<b>5</b>	<1	3
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

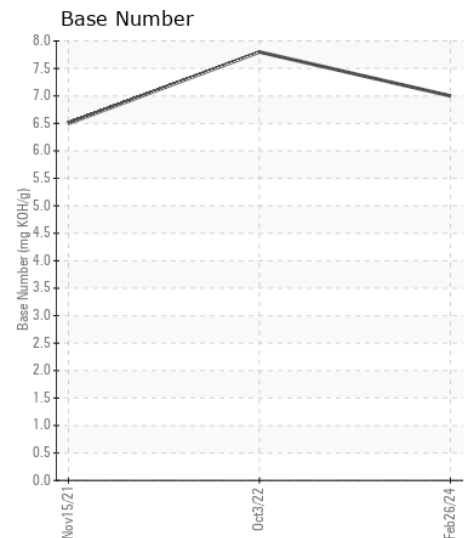
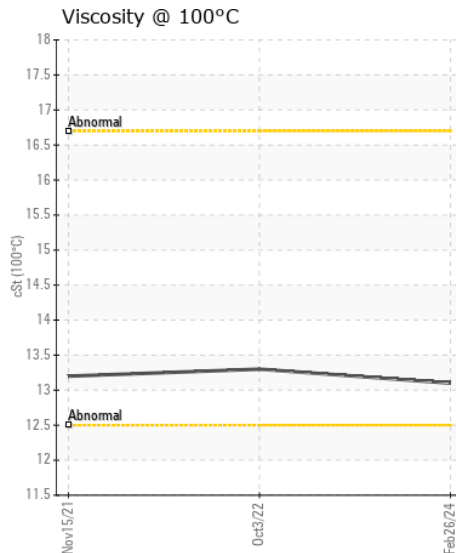
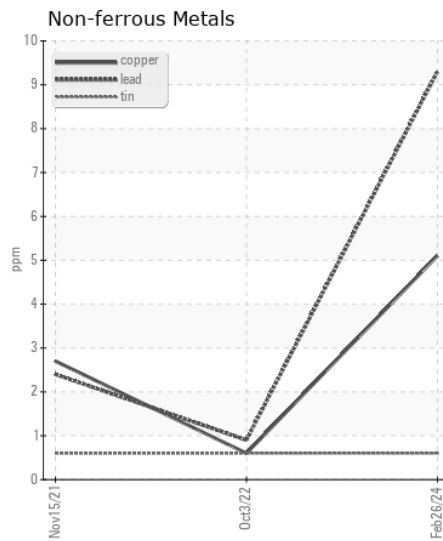
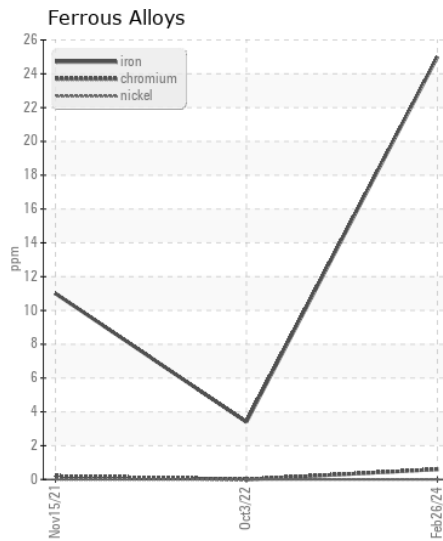
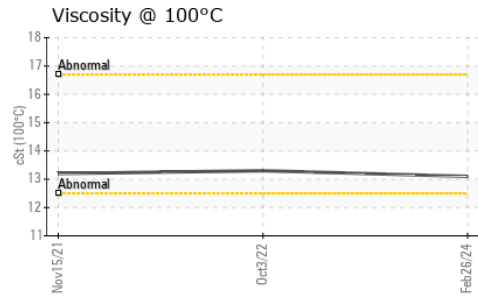
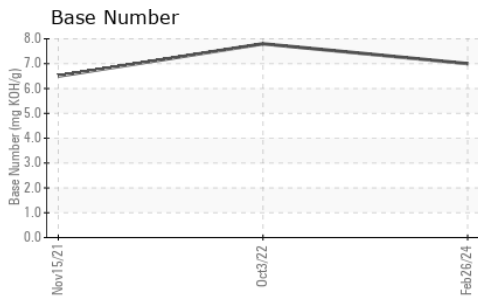
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>12</b>	3	6
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	2	1
Fuel		WC Method	>3.0	<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	>4	<b>0.3</b>	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.7</b>	9.4	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.9</b>	21.2	25
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>3</b>	4	2
Boron	ppm	ASTM D5185m		<b>69</b>	5	206
Barium	ppm	ASTM D5185m		<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m		<b>73</b>	59	115
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>815</b>	836	652
Calcium	ppm	ASTM D5185m		<b>1190</b>	1076	1628
Phosphorus	ppm	ASTM D5185m		<b>925</b>	968	696
Zinc	ppm	ASTM D5185m		<b>1120</b>	1162	762
Sulfur	ppm	ASTM D5185m		<b>2716</b>	3102	2076
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.3</b>	17.6	21.2
Base Number (BN)	mg KOH/g	ASTM D2896		<b>7.0</b>	7.8	6.5
Visc @ 100°C	cSt	ASTM D445		<b>13.1</b>	13.3	13.2



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0102217  
**Lab Number** : 06103589  
**Unique Number** : 10901819  
**Test Package** : FLEET

**Received** : 28 Feb 2024  
**Tested** : 29 Feb 2024  
**Diagnosed** : 01 Mar 2024 - Don Baldrige

**GFL Environmental - 642- Grand Rapids Hauling**  
 5826 Alden Nash Ave SE  
 Lowell, MI  
 US 49331

Contact: Chad Crosby  
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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)