



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



Area  
**(BD75348) {UNASSIGNED}**  
Machine Id  
**814031 MACK LR64R**  
Component  
**Diesel Engine**  
Fluid  
**TIER ONE 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0115230</b>	GFL0115244	GFL0102218
Sample Date		Client Info		<b>08 Jul 2024</b>	17 Apr 2024	21 Feb 2024
Machine Age	hrs	Client Info		<b>980</b>	558	269
Oil Age	hrs	Client Info		<b>79</b>	28	269
Filter Age	hrs	Client Info		<b>79</b>	0	269
Oil Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Sample Status				<b>NORMAL</b>	ATTENTION	ABNORMAL

**WEAR**

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>120	<b>29</b>	54	27
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	2	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	1	7
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	2	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	7	6
Lead	ppm	ASTM D5185m	>40	<b>4</b>	3	<1
Copper	ppm	ASTM D5185m	>330	<b>7</b>	3	49
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	1	2
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**

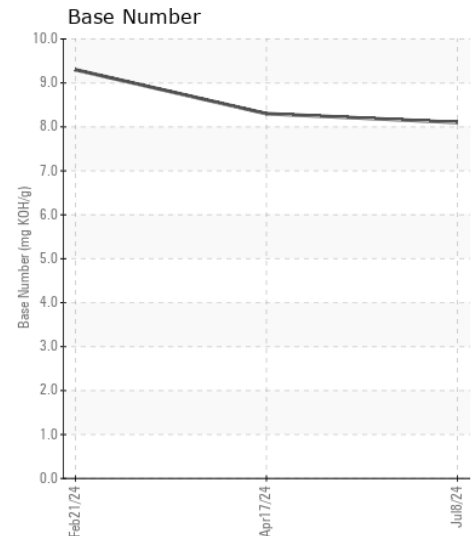
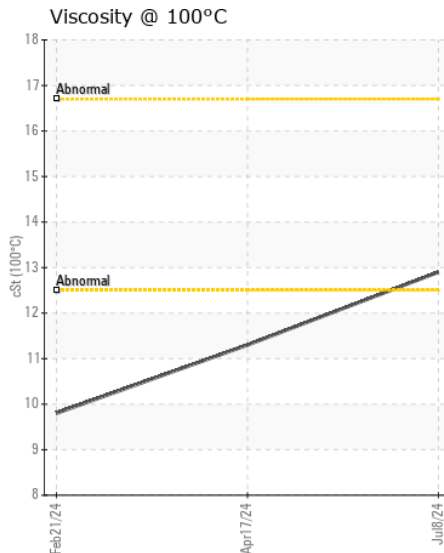
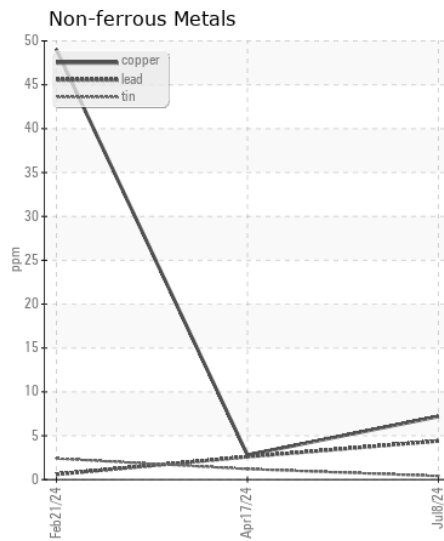
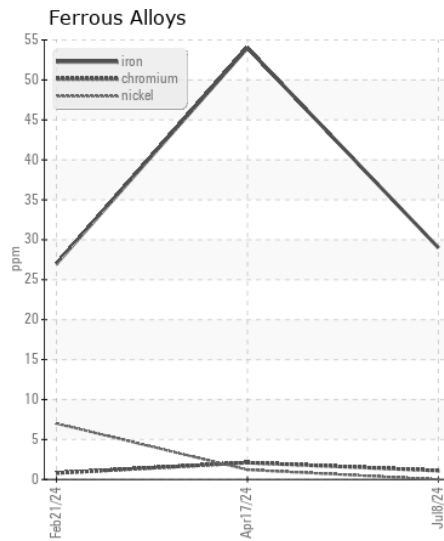
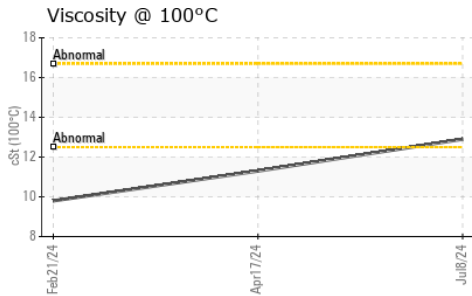
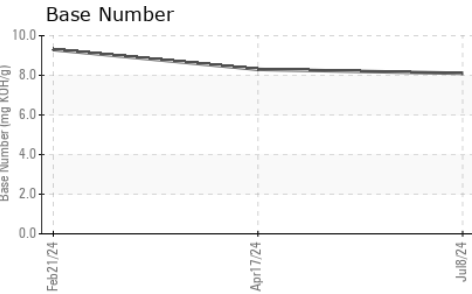
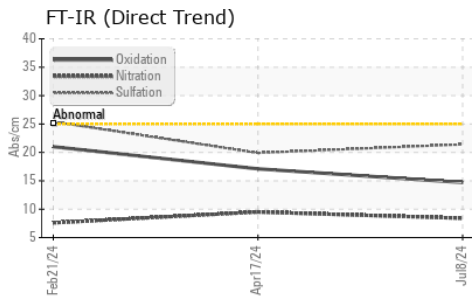
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>3</b>	6	▲ 80
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	4	6
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	0.4
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>1.6</b>	0.5	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.4</b>	9.5	7.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.4</b>	19.9	25.4
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 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>2</b>	6	2
Boron	ppm	ASTM D5185m		<b>8</b>	9	305
Barium	ppm	ASTM D5185m		<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m		<b>56</b>	83	110
Manganese	ppm	ASTM D5185m		<b>0</b>	1	4
Magnesium	ppm	ASTM D5185m		<b>819</b>	1229	709
Calcium	ppm	ASTM D5185m		<b>1147</b>	1544	1456
Phosphorus	ppm	ASTM D5185m		<b>1013</b>	1606	653
Zinc	ppm	ASTM D5185m		<b>1180</b>	1768	816
Sulfur	ppm	ASTM D5185m		<b>2697</b>	4923	2439
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.7</b>	17.1	21.0
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.1</b>	8.3	9.3
Visc @ 100°C	cSt	ASTM D445		<b>12.9</b>	● 11.3	▲ 9.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0115230  
**Lab Number** : 06234724  
**Unique Number** : 11123558  
**Test Package** : FLEET

**Received** : 12 Jul 2024  
**Tested** : 15 Jul 2024  
**Diagnosed** : 15 Jul 2024 - Wes Davis

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

Contact: Josh Vanvolkinburg  
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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: