



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



Machine Id  
**WL0187**  
Component  
**Diesel Engine**  
Fluid  
**MACK 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0108503</b>	GFL0066283	GFL0060368
Sample Date		Client Info		<b>01 May 2024</b>	19 Oct 2023	16 Jan 2023
Machine Age	hrs	Client Info		<b>17268</b>	500	500
Oil Age	hrs	Client Info		<b>500</b>	500	500
Filter Age	hrs	Client Info		<b>0</b>	0	500
Oil Changed		Client Info		<b>Not Chngd</b>	Changed	Changed
Filter Changed		Client Info		<b>Not Chngd</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	SEVERE

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>4</b>	7	▲ 330
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	4
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	▲ 6
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>&lt;1</b>	<1	17
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	41
Copper	ppm	ASTM D5185m	>330	<b>9</b>	0	94
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	6
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

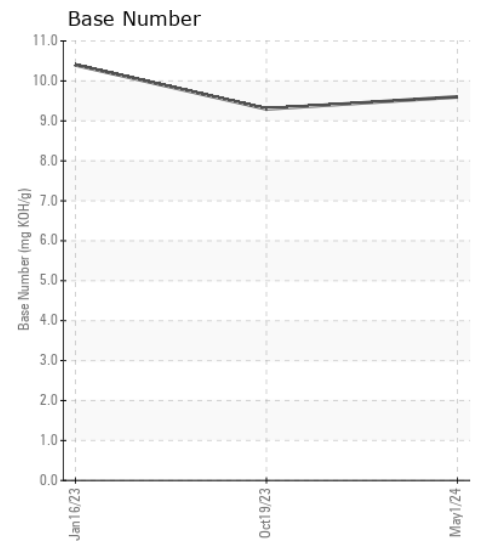
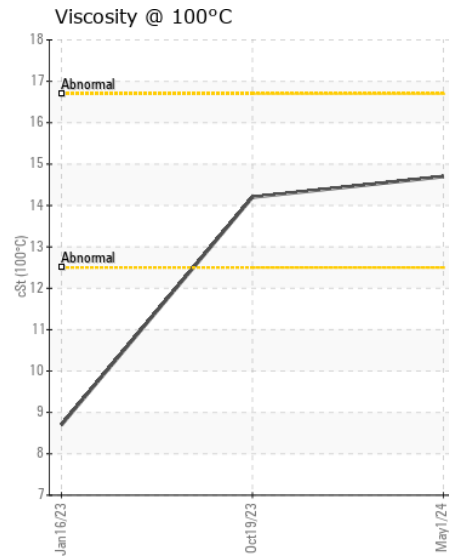
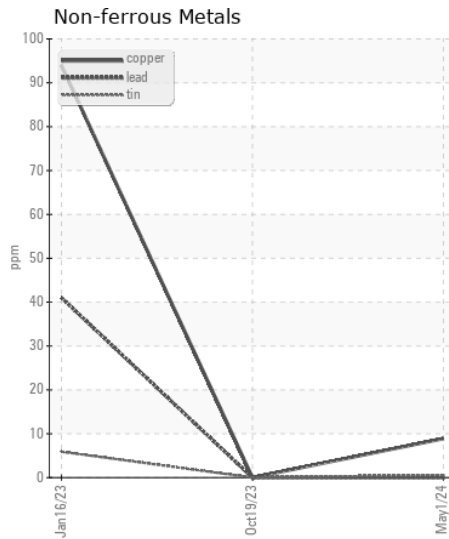
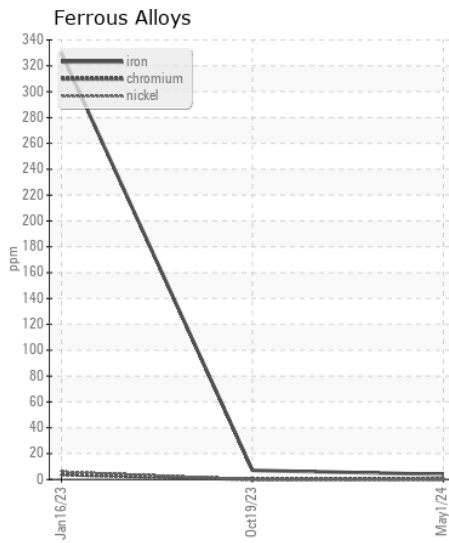
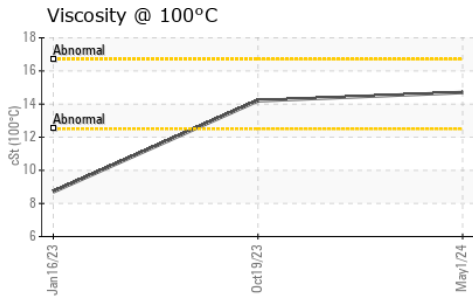
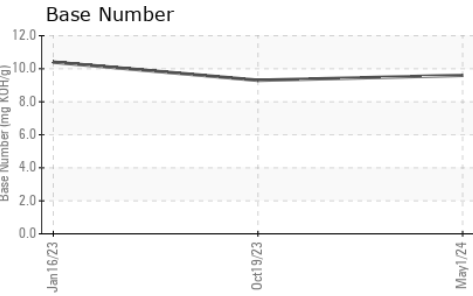
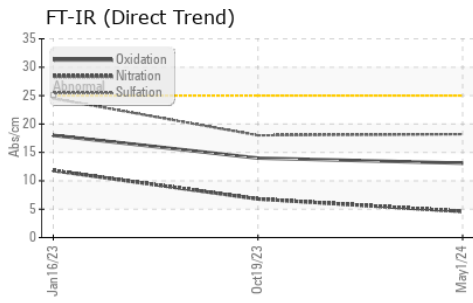
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	4	21
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	6
Fuel		WC Method	>5	<b>&lt;1.0</b>	1.4	▲ 16.6
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>	0.5	2.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>4.6</b>	6.8	11.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.2</b>	18.0	24.5
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>30</b>	4	13
Boron	ppm	ASTM D5185m		<b>98</b>	6	18
Barium	ppm	ASTM D5185m		<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>49</b>	60	50
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	3
Magnesium	ppm	ASTM D5185m		<b>370</b>	890	690
Calcium	ppm	ASTM D5185m		<b>1750</b>	1076	976
Phosphorus	ppm	ASTM D5185m		<b>1062</b>	973	798
Zinc	ppm	ASTM D5185m		<b>1208</b>	1191	937
Sulfur	ppm	ASTM D5185m		<b>3935</b>	2959	3003
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.1</b>	14.0	18.0
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.6</b>	9.3	10.4
Visc @ 100°C	cSt	ASTM D445		<b>14.7</b>	14.2	▲ 8.7



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0108503  
**Lab Number** : 06178397  
**Unique Number** : 11029723  
**Test Package** : FLEET

**Received** : 14 May 2024  
**Tested** : 14 May 2024  
**Diagnosed** : 14 May 2024 - Wes Davis

**GFL Environmental - 938 - Hager City**  
 W9724 WIS-35  
 HAGER CITY, WI  
 US 54014  
 Contact: ANDY KANE

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: (715)202-3420

F: