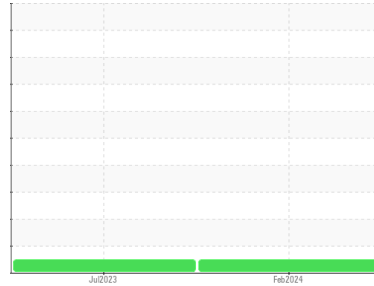




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**MACK 413043**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### 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.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0111404</b>	GFL0072240	---
Sample Date	Client Info		<b>03 Feb 2024</b>	12 Jul 2023	---
Machine Age	hrs	Client Info	<b>0</b>	0	---
Oil Age	hrs	Client Info	<b>0</b>	1707	---
Oil Changed	Client Info		<b>N/A</b>	Changed	---
Sample Status			<b>NORMAL</b>	NORMAL	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	---
Water	WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol	WC Method		<b>NEG</b>	NEG	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>14</b>	16	---
Chromium	ppm	ASTM D5185m >20	<b>1</b>	<1	---
Nickel	ppm	ASTM D5185m >5	<b>2</b>	1	---
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m >2	<b>0</b>	1	---
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	11	---
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	<1	---
Copper	ppm	ASTM D5185m >330	<b>2</b>	41	---
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	1	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	---
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>3</b>	6	---
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m 60	<b>62</b>	65	---
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m 1010	<b>956</b>	853	---
Calcium	ppm	ASTM D5185m 1070	<b>1024</b>	1108	---
Phosphorus	ppm	ASTM D5185m 1150	<b>966</b>	945	---
Zinc	ppm	ASTM D5185m 1270	<b>1226</b>	1133	---
Sulfur	ppm	ASTM D5185m 2060	<b>2958</b>	2593	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>6</b>	10	---
Sodium	ppm	ASTM D5185m	<b>3</b>	2	---
Potassium	ppm	ASTM D5185m >20	<b>9</b>	30	---

## INFRA-RED

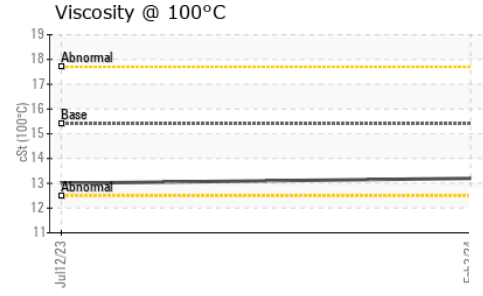
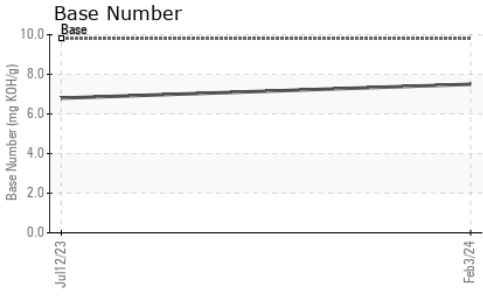
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.3</b>	0.3	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.7</b>	8.0	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.7</b>	20.0	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.3</b>	16.1	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.5</b>	6.8	---



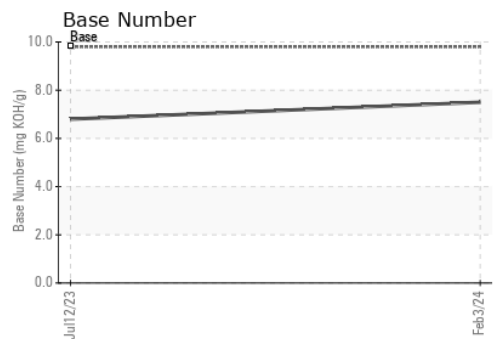
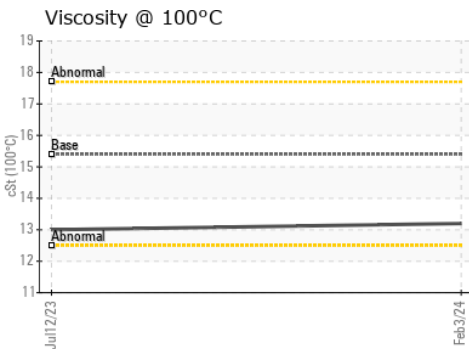
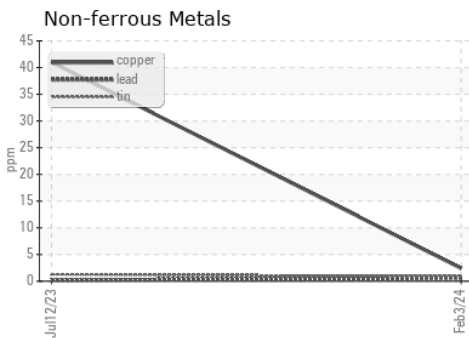
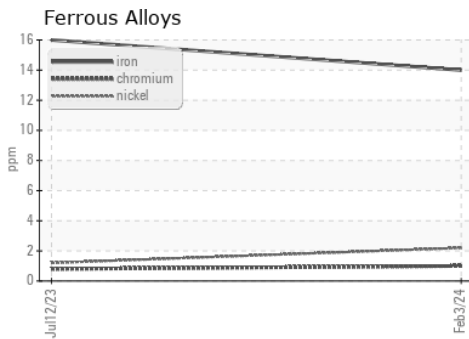
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.2</b>	13.0	---

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0111404  
**Lab Number** : 06078156  
**Unique Number** : 10860247  
**Test Package** : FLEET

**Received** : 02 Feb 2024  
**Tested** : 05 Feb 2024  
**Diagnosed** : 05 Feb 2024 - Wes Davis

**GFL Environmental - 004 - Newport - Central Coast**  
 427 Roberts Road  
 Newport, NC  
 US 28570  
 Contact: Marquis Williams  
 marquis.williams@gflenv.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)

F: (252)223-6010