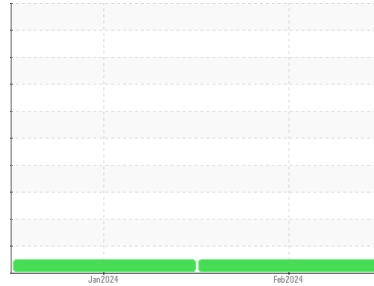




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**934064**

Component  
**Natural Gas Engine**

Fluid  
**PETRO CANADA DURON GEO LD 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. ( Customer Sample Comment: Engine oil sample )

### Wear

All component wear rates are normal.

### Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. No other contaminants were detected 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>GFL0103946</b>	GFL0103964	---
Sample Date	Client Info		<b>14 Feb 2024</b>	29 Jan 2024	---
Machine Age	hrs	Client Info	<b>775</b>	645	---
Oil Age	hrs	Client Info	<b>775</b>	645	---
Oil Changed	Client Info		<b>Not Chngd</b>	Changed	---
Sample Status			<b>NORMAL</b>	NORMAL	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	<b>NEG</b>	NEG	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	<b>9</b>	30	---
Chromium	ppm	ASTM D5185m >4	<b>&lt;1</b>	1	---
Nickel	ppm	ASTM D5185m >2	<b>0</b>	<1	---
Titanium	ppm	ASTM D5185m	<b>0</b>	0	---
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m >9	<b>20</b>	68	---
Lead	ppm	ASTM D5185m >30	<b>&lt;1</b>	1	---
Copper	ppm	ASTM D5185m >35	<b>2</b>	14	---
Tin	ppm	ASTM D5185m >4	<b>1</b>	2	---
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	<b>24</b>	10	---
Barium	ppm	ASTM D5185m 5	<b>0</b>	<1	---
Molybdenum	ppm	ASTM D5185m 50	<b>46</b>	52	---
Manganese	ppm	ASTM D5185m 0	<b>2</b>	12	---
Magnesium	ppm	ASTM D5185m 560	<b>542</b>	706	---
Calcium	ppm	ASTM D5185m 1510	<b>1452</b>	1219	---
Phosphorus	ppm	ASTM D5185m 780	<b>715</b>	696	---
Zinc	ppm	ASTM D5185m 870	<b>877</b>	901	---
Sulfur	ppm	ASTM D5185m 2040	<b>2263</b>	2278	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	<b>8</b>	26	---
Sodium	ppm	ASTM D5185m	<b>4</b>	5	---
Potassium	ppm	ASTM D5185m >20	<b>67</b>	250	---

## INFRA-RED

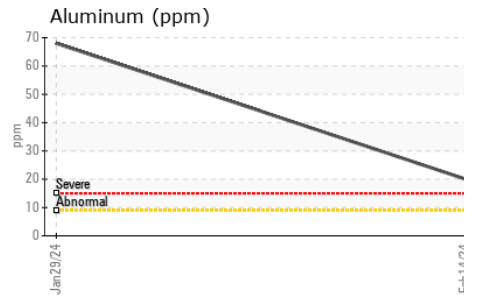
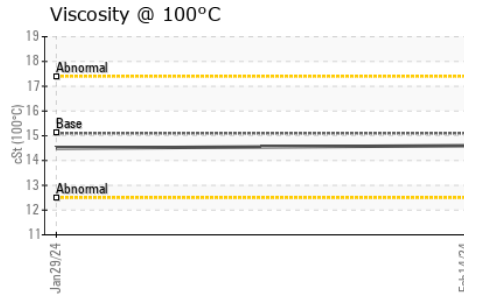
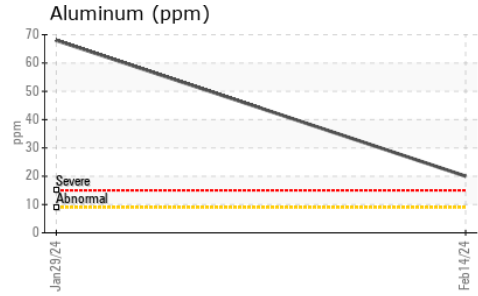
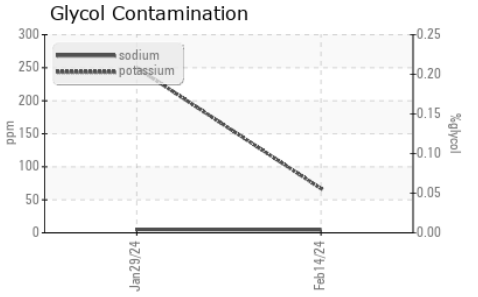
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	<b>0.1</b>	0	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.1</b>	11.5	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.2</b>	22.7	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.4</b>	20.3	---
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	<b>7.6</b>	4.1	---



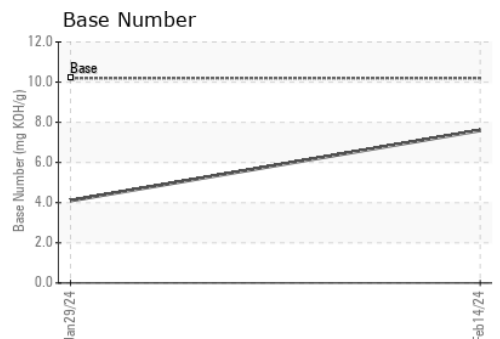
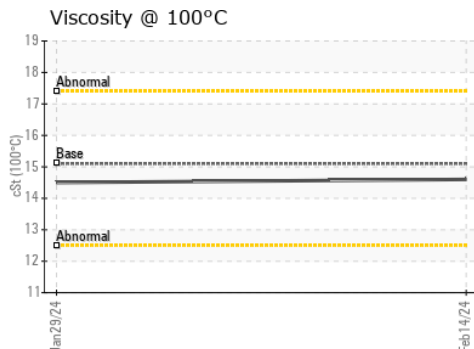
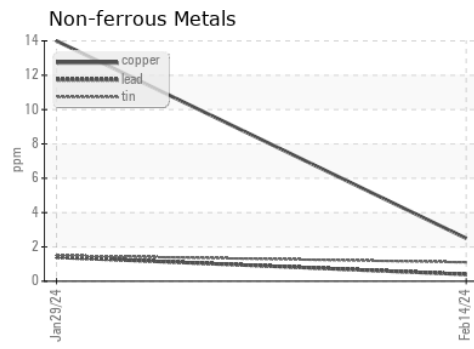
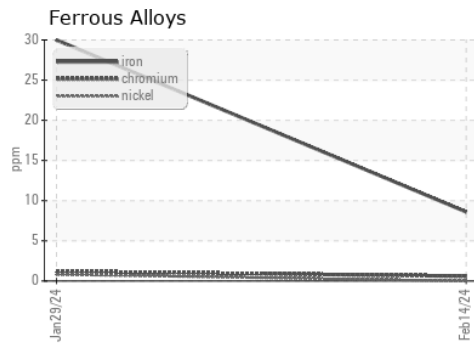
# OIL ANALYSIS REPORT



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	>0.1	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	<b>14.6</b>	14.5

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0103946      **Received** : 22 Feb 2024  
**Lab Number** : 06097520      **Tested** : 23 Feb 2024  
**Unique Number** : 10890373      **Diagnosed** : 24 Feb 2024 - Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 865 - East Mount Hauling**  
 7213 East Mount Houston Road  
 Houston, TX  
 US 77050  
 Contact: Saul Castillo  
 saul.castillo@gflenv.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)