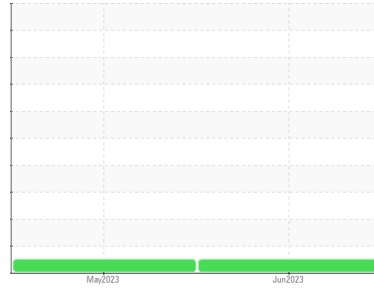




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**837M**  
 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>GFL0069819</b>	GFL0069893	---
Sample Date	Client Info		<b>22 Jun 2023</b>	31 May 2023	---
Machine Age	hrs	Client Info	<b>14666</b>	10038	---
Oil Age	hrs	Client Info	<b>600</b>	600	---
Oil Changed	Client Info		<b>Changed</b>	Changed	---
Sample Status			<b>NORMAL</b>	NORMAL	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	---
Glycol	WC Method		<b>NEG</b>	NEG	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >80	<b>19</b>	21	---
Chromium	ppm	ASTM D5185m >5	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	---
Titanium	ppm	ASTM D5185m	<b>0</b>	0	---
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m >30	<b>2</b>	1	---
Lead	ppm	ASTM D5185m >30	<b>0</b>	0	---
Copper	ppm	ASTM D5185m >150	<b>4</b>	<1	---
Tin	ppm	ASTM D5185m >5	<b>&lt;1</b>	0	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>5</b>	2	---
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m 60	<b>60</b>	55	---
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m 1010	<b>955</b>	884	---
Calcium	ppm	ASTM D5185m 1070	<b>1084</b>	1038	---
Phosphorus	ppm	ASTM D5185m 1150	<b>1076</b>	954	---
Zinc	ppm	ASTM D5185m 1270	<b>1320</b>	1210	---
Sulfur	ppm	ASTM D5185m 2060	<b>3020</b>	3355	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>6</b>	3	---
Sodium	ppm	ASTM D5185m	<b>0</b>	2	---
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	3	---

## INFRA-RED

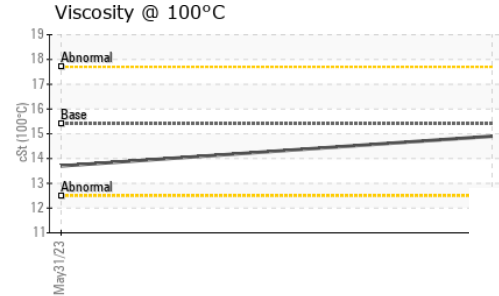
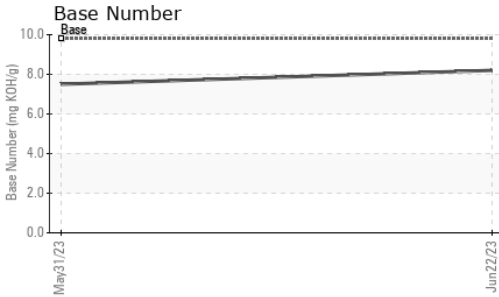
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>1.2</b>	1.2	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.5</b>	9.0	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.2</b>	21.6	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.1</b>	18.0	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.2</b>	7.5	---



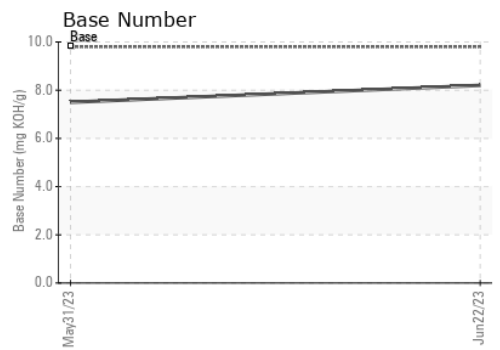
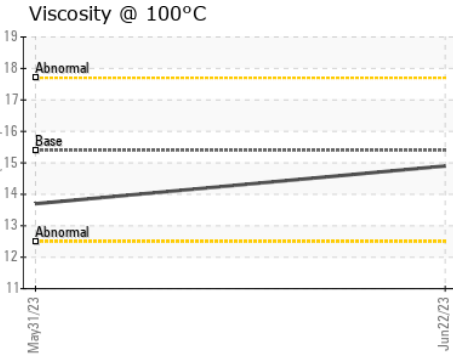
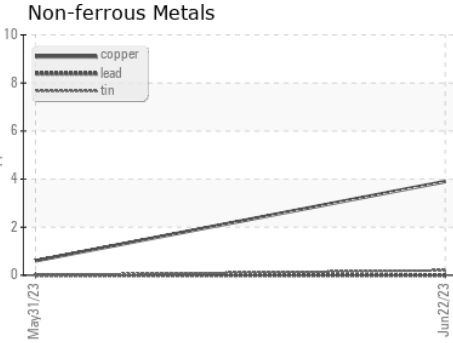
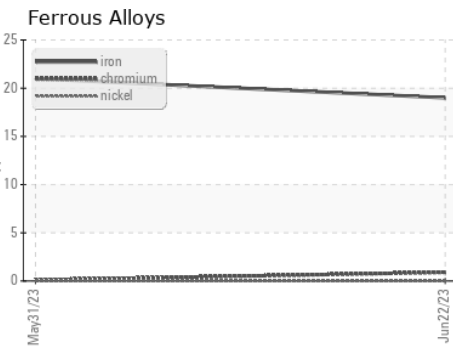
# OIL ANALYSIS REPORT



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>14.9</b>	13.7	---

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0069819 **Received** : 20 Oct 2023  
**Lab Number** : **05984384** **Diagnosed** : 20 Oct 2023  
**Unique Number** : 10701679 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 418 - Metro/MI East**  
 22001 Hoover Dr  
 Warren, MI  
 US 48089  
 Contact: JIM HESS  
 jhess@gflenv.com  
 T:  
 F:

Certificate L2367  
 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)