



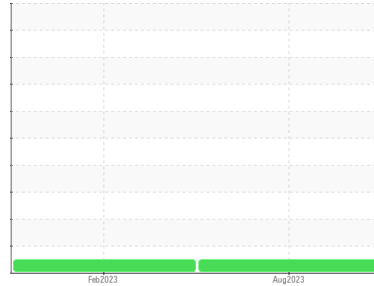
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**726056**  
 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>GFL0085628</b>	GFL0076873	---
Sample Date	Client Info		<b>16 Aug 2023</b>	27 Feb 2023	---
Machine Age	hrs	Client Info	<b>13780</b>	13358	---
Oil Age	hrs	Client Info	<b>422</b>	0	---
Oil Changed	Client Info		<b>Changed</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	---
Glycol	WC Method		<b>NEG</b>	NEG	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>24</b>	8	---
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m >5	<b>5</b>	0	---
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	---
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	2	---
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	<1	---
Copper	ppm	ASTM D5185m >330	<b>3</b>	<1	---
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	---
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 0	<b>6</b>	10	---
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m 60	<b>61</b>	59	---
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m 1010	<b>919</b>	934	---
Calcium	ppm	ASTM D5185m 1070	<b>1186</b>	1123	---
Phosphorus	ppm	ASTM D5185m 1150	<b>1019</b>	1002	---
Zinc	ppm	ASTM D5185m 1270	<b>1234</b>	1241	---
Sulfur	ppm	ASTM D5185m 2060	<b>3563</b>	3844	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	4	---
Sodium	ppm	ASTM D5185m	<b>11</b>	5	---
Potassium	ppm	ASTM D5185m >20	<b>0</b>	<1	---

## INFRA-RED

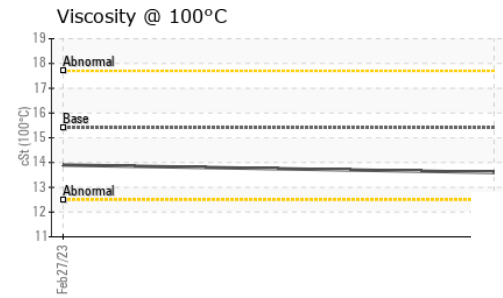
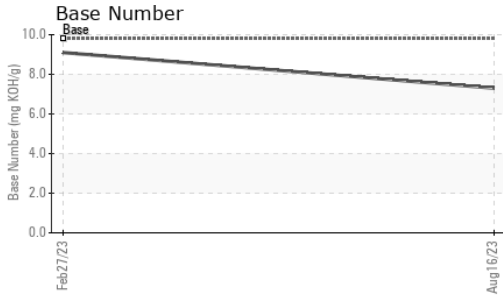
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>1</b>	0.5	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.2</b>	6.9	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.5</b>	18.4	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.1</b>	13.8	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.3</b>	9.1	---



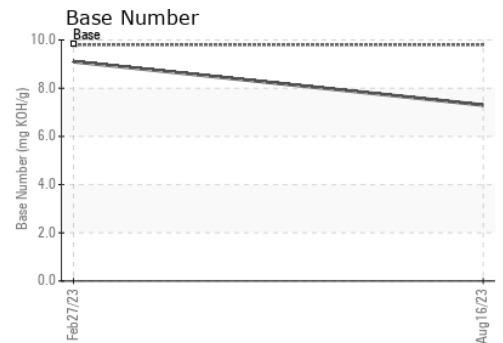
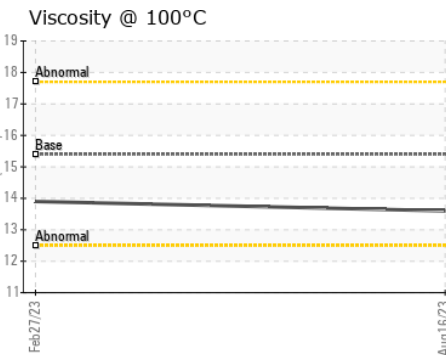
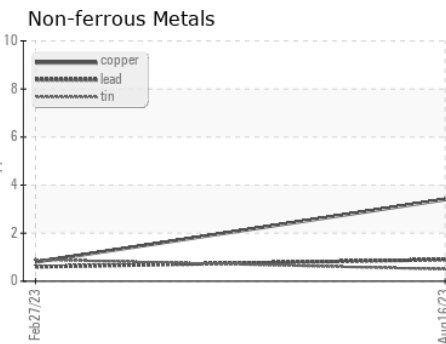
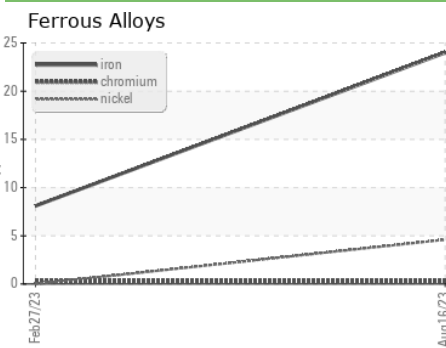
# OIL ANALYSIS REPORT



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	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.6</b>	13.9

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0085628 **Received** : 22 Aug 2023  
**Lab Number** : 05931380 **Diagnosed** : 23 Aug 2023  
**Unique Number** : 10616651 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 411 - Kingsford HC**  
 1001 E Blvd  
 Kingsford, MI  
 US 49802  
 Contact: Service Manager

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: