



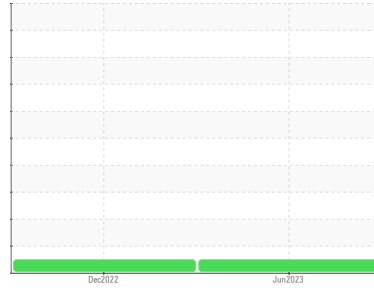
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**156M**  
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	history 1	history 2
Sample Number	Client Info		<b>GFL0015805</b>	GFL0067624	---
Sample Date	Client Info		<b>28 Jun 2023</b>	27 Dec 2022	---
Machine Age	hrs	Client Info	<b>19217</b>	0	---
Oil Age	hrs	Client Info	<b>0</b>	0	---
Oil Changed	Client Info		<b>N/A</b>	N/A	---
Sample Status			<b>NORMAL</b>	NORMAL	---

## CONTAMINATION

	method	limit/base	current	history 1	history 2
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	history 1	history 2
Iron	ppm	ASTM D5185m >120	<b>6</b>	8	---
Chromium	ppm	ASTM D5185m >20	<b>2</b>	<1	---
Nickel	ppm	ASTM D5185m >5	<b>1</b>	0	---
Titanium	ppm	ASTM D5185m >2	<b>2</b>	0	---
Silver	ppm	ASTM D5185m >2	<b>2</b>	0	---
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	2	---
Lead	ppm	ASTM D5185m >40	<b>4</b>	1	---
Copper	ppm	ASTM D5185m >330	<b>2</b>	3	---
Tin	ppm	ASTM D5185m >15	<b>2</b>	<1	---
Vanadium	ppm	ASTM D5185m	<b>1</b>	0	---
Cadmium	ppm	ASTM D5185m	<b>2</b>	0	---

## ADDITIVES

	method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m 0	<b>6</b>	90	---
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m 60	<b>54</b>	61	---
Manganese	ppm	ASTM D5185m 0	<b>2</b>	<1	---
Magnesium	ppm	ASTM D5185m 1010	<b>932</b>	899	---
Calcium	ppm	ASTM D5185m 1070	<b>1072</b>	1137	---
Phosphorus	ppm	ASTM D5185m 1150	<b>961</b>	1009	---
Zinc	ppm	ASTM D5185m 1270	<b>1191</b>	1218	---
Sulfur	ppm	ASTM D5185m 2060	<b>3582</b>	3353	---

## CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m >25	<b>7</b>	6	---
Sodium	ppm	ASTM D5185m	<b>4</b>	2	---
Potassium	ppm	ASTM D5185m >20	<b>6</b>	2	---

## INFRA-RED

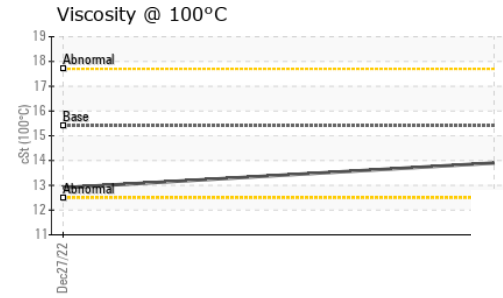
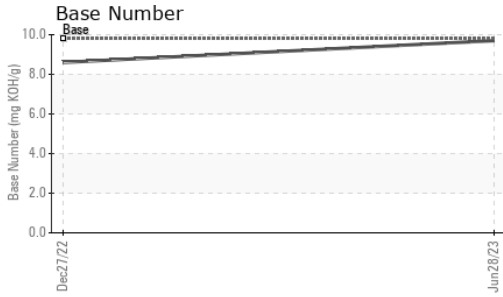
	method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844 >4	<b>0.1</b>	0.2	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>4.7</b>	7.5	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.6</b>	18.6	---

## FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.2</b>	15.1	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>9.7</b>	8.6	---



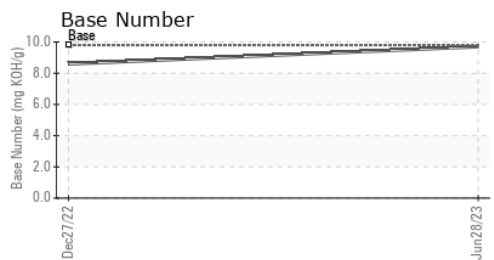
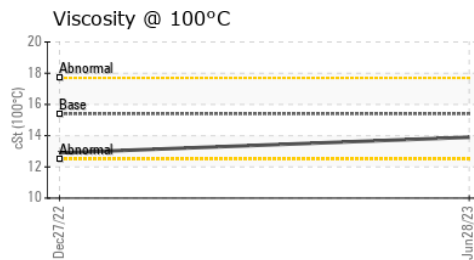
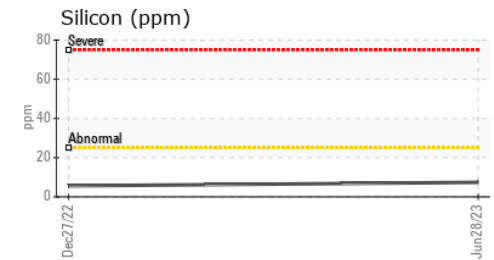
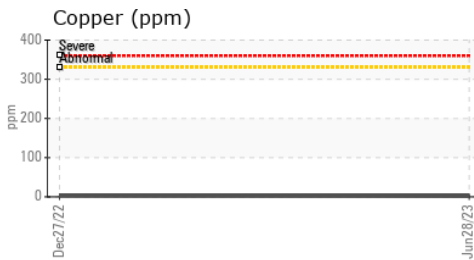
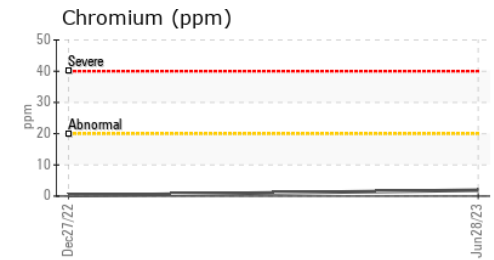
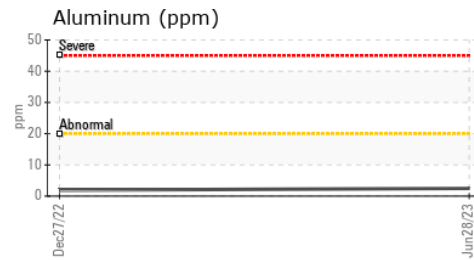
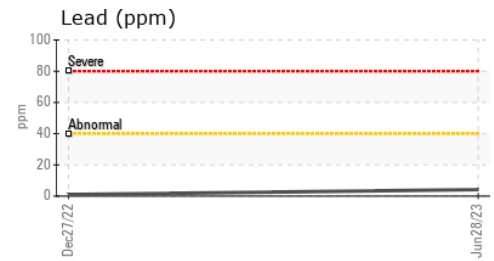
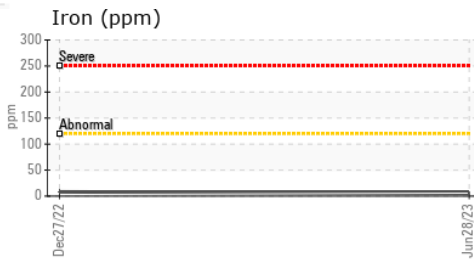
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
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	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	12.9

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0015805 **Received** : 03 Jul 2023  
**Lab Number** : 05888885 **Diagnosed** : 05 Jul 2023  
**Unique Number** : 10539368 **Diagnostician** : Don Baldrige  
**Test Package** : MOB 2

**GFL Environmental - 463 - Cheboygan**  
 501 N. Western Ave  
 Cheboygan, MI  
 US 49721  
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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)