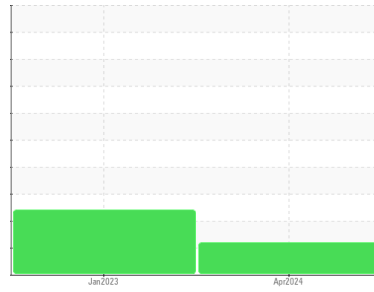




# OIL ANALYSIS REPORT

## Sample Rating Trend



**WEAR**



Machine Id

**422000**

Component

**Diesel Engine**

Fluid

**PETRO CANADA DURON SHP 15W40 (--- GAL)**

### DIAGNOSIS

#### Recommendation

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. No other corrective action is recommended at this time.

#### Wear

Aluminum ppm levels are abnormal. Piston wear is indicated.

#### Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

#### Fluid Condition

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

### SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0120242</b>	GFL0070116	---
Sample Date	Client Info		<b>25 Apr 2024</b>	10 Jan 2023	---
Machine Age	kms	Client Info	<b>490118</b>	385210	---
Oil Age	kms	Client Info	<b>0</b>	0	---
Oil Changed	Client Info		<b>Changed</b>	N/A	---
Sample Status			<b>ABNORMAL</b>	ATTENTION	---

### CONTAMINATION

	method	limit/base	current	history1	history2
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 D5185(m)	>120	<b>13</b>	16	---
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	---
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	---
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185(m)	>20	<b>▲ 26</b>	4	---
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	1	---
Copper	ppm	ASTM D5185(m)	>330	<b>3</b>	6	---
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	2	---
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	---

### ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	0	<b>1</b>	20	---
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185(m)	60	<b>60</b>	● 14	---
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	1	---
Magnesium	ppm	ASTM D5185(m)	1010	<b>940</b>	● 161	---
Calcium	ppm	ASTM D5185(m)	1070	<b>1020</b>	● 2087	---
Phosphorus	ppm	ASTM D5185(m)	1150	<b>901</b>	1068	---
Zinc	ppm	ASTM D5185(m)	1270	<b>1125</b>	1197	---
Sulfur	ppm	ASTM D5185(m)	2060	<b>2288</b>	● 3187	---
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	---

### CONTAMINANTS

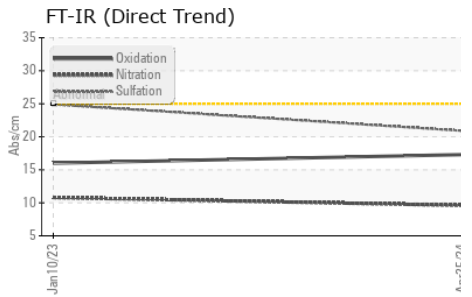
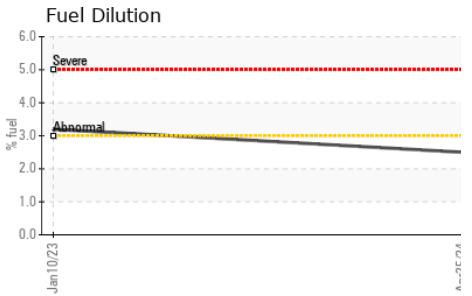
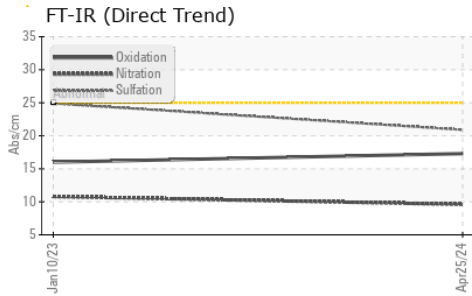
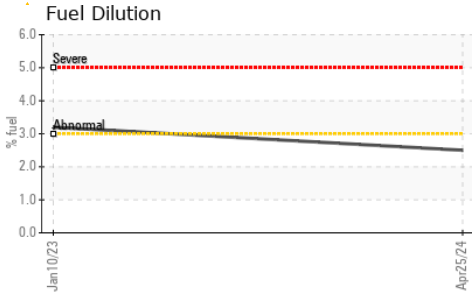
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	8	---
Sodium	ppm	ASTM D5185(m)		<b>5</b>	8	---
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	---
Fuel	%	ASTM D7593*	>3.0	<b>2.5</b>	▲ 3.2	---

### INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	<b>0</b>	0	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.6</b>	10.8	---
Sulfation	Abs.1mm	ASTM D7415*	>30	<b>20.9</b>	24.9	---



# OIL ANALYSIS REPORT

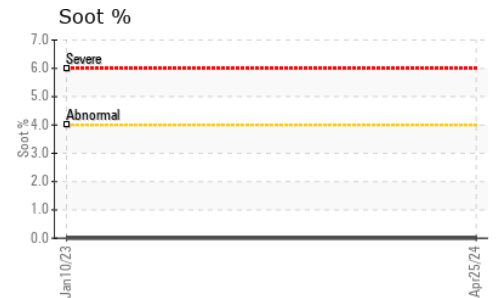
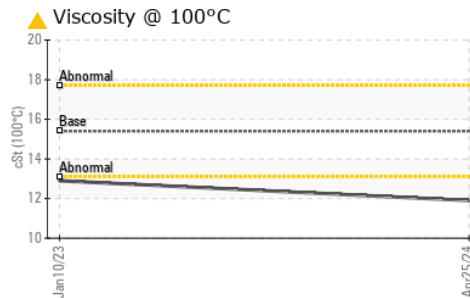
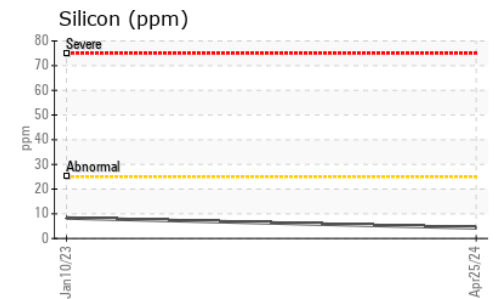
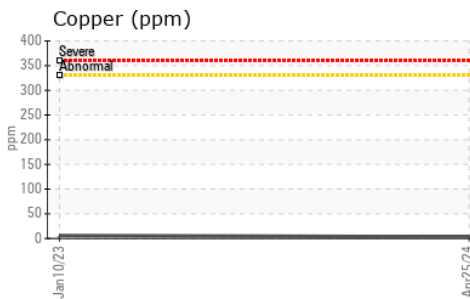
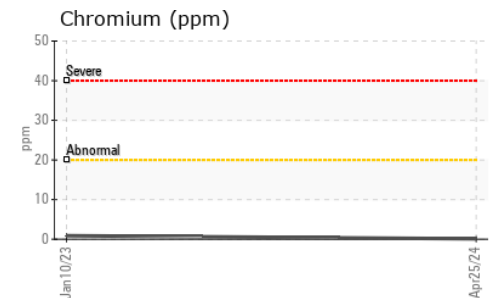
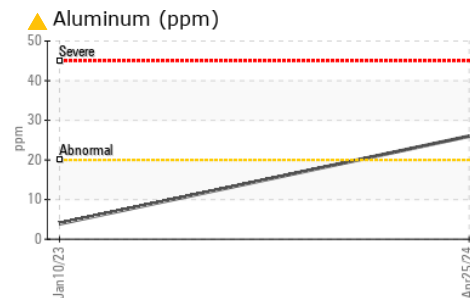
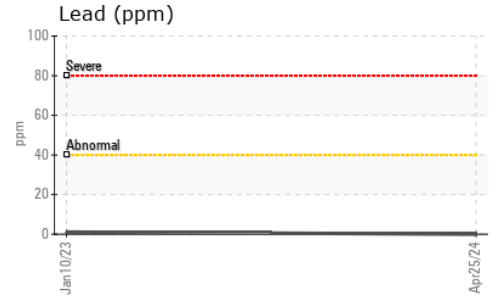
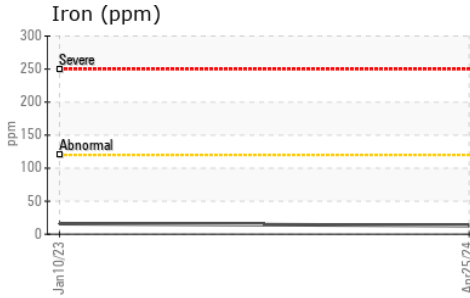


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>17.3</b>	16.0	---

VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	---
Free Water	scalar	Visual*		<b>NEG</b>	NEG	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>▲ 11.9</b>	12.9	---

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0120242  
**Lab Number** : 02632700  
**Unique Number** : 5773853  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel )

**GFL Environmental - 853 - Antigonish**  
 17 Adam St  
 Antigonish, NS  
 CA B2G 2G1

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

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 F: (902)863-2084