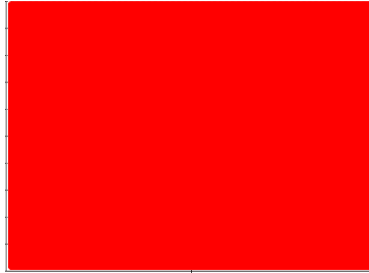




# OIL ANALYSIS REPORT

Sample Rating Trend

WEAR



Machine Id  
**801242**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (36 LTR)**

## DIAGNOSIS

### Recommendation

We advise that you check the fuel injection system. We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

Aluminum and iron ppm levels are severe. Cylinder, crank, or cam shaft wear is indicated. Piston wear is indicated.

### Contamination

Test for glycol is positive. There is a high amount of fuel present in the oil. There is a light concentration of glycol present in the oil. Tests confirm the presence of fuel in the oil.

### Fluid Condition

Fuel is present in the oil and is lowering the viscosity. 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>GFL0059070</b>	---	---
Sample Date	Client Info	<b>31 Oct 2023</b>	---	---
Machine Age	hrs	<b>0</b>	---	---
Oil Age	hrs	<b>600</b>	---	---
Oil Changed	Client Info	<b>Changed</b>	---	---
Sample Status		<b>SEVERE</b>	---	---

## WEAR METALS

method	limit/base	current	history1	history2
PQ	ASTM D8184*	<b>13</b>	---	---
Iron	ppm	ASTM D5185(m) >100	<b>223</b>	---
Chromium	ppm	ASTM D5185(m) >20	<b>10</b>	---
Nickel	ppm	ASTM D5185(m) >4	<b>&lt;1</b>	---
Titanium	ppm	ASTM D5185(m)	<b>0</b>	---
Silver	ppm	ASTM D5185(m) >3	<b>&lt;1</b>	---
Aluminum	ppm	ASTM D5185(m) >20	<b>70</b>	---
Lead	ppm	ASTM D5185(m) >40	<b>10</b>	---
Copper	ppm	ASTM D5185(m) >330	<b>6</b>	---
Tin	ppm	ASTM D5185(m) >15	<b>2</b>	---
Antimony	ppm	ASTM D5185(m)	<b>0</b>	---
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	---
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	---
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	---

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 0	<b>2</b>	---
Barium	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	---
Molybdenum	ppm	ASTM D5185(m) 60	<b>131</b>	---
Manganese	ppm	ASTM D5185(m) 0	<b>1</b>	---
Magnesium	ppm	ASTM D5185(m) 1010	<b>858</b>	---
Calcium	ppm	ASTM D5185(m) 1070	<b>984</b>	---
Phosphorus	ppm	ASTM D5185(m) 1150	<b>808</b>	---
Zinc	ppm	ASTM D5185(m) 1270	<b>1095</b>	---
Sulfur	ppm	ASTM D5185(m) 2060	<b>2264</b>	---
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	---

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	<b>13</b>	---
Sodium	ppm	ASTM D5185(m)	<b>125</b>	---
Potassium	ppm	ASTM D5185(m) >20	<b>651</b>	---
Fuel	%	ASTM D7593* >2.0	<b>8.3</b>	---
Glycol	%	ASTM D7922*	<b>0.034</b>	---

## INFRA-RED

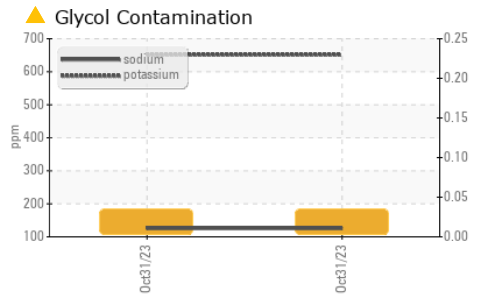
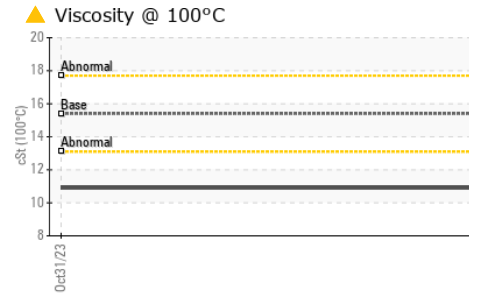
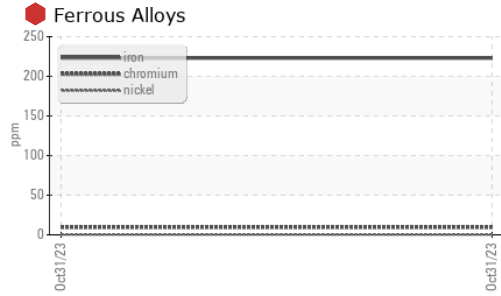
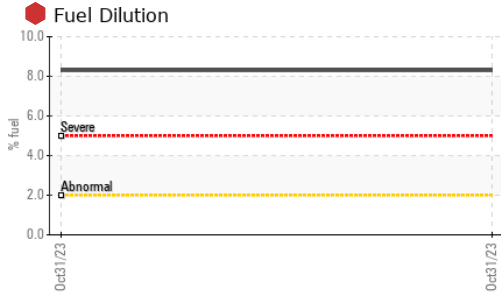
method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	<b>2.4</b>	---
Nitration	Abs/cm	ASTM D7624* >20	<b>16.2</b>	---
Sulfation	Abs/.1mm	ASTM D7415* >30	<b>26.9</b>	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414* >25	<b>21.4</b>	---



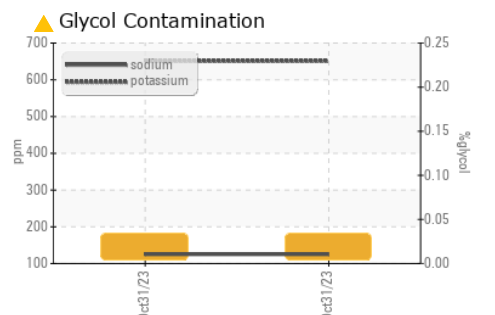
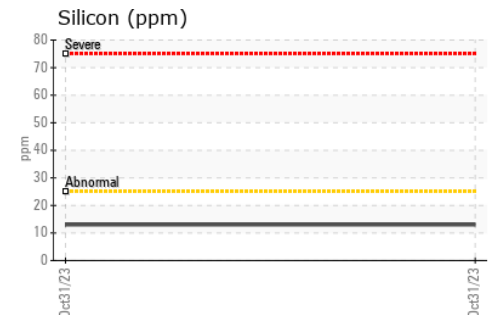
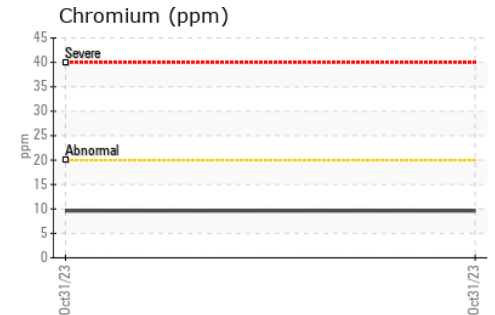
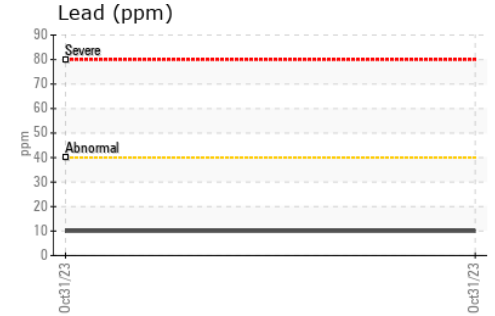
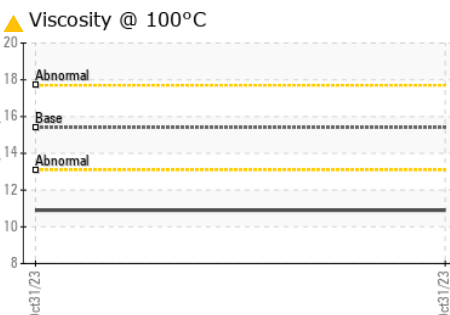
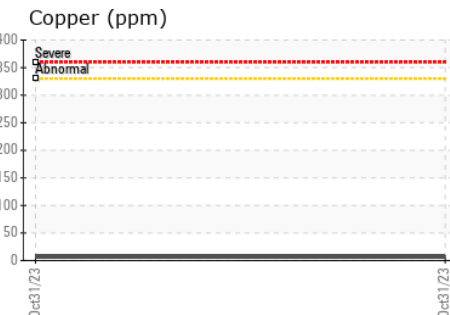
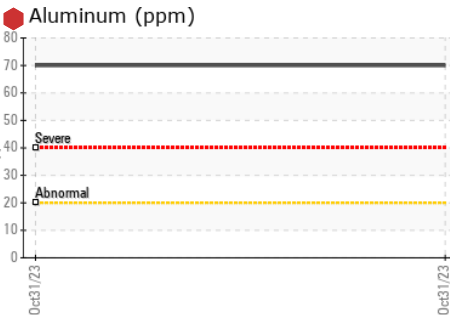
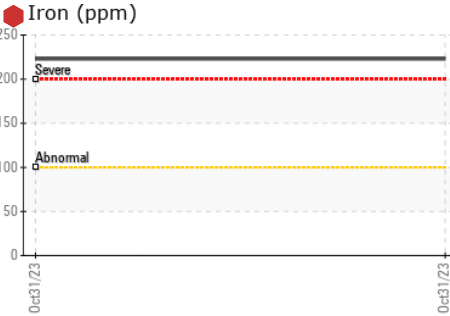
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
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 D7279(m)	15.4	▲ 10.9	---

## GRAPHS



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 570 - Thunder Bay  
**Sample No.** : GFL0059070 **Received** : 06 Nov 2023  
**Lab Number** : 02594033 **Diagnosed** : 07 Nov 2023  
**Unique Number** : 5671112 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, Glycol, PercentFuel, PQ )

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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