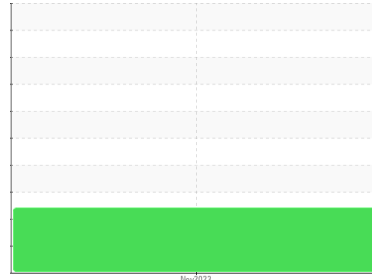




# OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id  
**933010**  
 Component  
**Natural Gas Engine**  
 Fluid  
**PETRO CANADA DURON HP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil from the component if this has not already been done. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

Iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated.

### Contamination

There is a moderate concentration of dirt present in the oil. High amount of ingressed dirt has caused abrasive wear to the component.

### Fluid Condition

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>GFL0097620</b>	---	---
Sample Date	Client Info		<b>14 Nov 2023</b>	---	---
Machine Age	hrs	Client Info	<b>1155</b>	---	---
Oil Age	hrs	Client Info	<b>1155</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*	>45	<b>0</b>	---	---
Iron	ppm	ASTM D5185(m)	>50	<b>▲ 71</b>	---
Chromium	ppm	ASTM D5185(m)	>5	<b>2</b>	---
Nickel	ppm	ASTM D5185(m)	>4	<b>2</b>	---
Titanium	ppm	ASTM D5185(m)	>5	<b>0</b>	---
Silver	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	---
Aluminum	ppm	ASTM D5185(m)	>25	<b>24</b>	---
Lead	ppm	ASTM D5185(m)	>40	<b>2</b>	---
Copper	ppm	ASTM D5185(m)	>150	<b>17</b>	---
Tin	ppm	ASTM D5185(m)	>4	<b>1</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>8</b>	---
Barium	ppm	ASTM D5185(m)	0	<b>3</b>	---
Molybdenum	ppm	ASTM D5185(m)	60	<b>60</b>	---
Manganese	ppm	ASTM D5185(m)	0	<b>10</b>	---
Magnesium	ppm	ASTM D5185(m)	1010	<b>790</b>	---
Calcium	ppm	ASTM D5185(m)	1070	<b>1439</b>	---
Phosphorus	ppm	ASTM D5185(m)	1150	<b>756</b>	---
Zinc	ppm	ASTM D5185(m)	1270	<b>928</b>	---
Sulfur	ppm	ASTM D5185(m)	2060	<b>1909</b>	---
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	<b>▲ 25</b>	---
Sodium	ppm	ASTM D5185(m)		<b>7</b>	---
Potassium	ppm	ASTM D5185(m)	>20	<b>17</b>	---
Glycol	%	ASTM D7922*		<b>0.0</b>	---

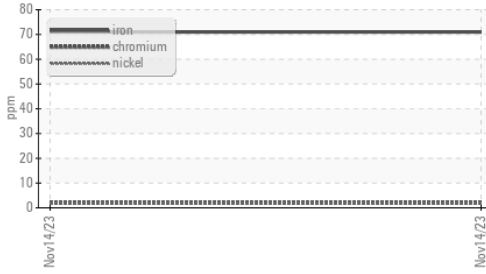
## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		<b>0</b>	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>12.7</b>	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>26.4</b>	---



# OIL ANALYSIS REPORT

## ▲ Ferrous Alloys



## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs./1mm ASTM D7414*	<b>23.8</b>	---	---

## VISUAL

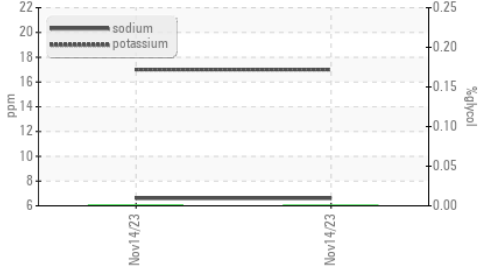
method	limit/base	current	history1	history2
Emulsified Water	scalar Visual*	<b>NEG</b>	---	---
Free Water	scalar Visual*	<b>NEG</b>	---	---

## FLUID PROPERTIES

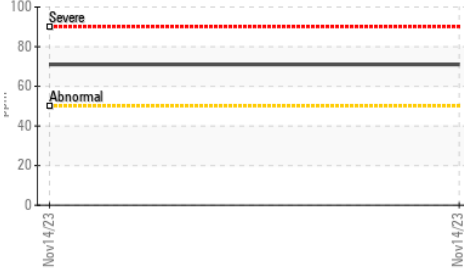
method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D7279(m)	<b>14.4</b>	---	---

## GRAPHS

### Glycol Contamination



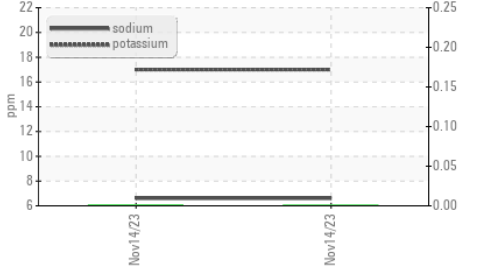
### ▲ Iron (ppm)



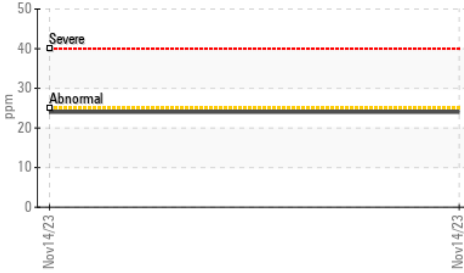
### Lead (ppm)



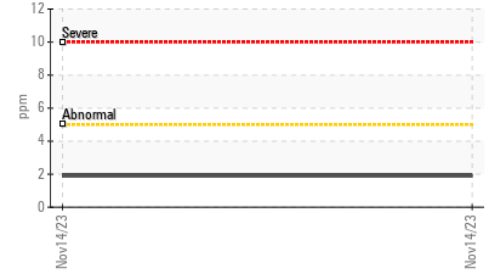
### Glycol Contamination



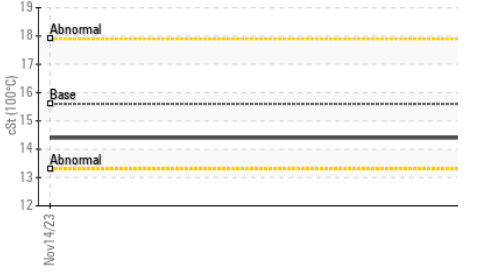
### Aluminum (ppm)



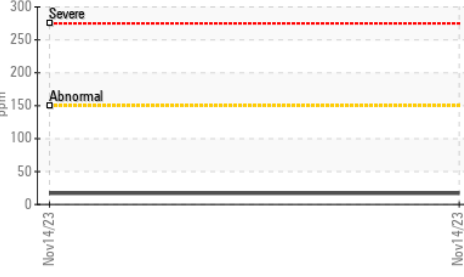
### Chromium (ppm)



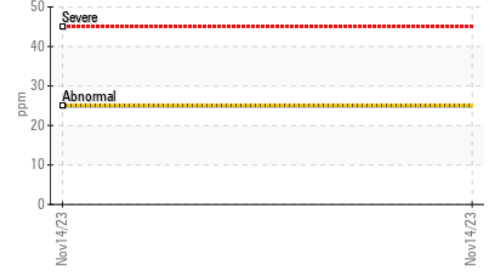
### Viscosity @ 100°C



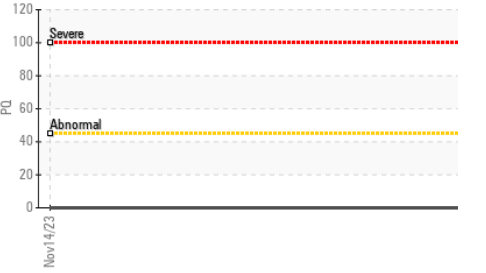
### Copper (ppm)



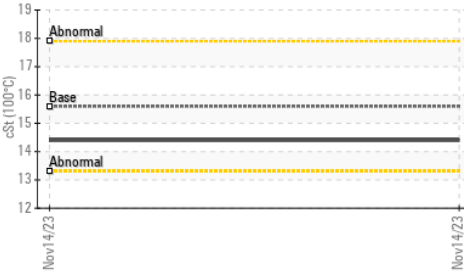
### ▲ Silicon (ppm)



### PQ



### Viscosity @ 100°C



### PQ



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 554 - Edmonton SW  
**Sample No.** : GFL0097620  
**Lab Number** : 02597813  
**Unique Number** : 5682893  
**Test Package** : MOB 1 ( Additional Tests: Glycol, PQ )

**Received** : 21 Nov 2023  
**Diagnosed** : 22 Nov 2023  
**Diagnostician** : Kevin Marson

8409 -15th Street NW  
 Edmonton, AB  
 CA T6P 0B8  
 Contact: Tim Greig  
 tgreig@gflenv.com  
 T: (780)231-0521  
 F:

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.