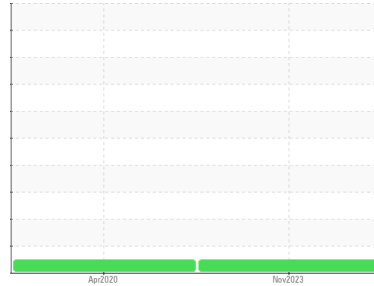




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**STERLING 423002**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

### Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0096337</b>	GFL0005127	---
Sample Date	Client Info		<b>06 Nov 2023</b>	09 Apr 2020	---
Machine Age	hrs	Client Info	<b>383036</b>	36331	---
Oil Age	hrs	Client Info	<b>600</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	>5	<b>&lt;1.0</b>	<1.0	---
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)	>100	<b>10</b>	11	---
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	---
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	<1	---
Titanium	ppm	ASTM D5185(m)		<b>0</b>	1	---
Silver	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	0	---
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	<1	---
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	<1	---
Copper	ppm	ASTM D5185(m)	>330	<b>1</b>	2	---
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	---
Antimony	ppm	ASTM D5185(m)		<b>0</b>	<1	---
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>4</b>	41	---
Barium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	---
Molybdenum	ppm	ASTM D5185(m)	60	<b>9</b>	25	---
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	<1	---
Magnesium	ppm	ASTM D5185(m)	1010	<b>127</b>	688	---
Calcium	ppm	ASTM D5185(m)	1070	<b>2232</b>	1369	---
Phosphorus	ppm	ASTM D5185(m)	1150	<b>922</b>	1048	---
Zinc	ppm	ASTM D5185(m)	1270	<b>1055</b>	1183	---
Sulfur	ppm	ASTM D5185(m)	2060	<b>3109</b>	2994	---
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	---

## CONTAMINANTS

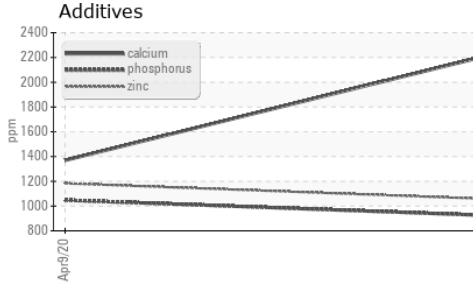
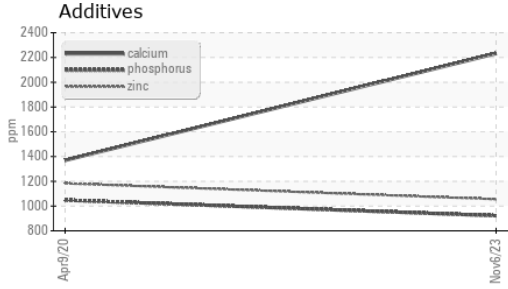
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>2</b>	2	---
Sodium	ppm	ASTM D5185(m)		<b>2</b>	1	---
Potassium	ppm	ASTM D5185(m)	>20	<b>6</b>	2	---

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	<b>0</b>	0.1	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>6.1</b>	8.3	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>16.4</b>	23.8	---



# OIL ANALYSIS REPORT



### FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	10.1	14.3

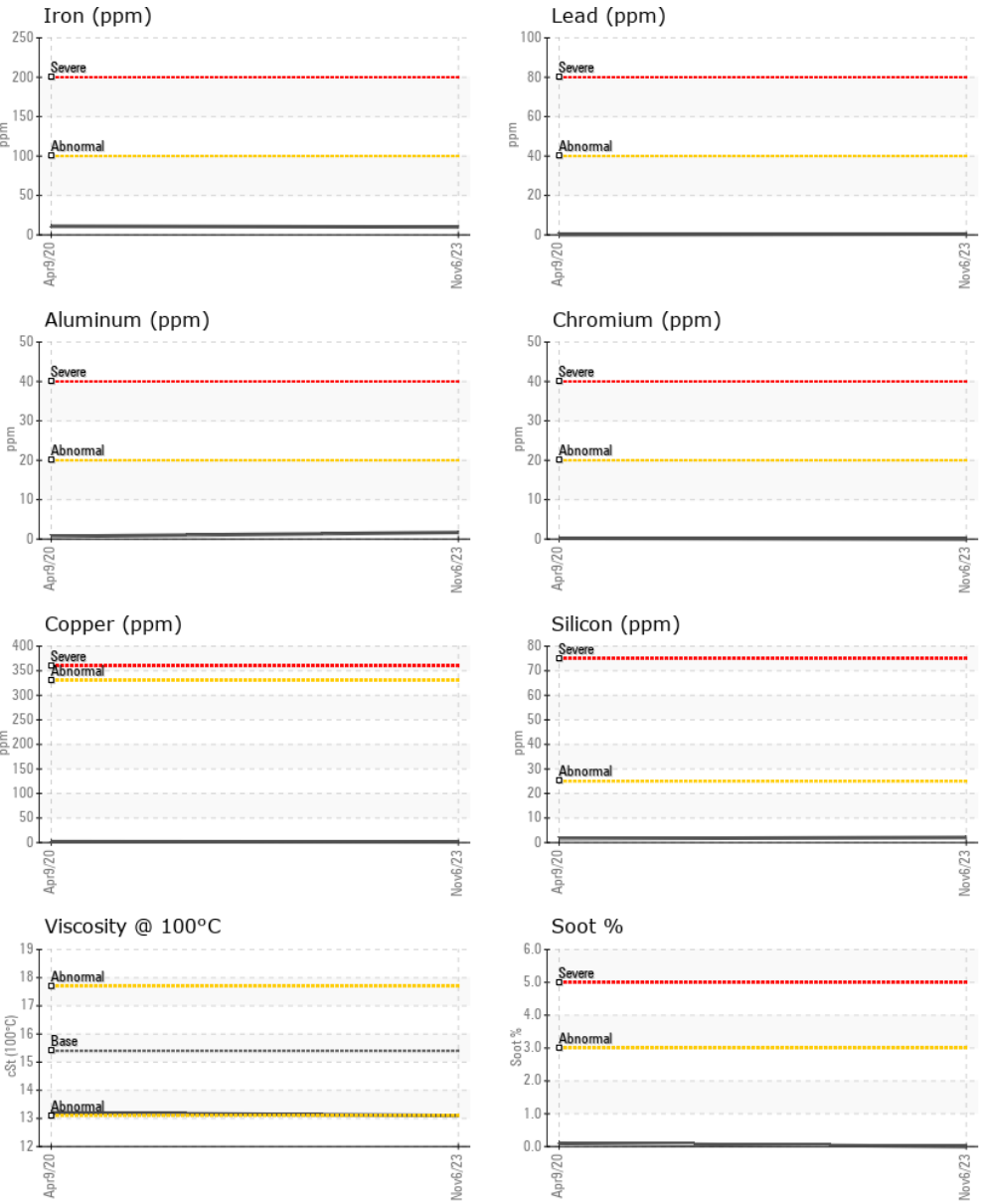
### VISUAL

	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	13.1	13.2

### GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0096337  
**Lab Number** : 02602762  
**Unique Number** : 5695847  
**Test Package** : MOB 1

**GFL Environmental - 527**  
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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.