



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>ABNORMAL</b>

Machine Id  
**801178**

Component  
**Diesel Engine**

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

**RECOMMENDATION**

We advise that you check for faulty combustion and a possible overheat condition. We advise that you check the engine tuning and timing. Check for low coolant level. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0096736</b>	---	---
Sample Date		Client Info		<b>19 Dec 2023</b>	---	---
Machine Age	hrs	Client Info		<b>14056</b>	---	---
Oil Age	hrs	Client Info		<b>600</b>	---	---
Filter Age	hrs	Client Info		<b>600</b>	---	---
Oil Changed		Client Info		<b>N/A</b>	---	---
Filter Changed		Client Info		<b>N/A</b>	---	---
Sample Status				<b>ABNORMAL</b>	---	---

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>50</b>	---	---
Chromium	ppm	ASTM D5185(m)	>20	<b>2</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>0</b>	---	---
Aluminum	ppm	ASTM D5185(m)	>20	<b>5</b>	---	---
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	---	---
Copper	ppm	ASTM D5185(m)	>330	<b>5</b>	---	---
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	---	---

**CONTAMINATION**

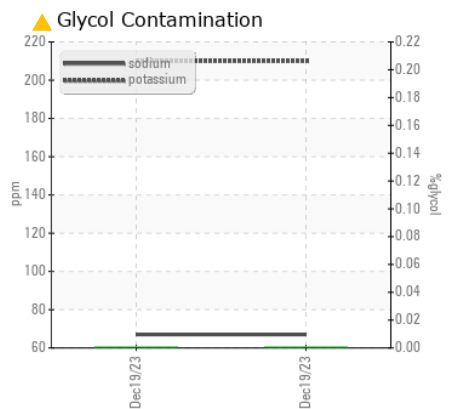
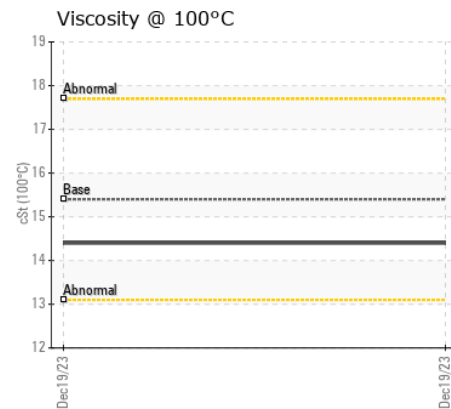
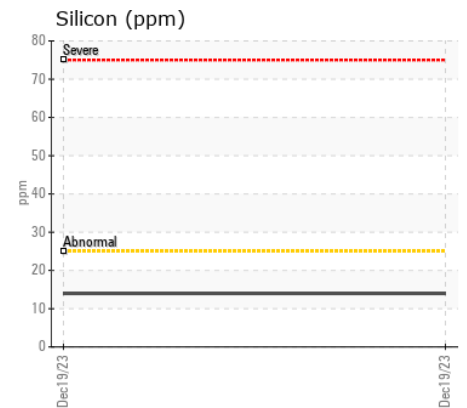
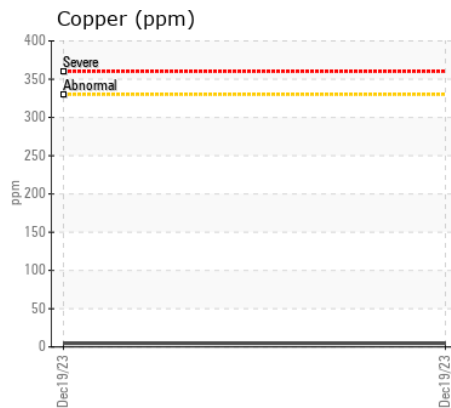
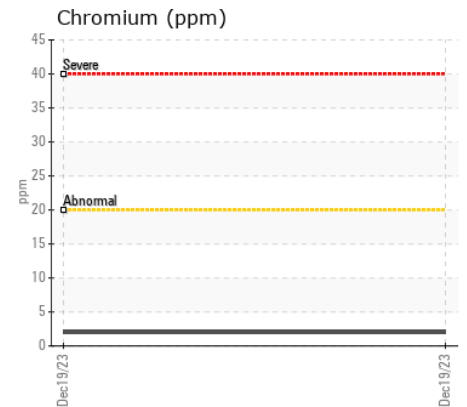
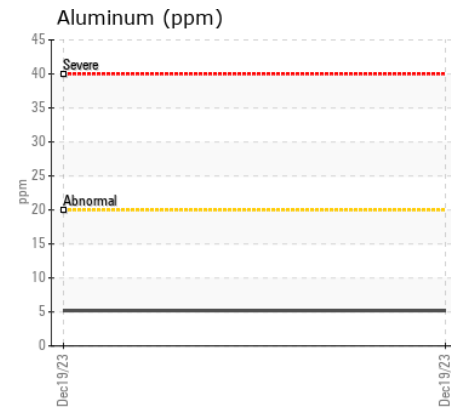
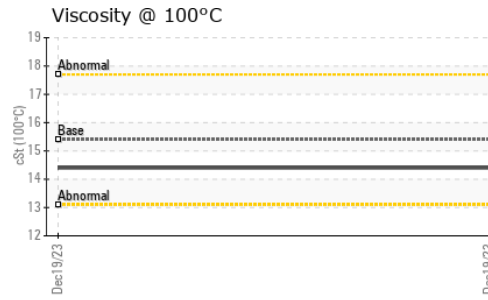
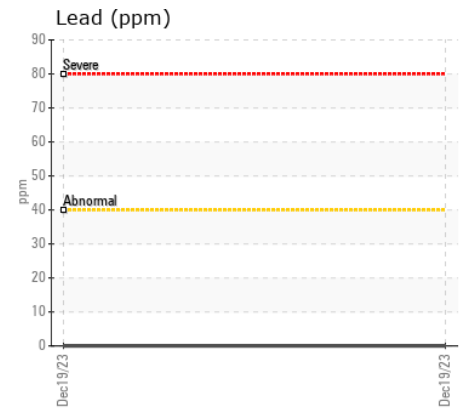
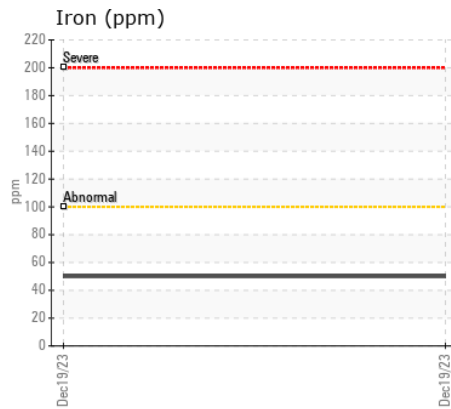
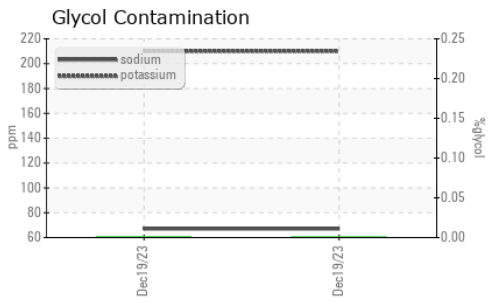
There is an abnormal level of nitration indicated. There is an abnormal level of sulfation indicated. Water treatment chemicals present, indicating slow coolant leak. Test for glycol is negative.

Silicon	ppm	ASTM D5185(m)	>25	<b>14</b>	---	---
Potassium	ppm	ASTM D5185(m)	>20	<b>▲ 210</b>	---	---
Fuel		WC Method	>5	<b>&lt;1.0</b>	---	---
Water		WC Method	>0.2	<b>NEG</b>	---	---
Glycol	%	ASTM D7922*		<b>0.0</b>	---	---
Soot %	%	ASTM D7844*	>3	<b>0.4</b>	---	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>▲ 20.7</b>	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>▲ 32.6</b>	---	---
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	---	---

**FLUID CONDITION**

A small degree of oil oxidation was indicated. The oil is no longer serviceable. The condition of the oil is acceptable for the time in service (see recommendation).

Sodium	ppm	ASTM D5185(m)		<b>67</b>	---	---
Boron	ppm	ASTM D5185(m)	0	<b>2</b>	---	---
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185(m)	60	<b>58</b>	---	---
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185(m)	1010	<b>911</b>	---	---
Calcium	ppm	ASTM D5185(m)	1070	<b>1011</b>	---	---
Phosphorus	ppm	ASTM D5185(m)	1150	<b>967</b>	---	---
Zinc	ppm	ASTM D5185(m)	1270	<b>1124</b>	---	---
Sulfur	ppm	ASTM D5185(m)	2060	<b>2121</b>	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>▲ 43.1</b>	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>14.4</b>	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 574 - Vancouver Fleet  
**Sample No.** : GFL0096736 **Received** : 18 Jan 2024  
**Lab Number** : 02609631 **Diagnosed** : 18 Jan 2024  
**Unique Number** : 5710717 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: Glycol )

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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.