

Machine Id  
**422000**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**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.

Test	UOM	Method	Limit/Abn	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	---
Filter Age	kms	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	N/A	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>ABNORMAL</b>	ATTENTION	---

**WEAR**

Aluminum ppm levels are abnormal. Piston wear is indicated.

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	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	---

**CONTAMINATION**

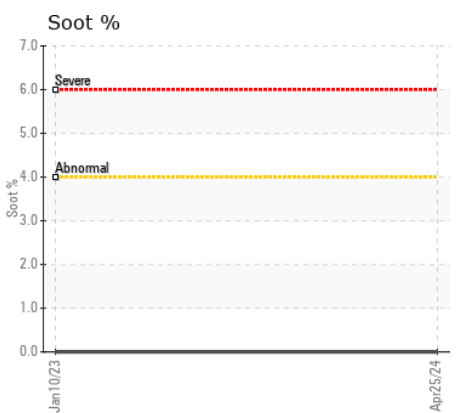
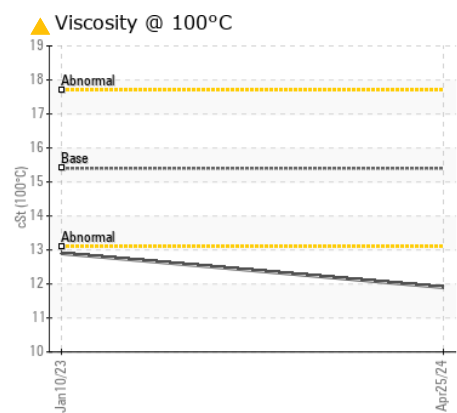
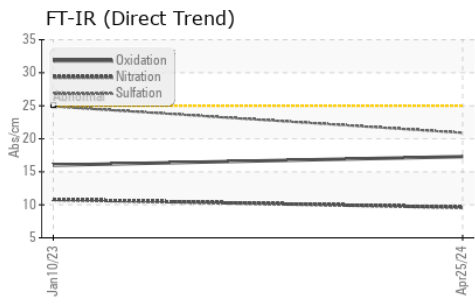
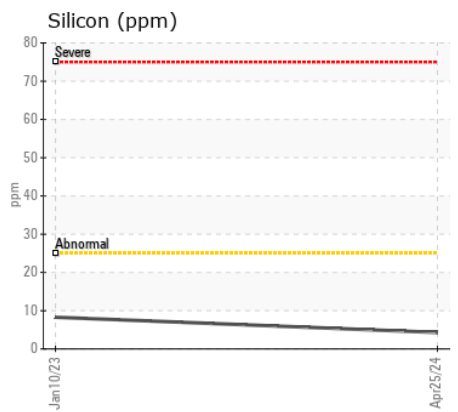
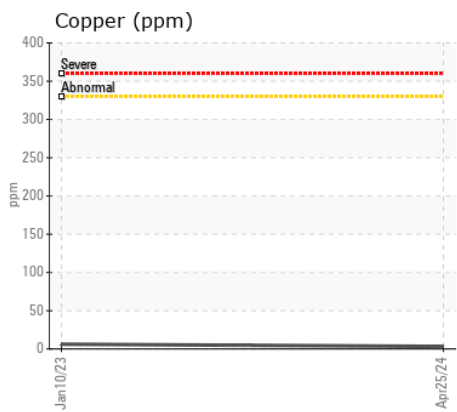
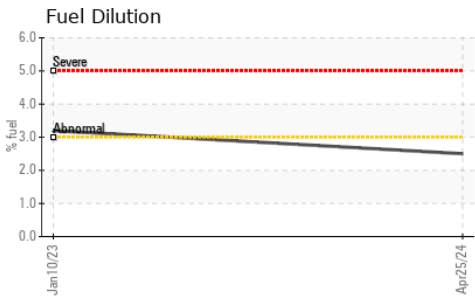
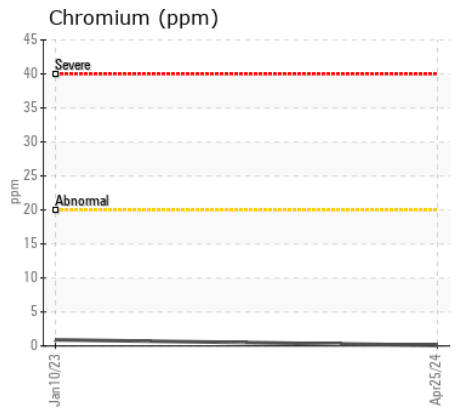
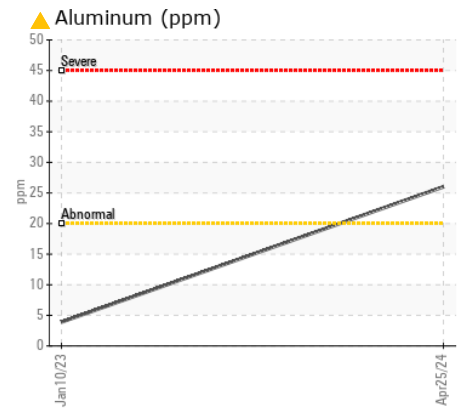
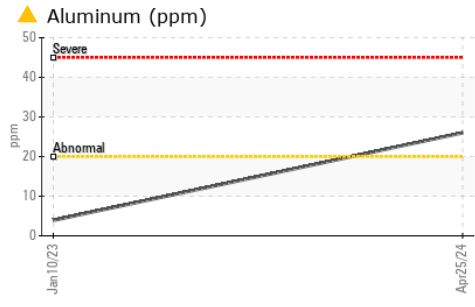
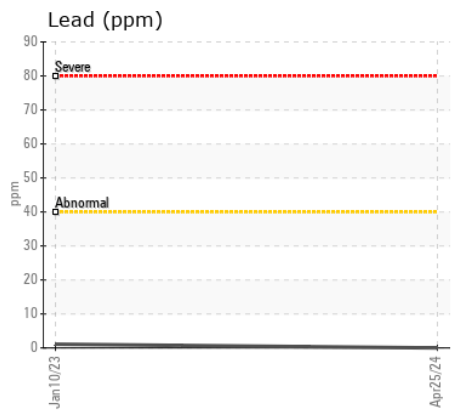
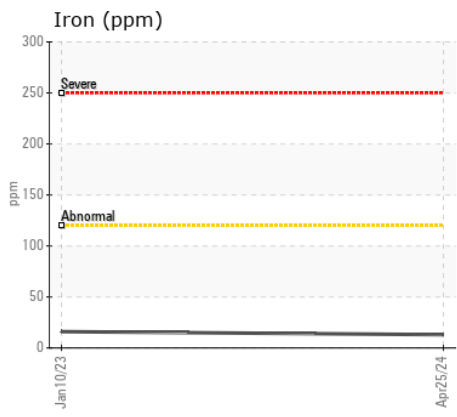
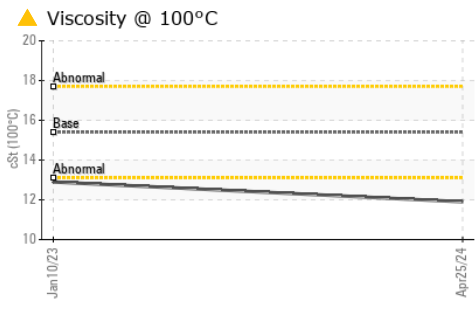
Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	8	---
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	---
Fuel	%	ASTM D7593*	>3.0	<b>2.5</b>	<b>▲ 3.2</b>	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
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	---
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	---

**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.

Sodium	ppm	ASTM D5185(m)		<b>5</b>	8	---
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>	<b>● 14</b>	---
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	1	---
Magnesium	ppm	ASTM D5185(m)	1010	<b>940</b>	<b>● 161</b>	---
Calcium	ppm	ASTM D5185(m)	1070	<b>1020</b>	<b>● 2087</b>	---
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>	<b>● 3187</b>	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>17.3</b>	16.0	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>▲ 11.9</b>	12.9	---



**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 )  
**Received** : 02 May 2024  
**Tested** : 03 May 2024  
**Diagnosed** : 03 May 2024 - Kevin Marson

**GFL Environmental - 853 - Antigonish**  
 17 Adam St  
 Antigonish, NS  
 CA B2G 2G1  
 Contact: Nicole Haverkort  
 nhaverkort@gflenv.com  
 T: (902)863-1744  
 F: (902)863-2084

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.