



Machine Id  
**8977**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (40 LTR)**

**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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0120093</b>	GFL0116369	GFL0097011
Sample Date		Client Info		<b>24 Apr 2024</b>	15 Mar 2024	16 Oct 2023
Machine Age	kms	Client Info		<b>190493</b>	188913	184117
Oil Age	kms	Client Info		<b>188913</b>	0	0
Filter Age	kms	Client Info		<b>188913</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>SEVERE</b>	SEVERE	SEVERE

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>90	<b>18</b>	18	29
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	2	1
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>330	<b>1</b>	2	1
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

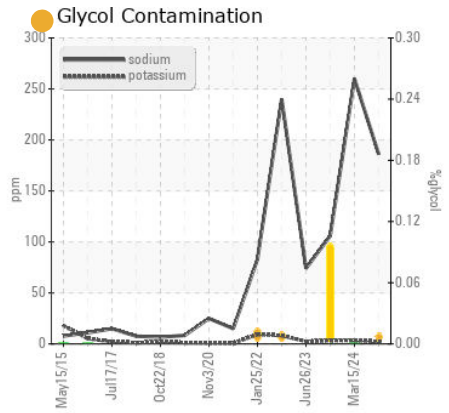
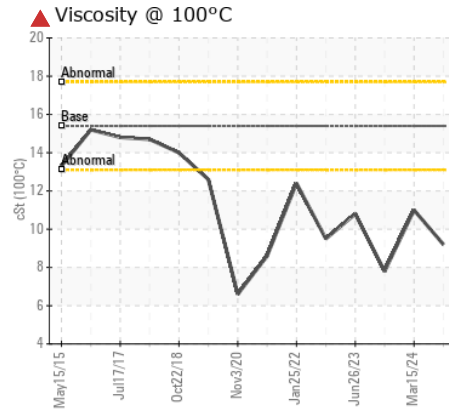
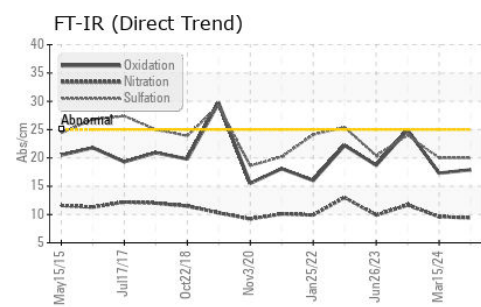
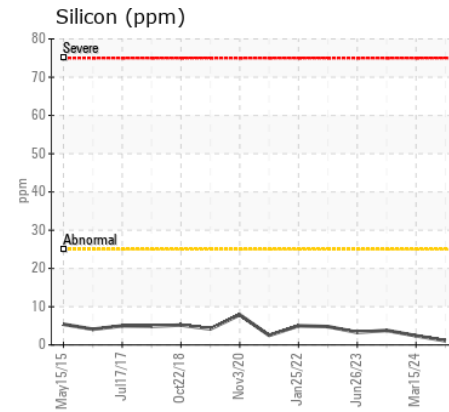
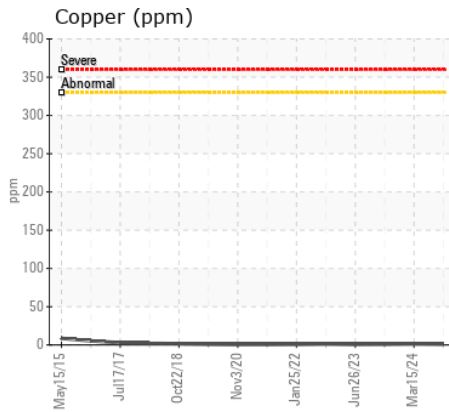
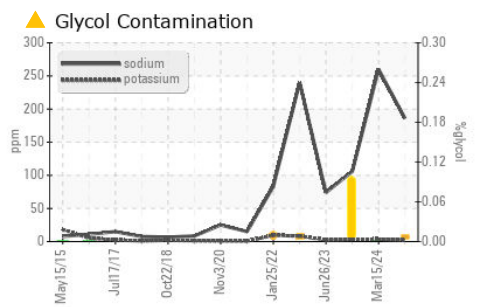
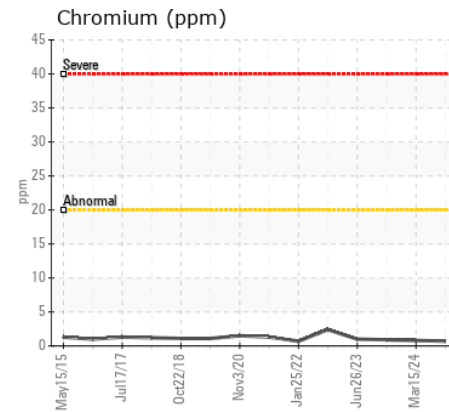
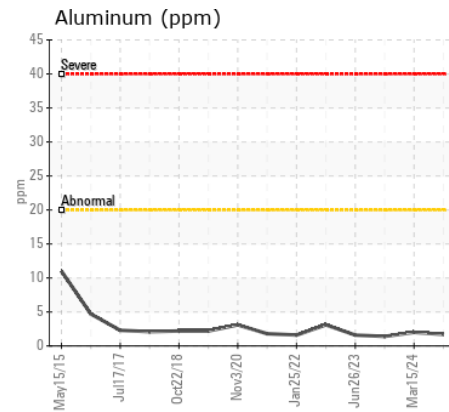
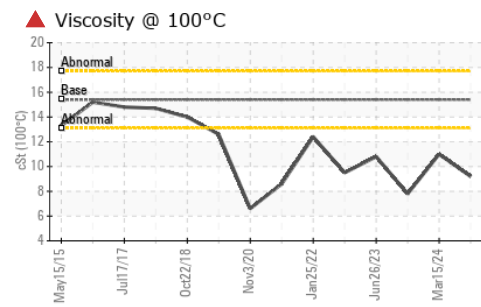
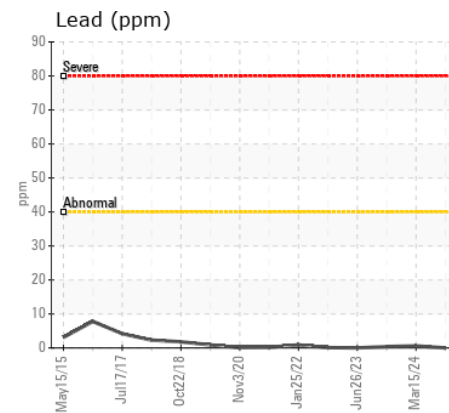
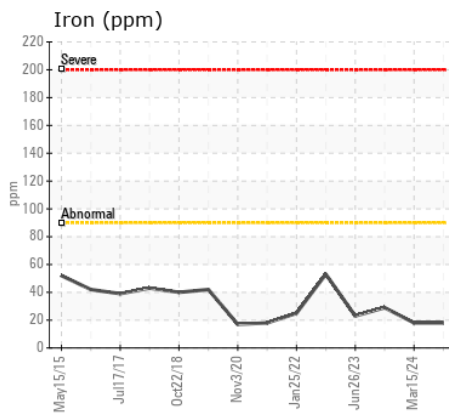
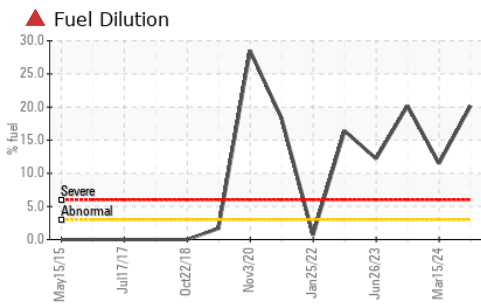
Test for glycol is positive. There is a high amount of fuel present in the oil. There is a light concentration of glycol present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>1</b>	2	4
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	4	3
Fuel	%	ASTM D7593*	>3.0	<b>▲ 20.2</b>	▲ 11.5	▲ 20.2
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	ASTM D7922*		<b>▲ 0.01</b>	0.0	▲ 0.098
Soot %	%	ASTM D7844*	>6	<b>0.1</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.4</b>	9.6	11.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.0</b>	20.0	24.0
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		<b>● 186</b>	● 260	● 106
Boron	ppm	ASTM D5185(m)	0	<b>2</b>	3	2
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185(m)	60	<b>47</b>	50	42
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185(m)	1010	<b>751</b>	787	668
Calcium	ppm	ASTM D5185(m)	1070	<b>783</b>	839	729
Phosphorus	ppm	ASTM D5185(m)	1150	<b>790</b>	884	664
Zinc	ppm	ASTM D5185(m)	1270	<b>919</b>	979	822
Sulfur	ppm	ASTM D5185(m)	2060	<b>1990</b>	2269	1615
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>17.9</b>	17.3	24.9
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>▲ 9.2</b>	▲ 11.0	▲ 7.8



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0120093 **Received** : 30 Apr 2024  
**Lab Number** : 02632230 **Tested** : 01 May 2024  
**Unique Number** : 5773383 **Diagnosed** : 01 May 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: Glycol, PercentFuel )

**GFL Environmental - 225 - COT(D2)**  
 20 Brydon Drive  
 Etobicoke, ON  
 CA M9W 5R6  
 Contact: Rick Philip  
 rphilip@gflenv.com  
 T: (416)745-8080  
 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.