

Machine Id  
**500528**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA 10W40 (--- GAL)**

### RECOMMENDATION

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>GFL0047666</b>	GFL0024285	GFL0011136
Sample Date		Client Info		<b>09 Dec 2023</b>	29 Sep 2021	29 Mar 2021
Machine Age	hrs	Client Info		<b>0</b>	6702	3210
Oil Age	hrs	Client Info		<b>0</b>	492	600
Filter Age	hrs	Client Info		<b>0</b>	492	600
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>SEVERE</b>	ABNORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>90	<b>75</b>	18	35
Chromium	ppm	ASTM D5185(m)	>20	<b>2</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	0
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>3</b>	4	2
Lead	ppm	ASTM D5185(m)	>40	<b>2</b>	1	<1
Copper	ppm	ASTM D5185(m)	>330	<b>31</b>	3	1
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	<1	0

### CONTAMINATION

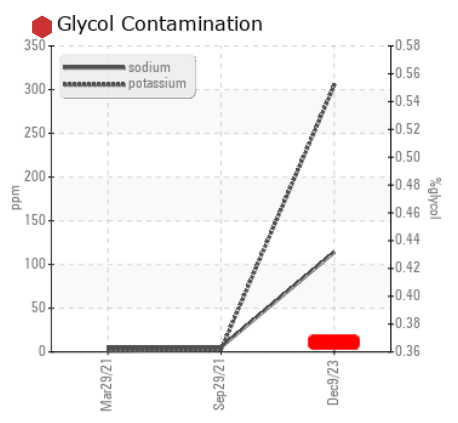
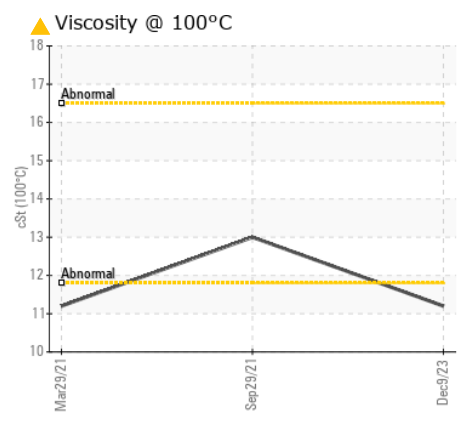
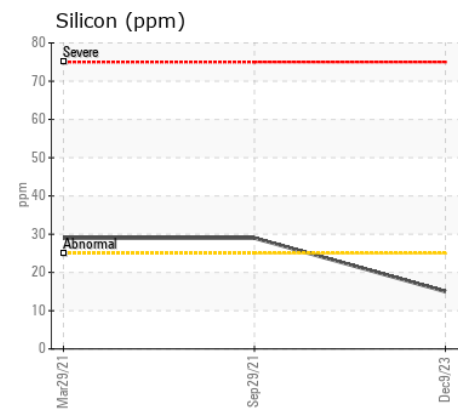
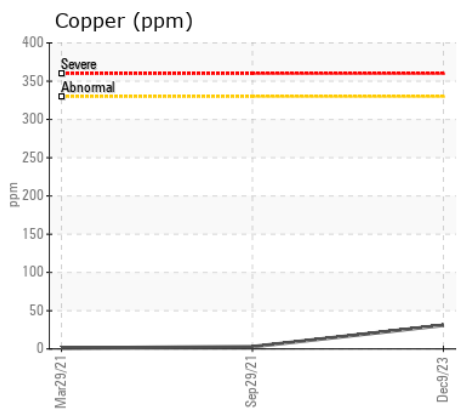
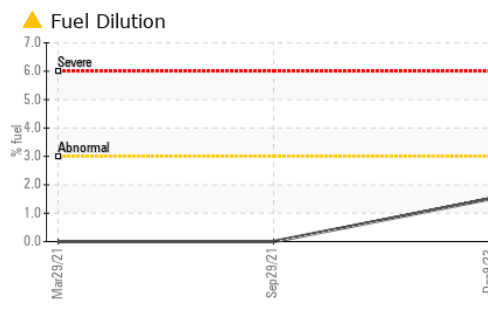
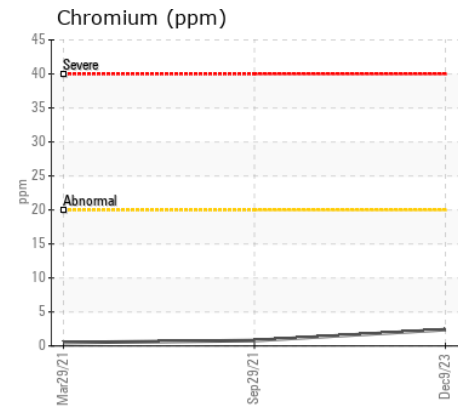
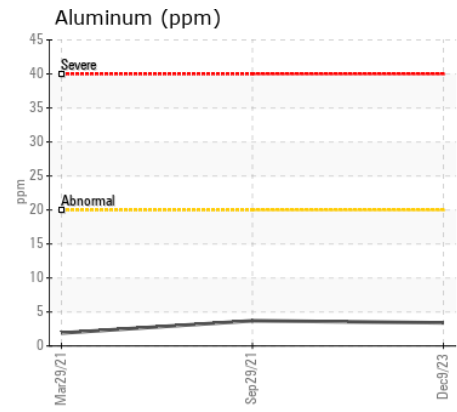
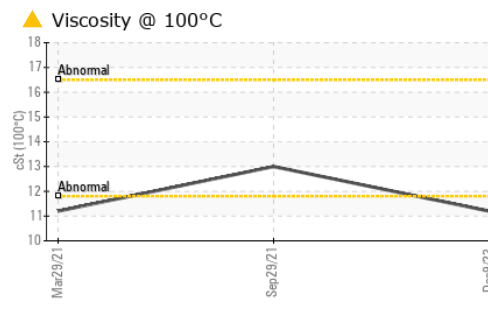
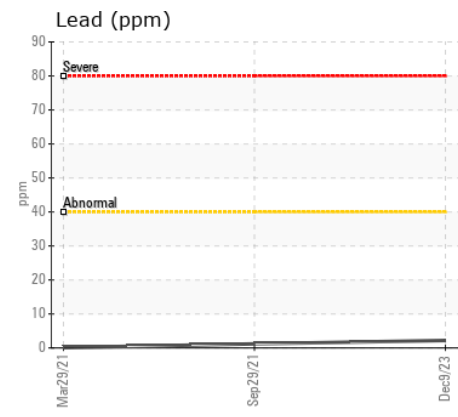
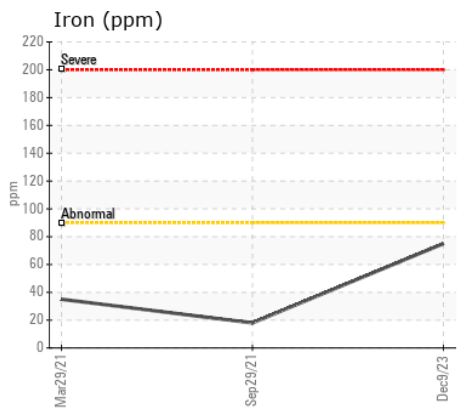
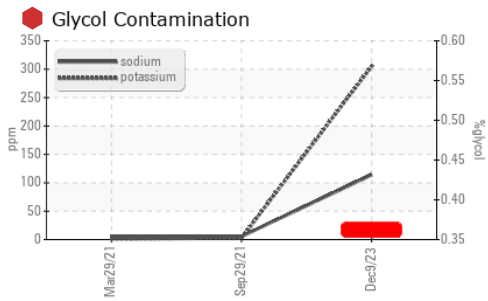
Test for glycol is positive. Light fuel dilution occurring. There is a high concentration of glycol present in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>15</b>	▲ 29	▲ 29
Potassium	ppm	ASTM D5185(m)	>20	▲ <b>305</b>	2	1
Fuel	%	ASTM D7593*	>3.0	▲ <b>1.5</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	ASTM D7922*		◆ <b>0.372</b>	NEG	NEG
Soot %	%	ASTM D7844*	>6	<b>0.9</b>	0.1	0.3
Nitration	Abs/cm	ASTM D7624*	>20	<b>13.1</b>	6.4	9.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>22.6</b>	23.5	21.2
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)	>20	▲ <b>114</b>	6	5
Boron	ppm	ASTM D5185(m)		<b>2</b>	270	2
Barium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185(m)		<b>92</b>	105	56
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	2	<1
Magnesium	ppm	ASTM D5185(m)		<b>955</b>	674	946
Calcium	ppm	ASTM D5185(m)		<b>1016</b>	1403	1038
Phosphorus	ppm	ASTM D5185(m)		<b>1025</b>	731	974
Zinc	ppm	ASTM D5185(m)		<b>1187</b>	838	1166
Sulfur	ppm	ASTM D5185(m)		<b>2631</b>	2047	2576
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>18.3</b>	15.9	16.9
Visc @ 100°C	cSt	ASTM D7279(m)		▲ <b>11.2</b>	13.0	11.2



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 355 - Saskatoon  
**Sample No.** : GFL0047666 **Received** : 22 Jan 2024  
**Lab Number** : 02610219 **Diagnosed** : 23 Jan 2024  
**Unique Number** : 5711305 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, Glycol, PercentFuel )

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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.