



Machine Id  
**701018**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA 10W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0069549</b>	GFL0069514	GFL0060879
Sample Date		Client Info		<b>29 May 2023</b>	06 Mar 2023	01 Nov 2022
Machine Age	hrs	Client Info		<b>12366</b>	11780	10874
Oil Age	hrs	Client Info		<b>0</b>	600	600
Filter Age	hrs	Client Info		<b>0</b>	600	600
Oil Changed		Client Info		<b>N/A</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>80	<b>19</b>	27	14
Chromium	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>30	<b>2</b>	4	3
Lead	ppm	ASTM D5185(m)	>30	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>150	<b>1</b>	2	1
Tin	ppm	ASTM D5185(m)	>5	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

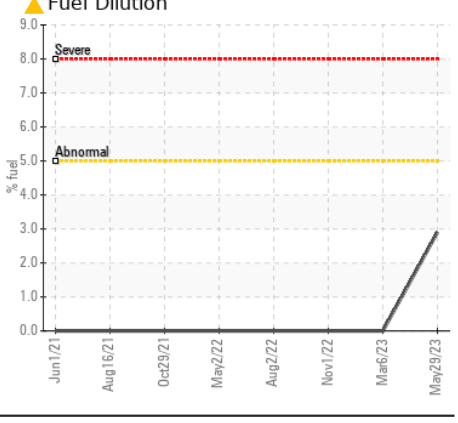
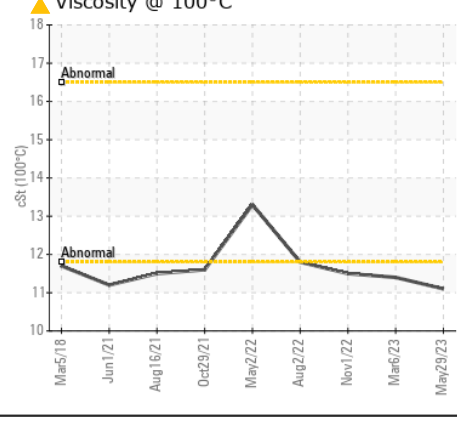
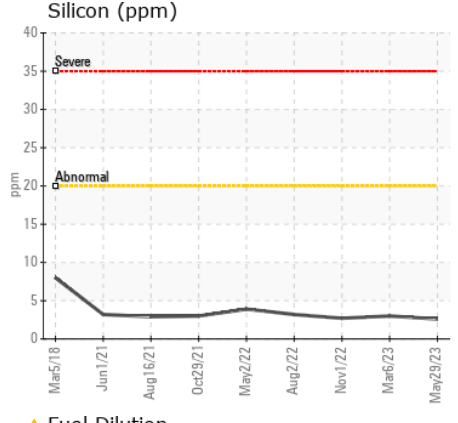
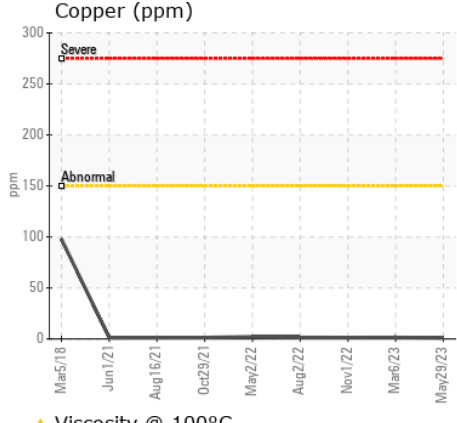
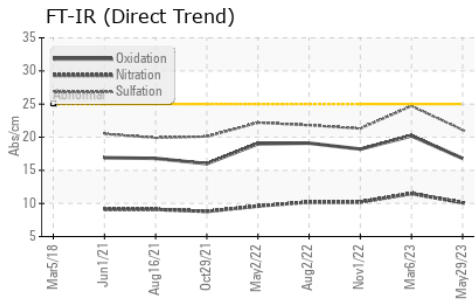
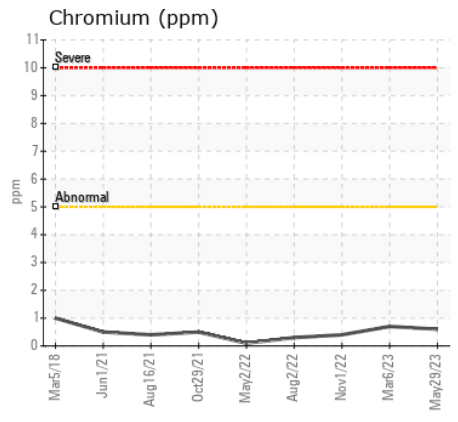
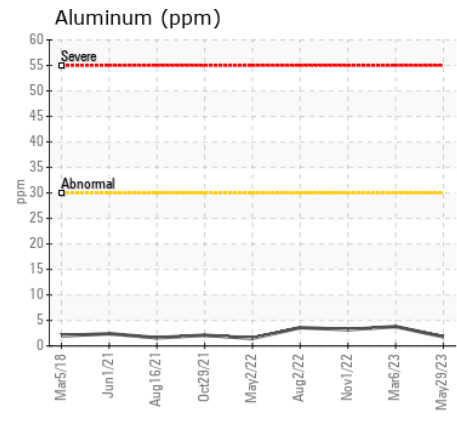
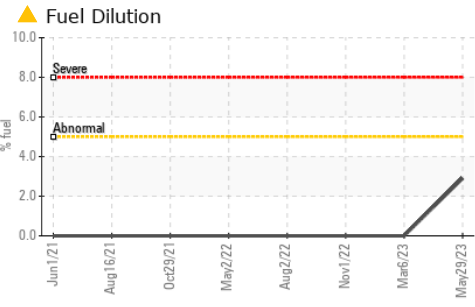
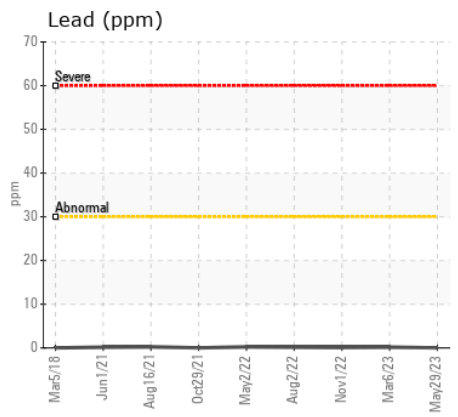
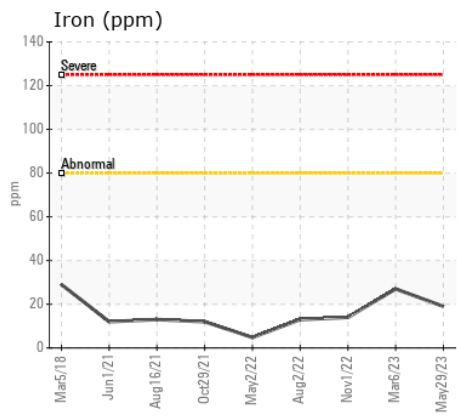
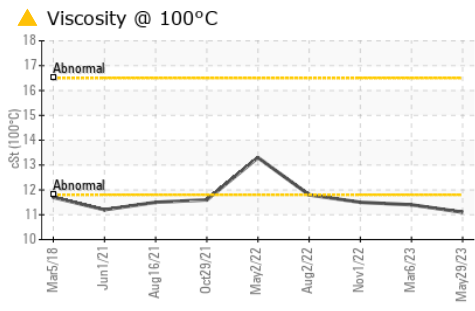
Light fuel dilution occurring.

Silicon	ppm	ASTM D5185(m)	>20	<b>3</b>	3	3
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	3	3
Fuel	%	ASTM D7593*	>5	<b>▲ 2.9</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>0.2</b>	0.3	0.2
Nitration	Abs/cm	ASTM D7624*	>20	<b>10.1</b>	11.5	10.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>21.1</b>	24.7	21.3
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 condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>20	<b>6</b>	7	7
Boron	ppm	ASTM D5185(m)		<b>11</b>	5	2
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>62</b>	62	60
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)		<b>961</b>	975	961
Calcium	ppm	ASTM D5185(m)		<b>1074</b>	1136	1078
Phosphorus	ppm	ASTM D5185(m)		<b>1055</b>	1046	1034
Zinc	ppm	ASTM D5185(m)		<b>1179</b>	1210	1195
Sulfur	ppm	ASTM D5185(m)		<b>2556</b>	2564	2513
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>16.8</b>	20.2	18.2
Visc @ 100°C	cSt	ASTM D7279(m)		<b>▲ 11.1</b>	11.4	11.5



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0069549  
**Lab Number** : 02577128  
**Unique Number** : 5630188  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel )  
**Received** : 21 Aug 2023  
**Tested** : 22 Aug 2023  
**Diagnosed** : 22 Aug 2023 - Wes Davis

**GFL Environmental - 565 - Winnipeg**  
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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.