

Machine Id  
**810061**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0117301</b>	GFL0044546	GFL0044520
Sample Date		Client Info		<b>30 Apr 2024</b>	18 Jan 2023	03 Aug 2022
Machine Age	kms	Client Info		<b>85183</b>	1303	605
Oil Age	kms	Client Info		<b>0</b>	600	300
Filter Age	kms	Client Info		<b>0</b>	600	300
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>90	<b>71</b>	25	53
Chromium	ppm	ASTM D5185(m)	>20	<b>3</b>	<1	2
Nickel	ppm	ASTM D5185(m)	>2	<b>1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	1
Aluminum	ppm	ASTM D5185(m)	>20	<b>6</b>	5	12
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	7	16
Copper	ppm	ASTM D5185(m)	>330	<b>4</b>	256	571
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	<1	1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

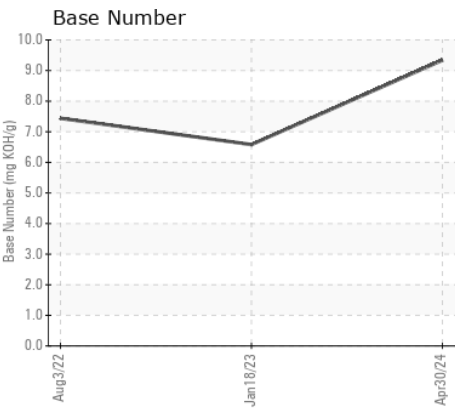
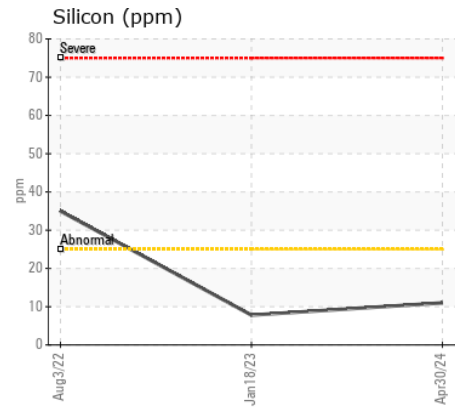
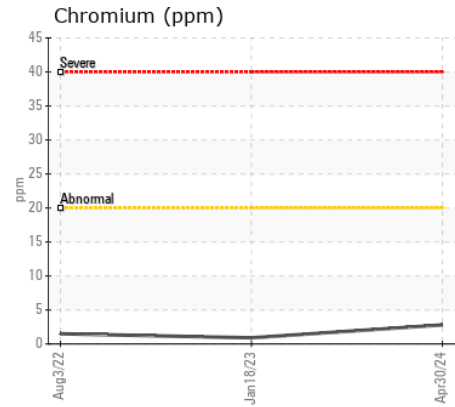
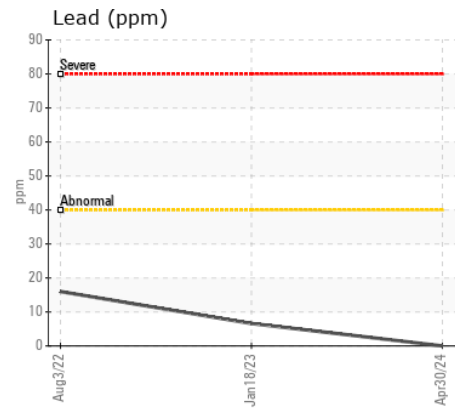
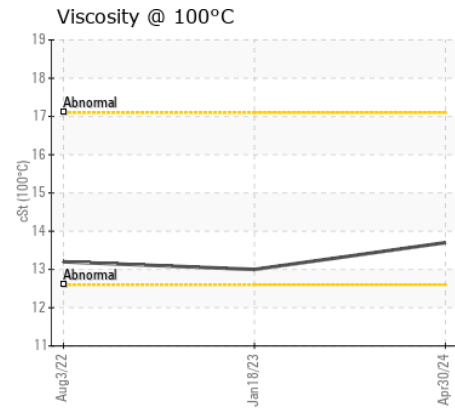
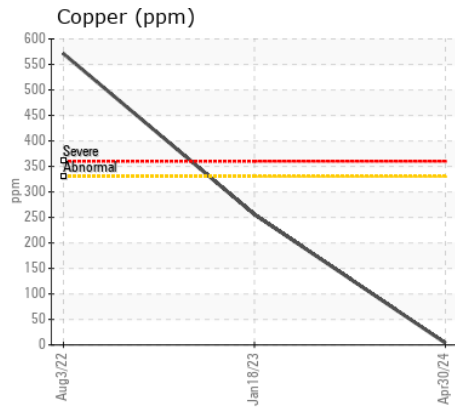
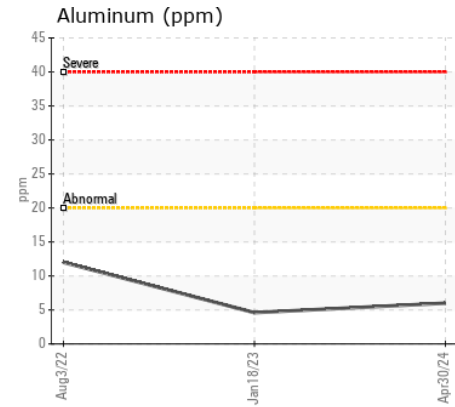
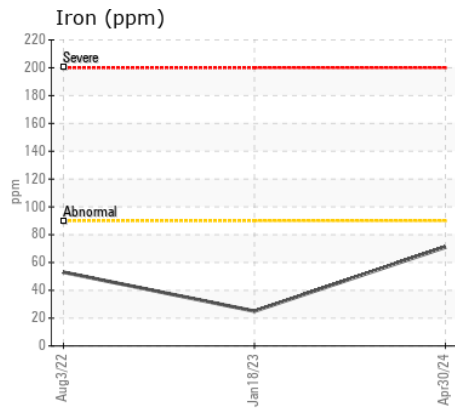
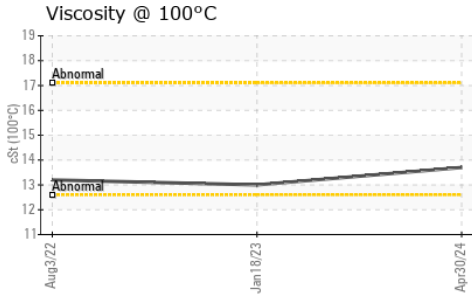
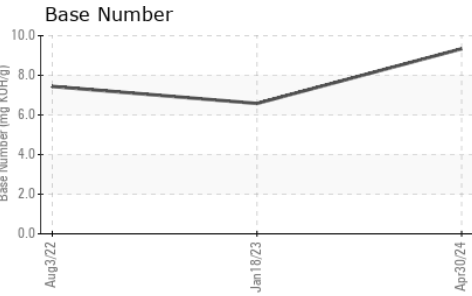
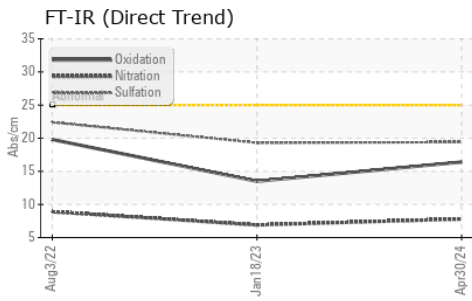
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>11</b>	8	35
Potassium	ppm	ASTM D5185(m)	>20	<b>4</b>	5	15
Fuel		WC Method	>3.0	<b>&lt;1.0</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*	>6	<b>0.3</b>	0	0.2
Nitration	Abs/cm	ASTM D7624*	>20	<b>7.8</b>	6.9	8.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>19.4</b>	19.3	22.4
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		<b>5</b>	1	6
Boron	ppm	ASTM D5185(m)		<b>3</b>	8	164
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	8
Molybdenum	ppm	ASTM D5185(m)		<b>58</b>	62	104
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	6
Magnesium	ppm	ASTM D5185(m)		<b>937</b>	940	664
Calcium	ppm	ASTM D5185(m)		<b>1038</b>	1155	1530
Phosphorus	ppm	ASTM D5185(m)		<b>938</b>	1034	697
Zinc	ppm	ASTM D5185(m)		<b>1142</b>	1184	863
Sulfur	ppm	ASTM D5185(m)		<b>2342</b>	2339	1963
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>16.4</b>	13.5	19.8
Base Number (BN)	mg KOH/g	ASTM D2896*		<b>9.34</b>	6.58	7.44
Visc @ 100°C	cSt	ASTM D7279(m)		<b>13.7</b>	13.0	13.2



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0117301  
**Lab Number** : 02632471  
**Unique Number** : 5773624  
**Test Package** : MOB 2  
**Received** : 01 May 2024  
**Tested** : 02 May 2024  
**Diagnosed** : 02 May 2024 - Wes Davis

**GFL Environmental - 550 - Rocky View County**  
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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.