



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**414073**  
Component  
**1 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>GFL0112717</b>	GFL0112761	---
Sample Date		Client Info		<b>16 Feb 2024</b>	07 Feb 2024	---
Machine Age	hrs	Client Info		<b>516</b>	434	---
Oil Age	hrs	Client Info		<b>0</b>	434	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Not Chngd</b>	Changed	---
Filter Changed		Client Info		<b>Not Chngd</b>	Changed	---
Sample Status				<b>NORMAL</b>	ABNORMAL	---

**WEAR**

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>120	<b>2</b>	30	---
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	---
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	4	---
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	---
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	1	---
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	14	---
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	---
Copper	ppm	ASTM D5185m	>330	<b>47</b>	246	---
Tin	ppm	ASTM D5185m	>15	<b>0</b>	3	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

**CONTAMINATION**

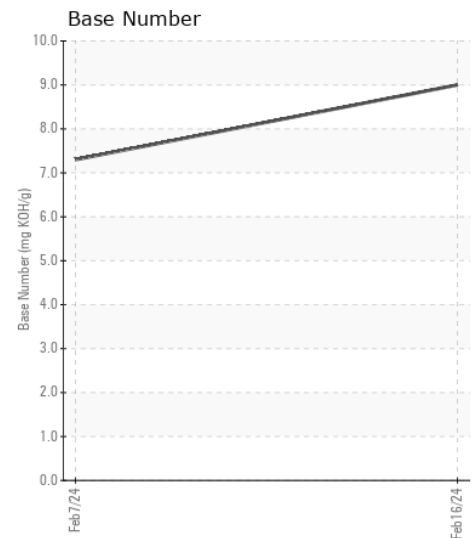
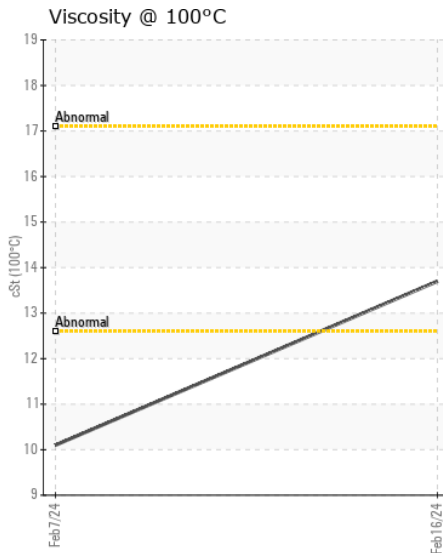
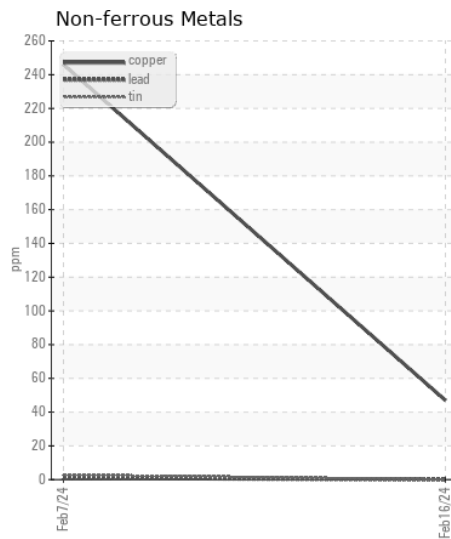
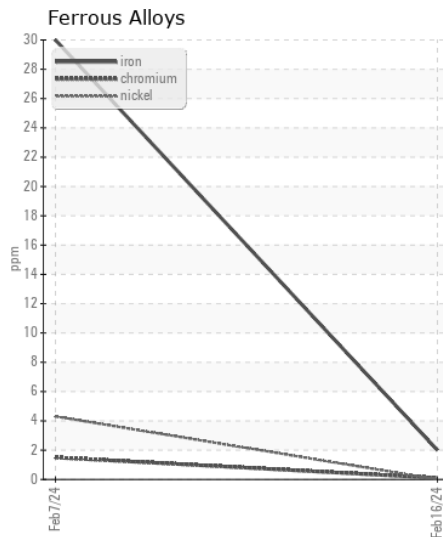
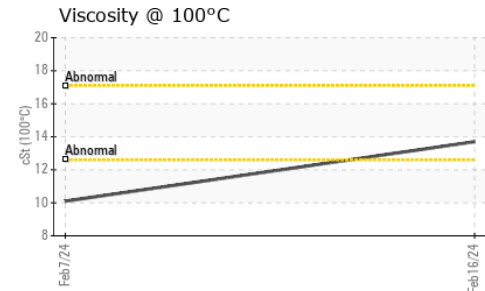
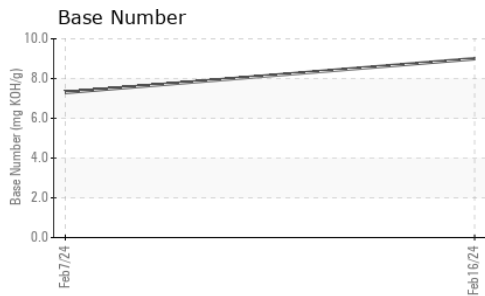
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>11</b>	▲ 69	---
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	39	---
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	0.5	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>4	<b>0.1</b>	0.6	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.5</b>	10.4	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.9</b>	26.0	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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 D5185m		<b>0</b>	0	---
Boron	ppm	ASTM D5185m		<b>21</b>	245	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>59</b>	109	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	4	---
Magnesium	ppm	ASTM D5185m		<b>863</b>	647	---
Calcium	ppm	ASTM D5185m		<b>973</b>	1277	---
Phosphorus	ppm	ASTM D5185m		<b>907</b>	660	---
Zinc	ppm	ASTM D5185m		<b>1128</b>	794	---
Sulfur	ppm	ASTM D5185m		<b>2788</b>	2595	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.9</b>	23.9	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.0</b>	7.3	---
Visc @ 100°C	cSt	ASTM D445		<b>13.7</b>	▲ 10.1	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0112717  
**Lab Number** : 06100856  
**Unique Number** : 10899086  
**Test Package** : FLEET

**Received** : 26 Feb 2024  
**Tested** : 27 Feb 2024  
**Diagnosed** : 27 Feb 2024 - Wes Davis

**GFL Environmental - 654 - Richmond Hauling**  
 11800 Lewis Road  
 Chester, VA  
 US 23831

Contact: Jimmy Mayes  
 jmayes@gflenv.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T:  
 F: