



Area  
**(YA156308)**

Machine Id  
**910018**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA 15W40 (12 GAL)**

**RECOMMENDATION**

Check for low coolant level. We advise that you check for the source of the coolant leak. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0123503</b>	GFL0094479	GFL0048080
Sample Date		Client Info		<b>13 Jun 2024</b>	04 Jun 2024	20 Jun 2023
Machine Age	hrs	Client Info		<b>12183</b>	12092	2312
Oil Age	hrs	Client Info		<b>100</b>	600	2312
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	Changed	N/A
Filter Changed		Client Info		<b>Not Changd</b>	Changed	N/A
Sample Status				<b>ATTENTION</b>	ATTENTION	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	<b>6</b>	7	38
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	4	2
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

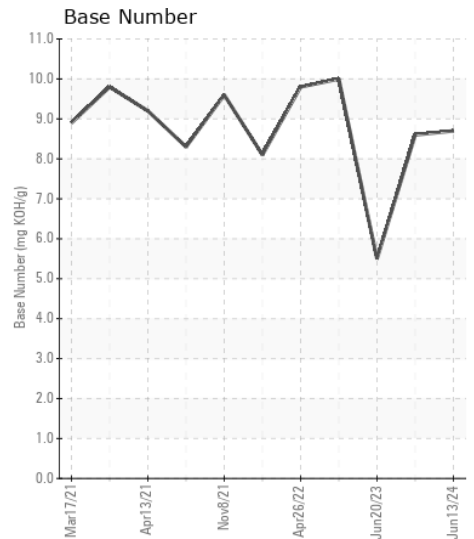
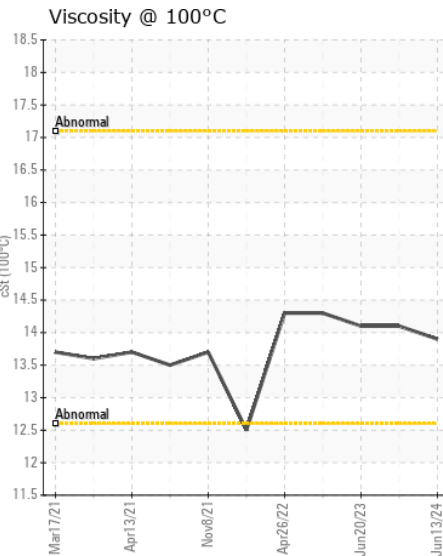
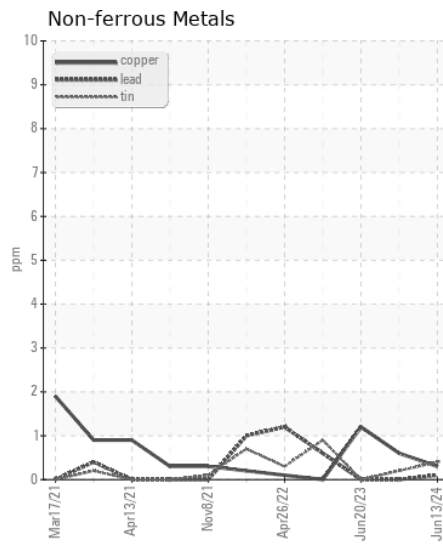
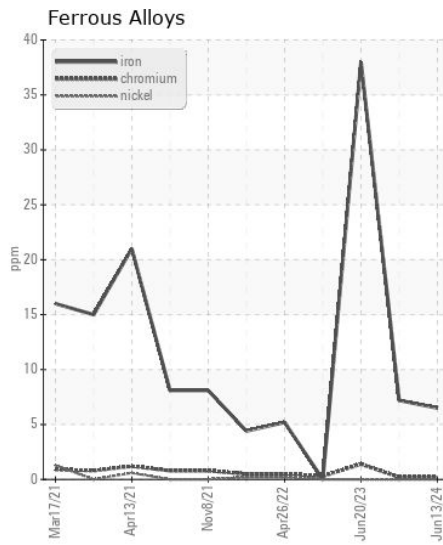
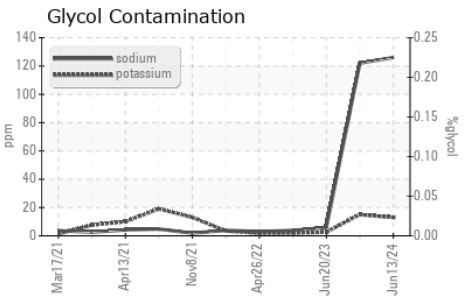
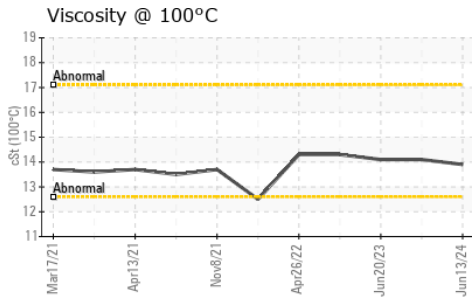
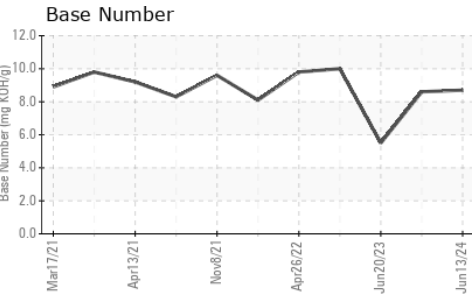
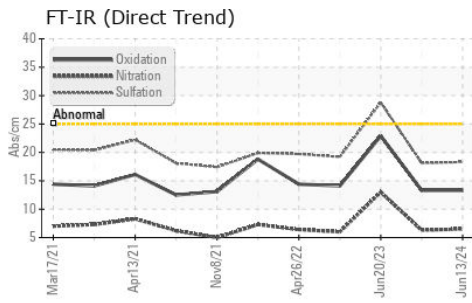
Sodium and/or potassium levels are high.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>13</b>	15	3
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	%	*ASTM D2982		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>6	<b>0.4</b>	0.4	2.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.5</b>	6.3	13.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.3</b>	18.1	28.8
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>126</b>	122	6
Boron	ppm	ASTM D5185m		<b>5</b>	4	5
Barium	ppm	ASTM D5185m		<b>0</b>	1	0
Molybdenum	ppm	ASTM D5185m		<b>62</b>	66	60
Manganese	ppm	ASTM D5185m		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>882</b>	889	967
Calcium	ppm	ASTM D5185m		<b>1086</b>	1135	1194
Phosphorus	ppm	ASTM D5185m		<b>873</b>	933	996
Zinc	ppm	ASTM D5185m		<b>1167</b>	1190	1272
Sulfur	ppm	ASTM D5185m		<b>3113</b>	3162	3140
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.3</b>	13.3	22.9
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.7</b>	8.6	5.5
Visc @ 100°C	cSt	ASTM D445		<b>13.9</b>	14.1	14.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0123503 **Received** : 14 Jun 2024  
**Lab Number** : 06209844 **Tested** : 17 Jun 2024  
**Unique Number** : 11082708 **Diagnosed** : 17 Jun 2024 - Angela Borella  
**Test Package** : FLEET ( Additional Tests: Glycol )

**GFL Environmental - 019 - Greenville/TriEast**  
 415 Staton Road  
 Greenville, NC  
 US 27834  
 Contact: Spencer Ligon  
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 T: (800)207-6618  
 F:

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)