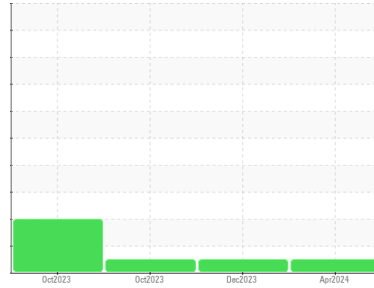




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**414057**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA 15W40 (10 GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

Metal levels are typical for a new component breaking in.

### Contamination

There is no indication of any contamination in the oil.

### 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.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0112936</b>	GFL0098097	GFL0088534
Sample Date	Client Info		<b>01 Apr 2024</b>	20 Dec 2023	10 Oct 2023
Machine Age	hrs	Client Info	<b>465</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	510	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>12</b>	12	3
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m >5	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	4	2
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	1
Copper	ppm	ASTM D5185m >330	<b>270</b>	57	19
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	1	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>3</b>	16	26
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>59</b>	65	62
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>948</b>	963	915
Calcium	ppm	ASTM D5185m	<b>1062</b>	1153	1098
Phosphorus	ppm	ASTM D5185m	<b>1035</b>	1071	1036
Zinc	ppm	ASTM D5185m	<b>1247</b>	1292	1232
Sulfur	ppm	ASTM D5185m	<b>3198</b>	3108	3136

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	11	10
Sodium	ppm	ASTM D5185m	<b>2</b>	2	2
Potassium	ppm	ASTM D5185m >20	<b>7</b>	11	6

## INFRA-RED

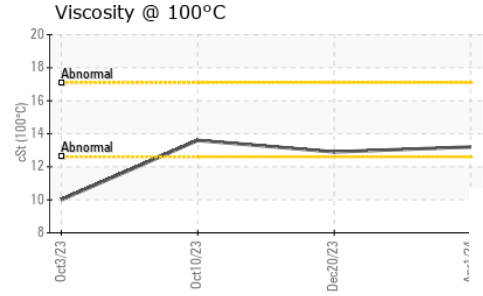
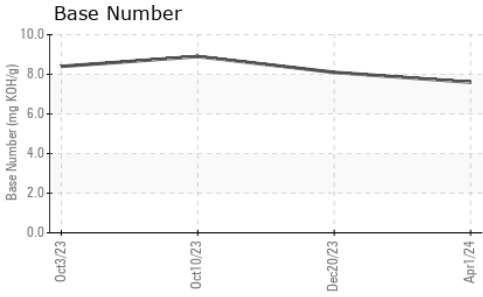
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.3</b>	0.2	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.6</b>	7.0	5.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.4</b>	19.9	18.5

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.6</b>	15.7	14.4
Base Number (BN)	mg KOH/g	ASTM D2896	<b>7.6</b>	8.1	8.9



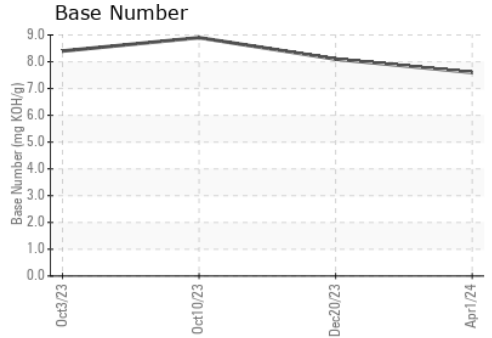
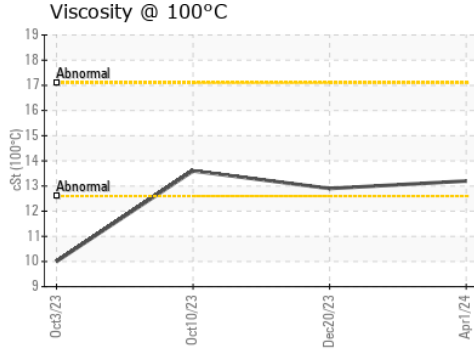
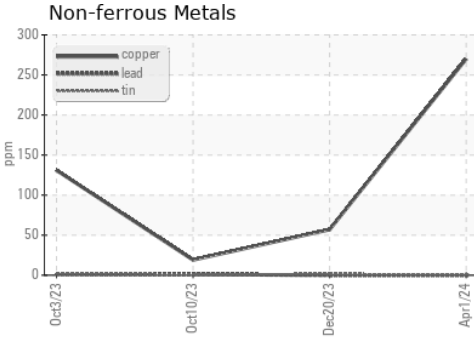
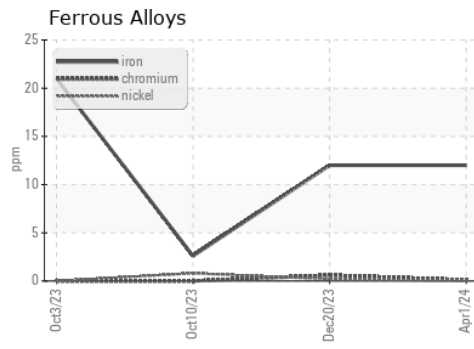
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	<b>13.2</b>	12.9	13.6

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0112936 **Received** : 03 Apr 2024  
**Lab Number** : **06137086** **Tested** : 03 Apr 2024  
**Unique Number** : 10956551 **Diagnosed** : 03 Apr 2024 - Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 017 - Durham**  
 148 Stone Park Court  
 Durham, NC  
 US 27703  
 Contact: William Russel  
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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)