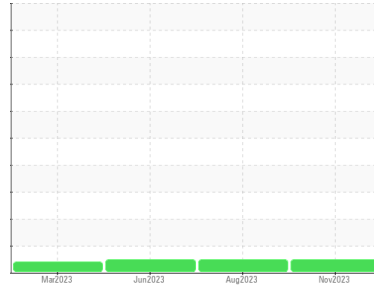




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**413035**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA 15W40 (10 GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### 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>GFL0098095</b>	GFL0088562	GFL0083313
Sample Date	Client Info		<b>01 Nov 2023</b>	03 Aug 2023	01 Jun 2023
Machine Age	hrs	Client Info	<b>806</b>	806	806
Oil Age	hrs	Client Info	<b>497</b>	497	485
Oil Changed	Client Info		<b>N/A</b>	N/A	Changed
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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>10</b>	9	13
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	2
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	5	5
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >330	<b>4</b>	7	52
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	2
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>4</b>	6	9
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>64</b>	56	63
Manganese	ppm	ASTM D5185m	<b>0</b>	<1	1
Magnesium	ppm	ASTM D5185m	<b>950</b>	955	958
Calcium	ppm	ASTM D5185m	<b>1178</b>	1130	1093
Phosphorus	ppm	ASTM D5185m	<b>957</b>	1041	1008
Zinc	ppm	ASTM D5185m	<b>1269</b>	1312	1281
Sulfur	ppm	ASTM D5185m	<b>3363</b>	3586	3284

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	5	10
Sodium	ppm	ASTM D5185m	<b>4</b>	3	4
Potassium	ppm	ASTM D5185m >20	<b>21</b>	17	16
Glycol	%	*ASTM D2982	<b>NEG</b>	NEG	NEG

## INFRA-RED

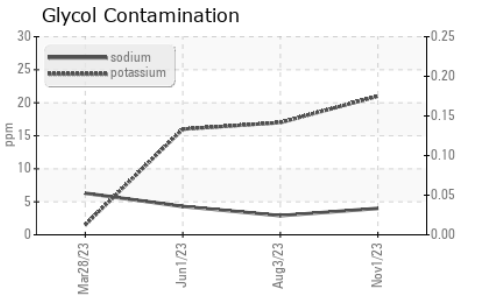
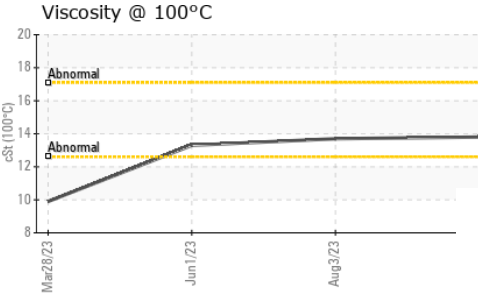
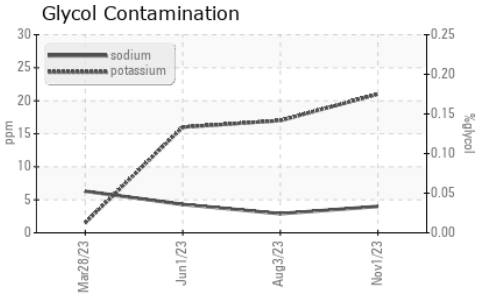
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.3</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.5</b>	7.9	8.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.5</b>	19.6	20.2

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>17.1</b>	15.9	16.3
Base Number (BN)	mg KOH/g	ASTM D2896	<b>7.7</b>	8.0	8.0



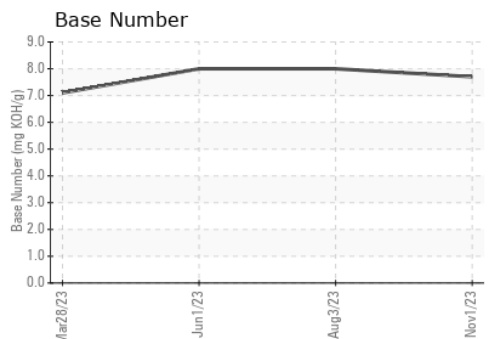
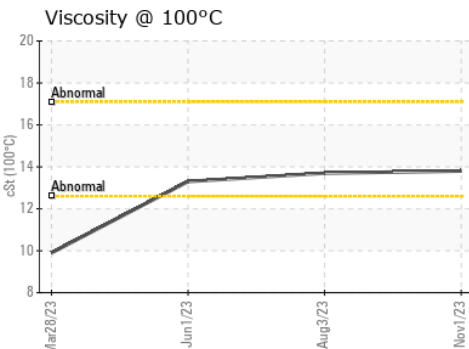
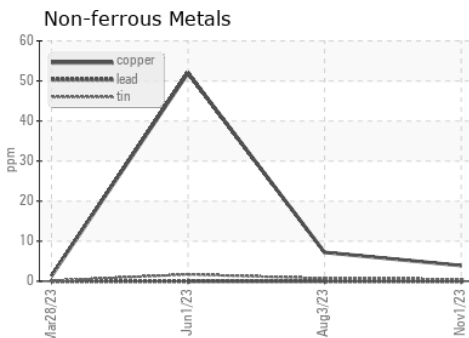
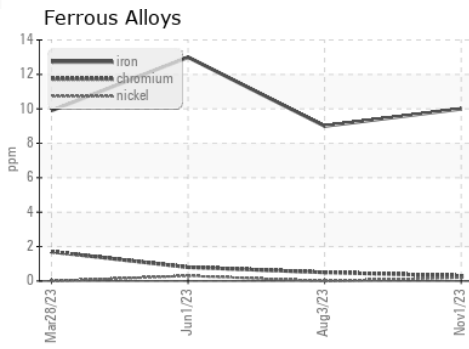
# OIL ANALYSIS REPORT



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>13.8</b>	13.7	13.3

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0098095 **Received** : 02 Nov 2023  
**Lab Number** : 05997297 **Diagnosed** : 05 Nov 2023  
**Unique Number** : 10725657 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET ( Additional Tests: Glycol )

**GFL Environmental - 017 - Durham**  
 148 Stone Park Court  
 Durham, NC  
 US 27703  
 Contact: William Russel  
 william.russell@gflenv.com  
 T:  
 F: (919)598-1852

Certificate L2367  
 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)