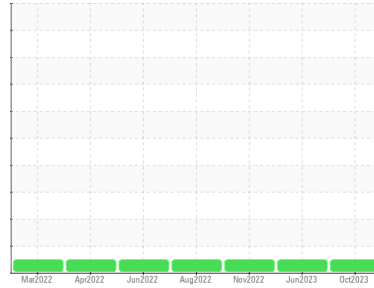




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**932001**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON GEO LD 15W40 (40 QTS)**

## 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>GFL0090097</b>	GFL0047435	GFL0063813
Sample Date	Client Info	<b>03 Oct 2023</b>	22 Jun 2023	28 Nov 2022
Machine Age	hrs	<b>4746</b>	3961	2440
Oil Age	hrs	<b>600</b>	600	600
Oil Changed	Client Info	<b>Changed</b>	Changed	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
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >165	<b>4</b>	6	6
Chromium	ppm ASTM D5185m >5	<b>0</b>	<1	<1
Nickel	ppm ASTM D5185m >4	<b>0</b>	<1	0
Titanium	ppm ASTM D5185m >2	<b>0</b>	<1	0
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>&lt;1</b>	7	2
Lead	ppm ASTM D5185m >150	<b>&lt;1</b>	4	<1
Copper	ppm ASTM D5185m >90	<b>1</b>	3	2
Tin	ppm ASTM D5185m >5	<b>&lt;1</b>	2	<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 50	<b>8</b>	14	10
Barium	ppm ASTM D5185m 5	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 50	<b>50</b>	54	49
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	2	<1
Magnesium	ppm ASTM D5185m 560	<b>556</b>	598	453
Calcium	ppm ASTM D5185m 1510	<b>1582</b>	1727	1828
Phosphorus	ppm ASTM D5185m 780	<b>689</b>	739	740
Zinc	ppm ASTM D5185m 870	<b>937</b>	997	990
Sulfur	ppm ASTM D5185m 2040	<b>2383</b>	2881	2935

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >35	<b>4</b>	7	12
Sodium	ppm ASTM D5185m	<b>6</b>	8	6
Potassium	ppm ASTM D5185m >20	<b>&lt;1</b>	2	<1

## INFRA-RED

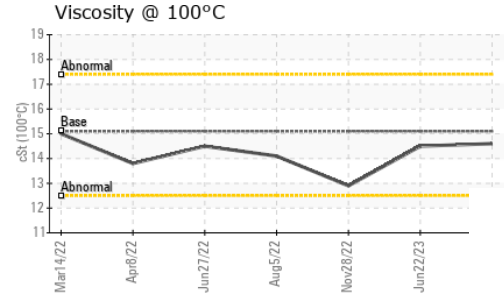
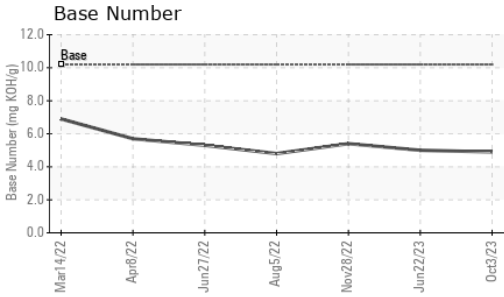
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >7.5	<b>0</b>	0.1	0.1
Nitration	Abs/cm *ASTM D7624 >20	<b>9.8</b>	10.0	11.2
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>20.2</b>	21.3	23.0

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>17.6</b>	18.8	17.2
Base Number (BN)	mg KOH/g ASTM D2896 10.2	<b>4.9</b>	5.0	5.4



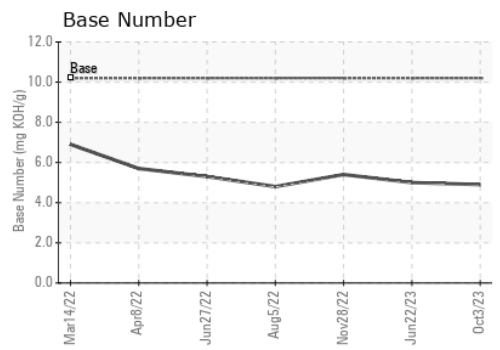
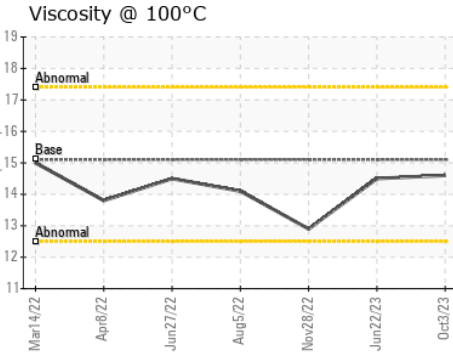
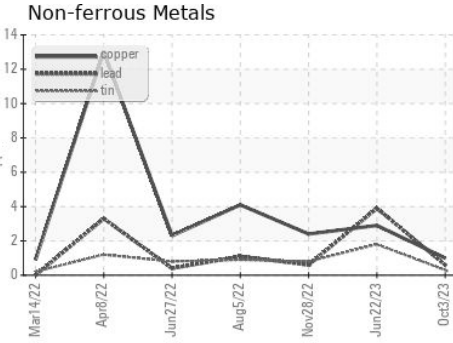
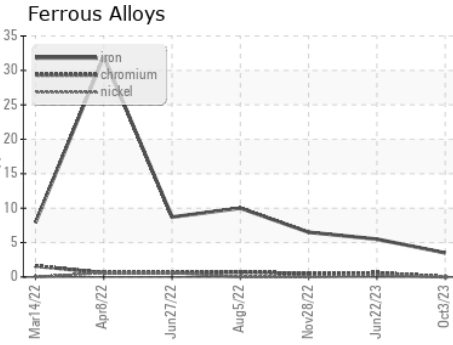
# OIL ANALYSIS REPORT



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	15.1	<b>14.6</b>	14.5	12.9

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0090097 **Received** : 05 Oct 2023  
**Lab Number** : **05970188** **Diagnosed** : 06 Oct 2023  
**Unique Number** : 10682138 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 030 - Conway Myrtle Beach**  
 3010 HWY 378  
 Conway, SC  
 US 29527  
 Contact: CHET STROSCHINE  
 cstroschine@gflenv.com  
 T:  
 F:

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)