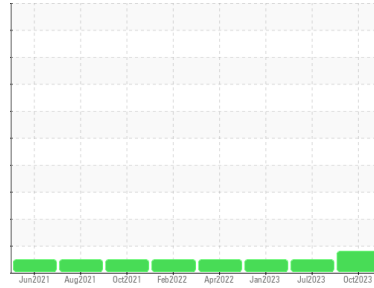




# PROBLEM SUMMARY

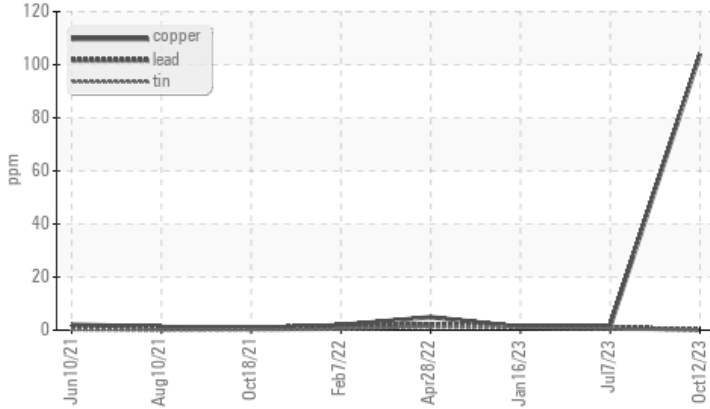
Sample Rating Trend



Machine Id  
**744000**  
 Component  
**Natural Gas Engine**  
 Fluid  
**PETRO CANADA DURON GEO LD 15W40 (--- LTR)**

## COMPONENT CONDITION SUMMARY

### ▲ Non-ferrous Metals



## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	NORMAL	NORMAL
Copper	ppm	ASTM D5185m	>35	▲ 104	1	1

Customer Id: GFL882  
 Sample No.: GFL0094253  
 Lab Number: 05981050  
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.

## HISTORICAL DIAGNOSIS

**07 Jul 2023 Diag: Wes Davis**

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



**16 Jan 2023 Diag: Don Baldrige**

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



**28 Apr 2022 Diag: Jonathan Hester**

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report





# OIL ANALYSIS REPORT

Sample Rating Trend

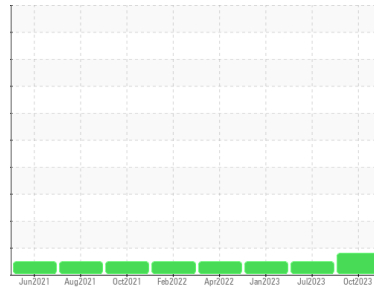
**WEAR**



Machine Id  
**744000**

Component  
**Natural Gas Engine**

Fluid  
**PETRO CANADA DURON GEO LD 15W40 (--- LTR)**



## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other 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 acceptable for the time in service.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0094253</b>	GFL0085405	GFL0066765
Sample Date	Client Info	<b>12 Oct 2023</b>	07 Jul 2023	16 Jan 2023
Machine Age	hrs	<b>24593</b>	23933	22863
Oil Age	hrs	<b>660</b>	22863	1998
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed
Sample Status		<b>ABNORMAL</b>	NORMAL	NORMAL

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >50	<b>10</b>	9	12
Chromium	ppm	ASTM D5185m >4	<b>1</b>	<1	1
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >9	<b>2</b>	3	2
Lead	ppm	ASTM D5185m >30	<b>0</b>	1	2
Copper	ppm	ASTM D5185m >35	<b>▲ 104</b>	1	1
Tin	ppm	ASTM D5185m >4	<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 50	<b>9</b>	7	10
Barium	ppm	ASTM D5185m 5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 50	<b>48</b>	49	54
Manganese	ppm	ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m 560	<b>503</b>	496	525
Calcium	ppm	ASTM D5185m 1510	<b>1352</b>	1564	1615
Phosphorus	ppm	ASTM D5185m 780	<b>676</b>	599	654
Zinc	ppm	ASTM D5185m 870	<b>838</b>	904	937
Sulfur	ppm	ASTM D5185m 2040	<b>2082</b>	2555	2685

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >+100	<b>3</b>	4	7
Sodium	ppm	ASTM D5185m	<b>6</b>	7	10
Potassium	ppm	ASTM D5185m >20	<b>3</b>	3	2

## INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	<b>0</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.1</b>	11.4	10.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.7</b>	22.6	22.0

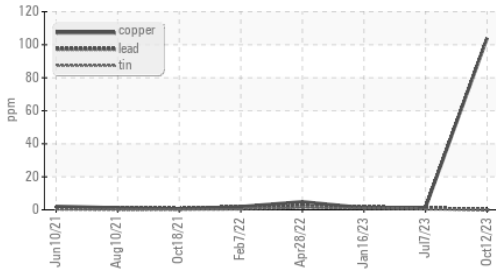
## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.9</b>	18.7	17.6
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	<b>4.9</b>	4.7	4.4



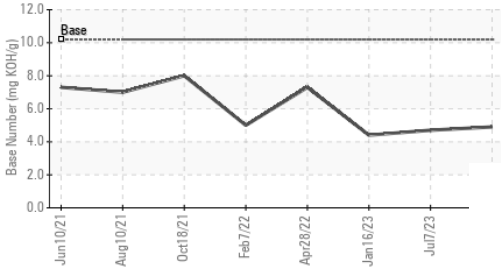
# OIL ANALYSIS REPORT

### ▲ Non-ferrous Metals



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	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

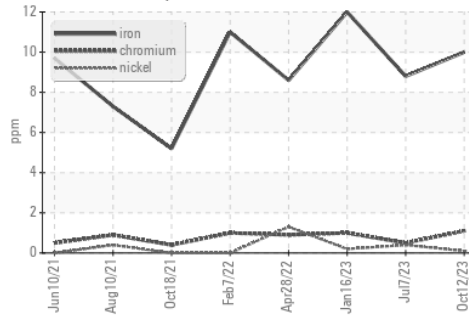
### Base Number



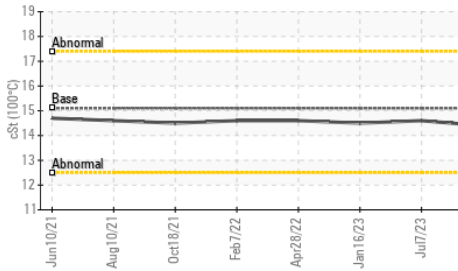
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.4	14.6

### GRAPHS

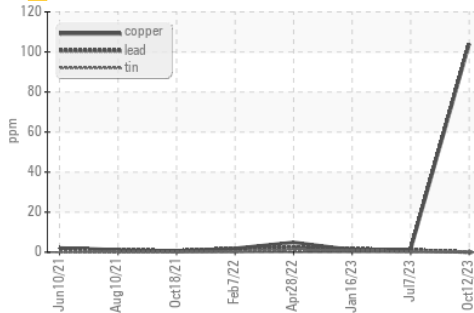
#### Ferrous Alloys



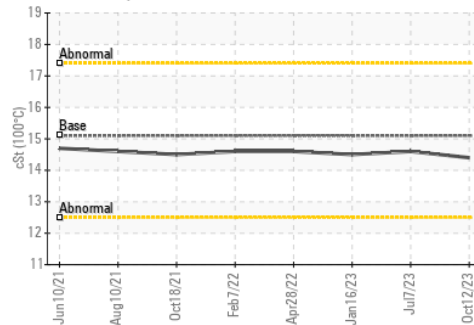
### Viscosity @ 100°C



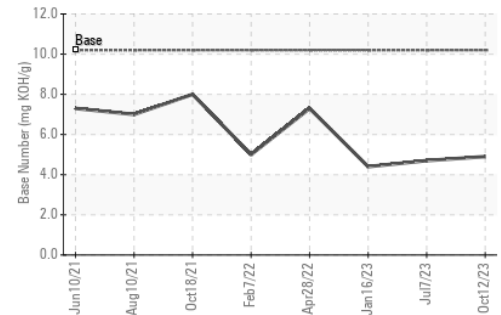
### ▲ Non-ferrous Metals



### Viscosity @ 100°C



### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0094253 **Received** : 17 Oct 2023  
**Lab Number** : 05981050 **Diagnosed** : 18 Oct 2023  
**Unique Number** : 10698345 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 882 - Gainesville**  
 5002 SW 41st Blvd  
 Gainesville, FL  
 US 32608  
 Contact: ROBERT CLARK  
 robert.clark@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: