

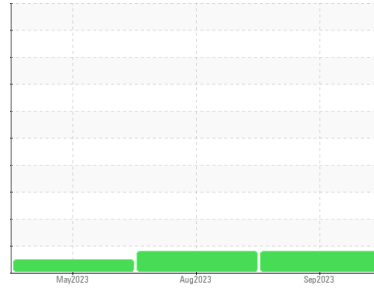


# PROBLEM SUMMARY



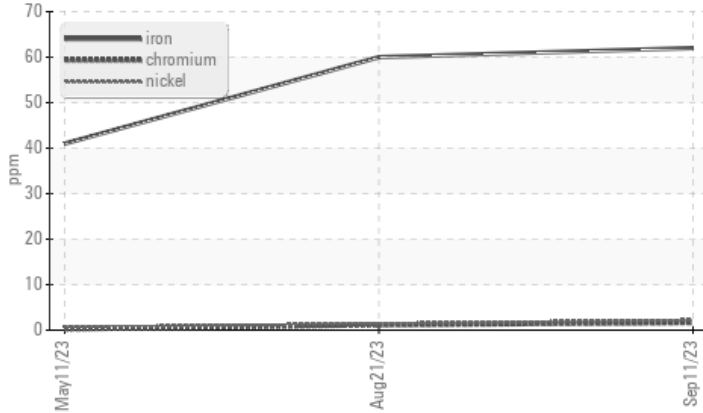
Machine Id  
**933048**  
 Component  
**Center Natural Gas Engine**  
 Fluid  
**PETRO CANADA DURON GEO LD 15W40 (--- GAL)**

Sample Rating Trend



## COMPONENT CONDITION SUMMARY

### ▲ Ferrous Alloys



## 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	ABNORMAL	NORMAL
Iron ppm ASTM D5185m >50	▲ 62	▲ 60	41

Customer Id: GFL883  
 Sample No.: GFL0071728  
 Lab Number: 05950734  
 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

### 21 Aug 2023 Diag: Don Baldrige

#### WEAR



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. Cylinder, crank, or cam shaft wear is indicated. All other 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](#)



### 11 May 2023 Diag: Doug Bogart

#### 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](#)





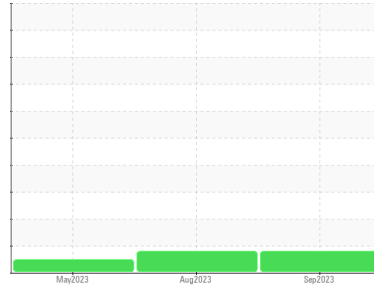
# OIL ANALYSIS REPORT

Sample Rating Trend

**WEAR**



Machine Id  
**933048**  
 Component  
**Center Natural Gas Engine**  
 Fluid  
**PETRO CANADA DURON GEO LD 15W40 (--- GAL)**



## 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

Cylinder, crank, or cam shaft wear is indicated. 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 suitable for further service.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0071728</b>	GFL0071723	GFL0058476
Sample Date	Client Info	<b>11 Sep 2023</b>	21 Aug 2023	11 May 2023
Machine Age	hrs	<b>1184</b>	1038	290
Oil Age	hrs	<b>1184</b>	600	600
Oil Changed	Client Info	<b>Changed</b>	Changed	Not Changed
Sample Status		<b>ABNORMAL</b>	ABNORMAL	NORMAL

## WEAR METALS

method	limit/base	current	history1	history2
Iron ppm	ASTM D5185m >50	<b>▲ 62</b>	▲ 60	41
Chromium ppm	ASTM D5185m >5	<b>2</b>	1	<1
Nickel ppm	ASTM D5185m >4	<b>2</b>	1	<1
Titanium ppm	ASTM D5185m >5	<b>0</b>	0	<1
Silver ppm	ASTM D5185m >3	<b>&lt;1</b>	0	<1
Aluminum ppm	ASTM D5185m >25	<b>17</b>	14	5
Lead ppm	ASTM D5185m >40	<b>2</b>	1	<1
Copper ppm	ASTM D5185m >150	<b>19</b>	18	16
Tin ppm	ASTM D5185m >4	<b>2</b>	1	<1
Vanadium ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron ppm	ASTM D5185m 50	<b>7</b>	6	24
Barium ppm	ASTM D5185m 5	<b>1</b>	0	0
Molybdenum ppm	ASTM D5185m 50	<b>57</b>	56	47
Manganese ppm	ASTM D5185m 0	<b>16</b>	16	14
Magnesium ppm	ASTM D5185m 560	<b>813</b>	797	735
Calcium ppm	ASTM D5185m 1510	<b>1079</b>	1110	942
Phosphorus ppm	ASTM D5185m 780	<b>778</b>	765	724
Zinc ppm	ASTM D5185m 870	<b>969</b>	963	884
Sulfur ppm	ASTM D5185m 2040	<b>2843</b>	2741	2485

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm	ASTM D5185m >25	<b>32</b>	32	35
Sodium ppm	ASTM D5185m	<b>7</b>	7	4
Potassium ppm	ASTM D5185m >20	<b>27</b>	23	18

## INFRA-RED

method	limit/base	current	history1	history2
Soot %	*ASTM D7844	<b>0.1</b>	0	0
Nitration	Abs/cm *ASTM D7624 >20	<b>12.1</b>	11.8	9.9
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>26.0</b>	24.9	20.5

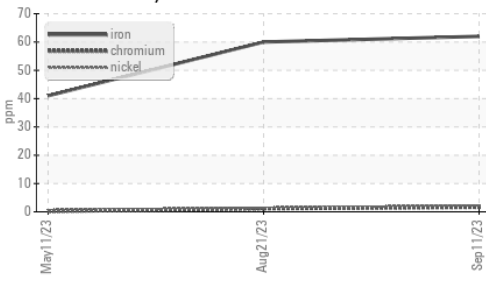
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>25.0</b>	23.7	19.2
Base Number (BN)	mg KOH/g ASTM D2896 10.2	<b>2.6</b>	2.7	5.8

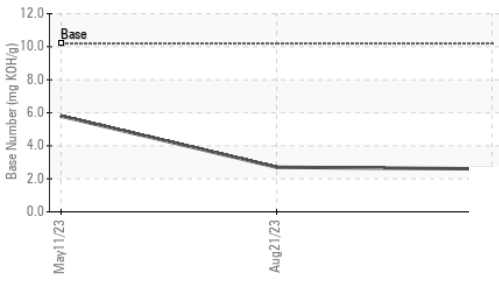


# OIL ANALYSIS REPORT

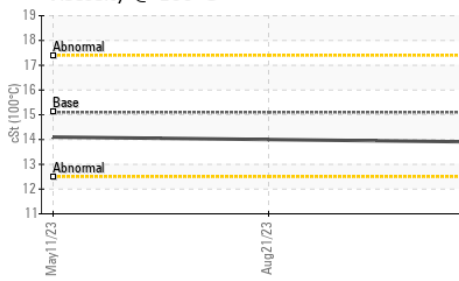
### ▲ Ferrous Alloys



### Base Number



### Viscosity @ 100°C

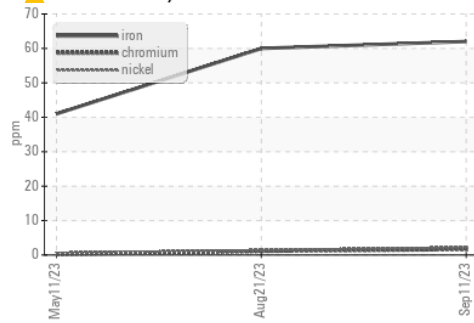


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

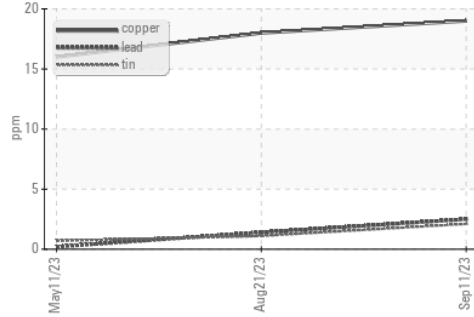
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	13.9	14.0

### GRAPHS

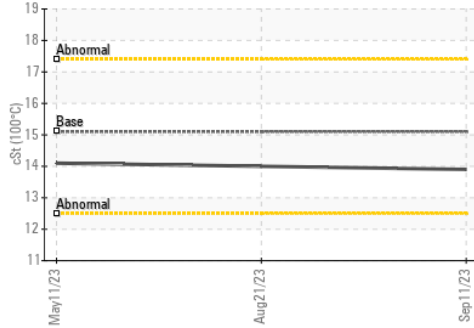
### ▲ Ferrous Alloys



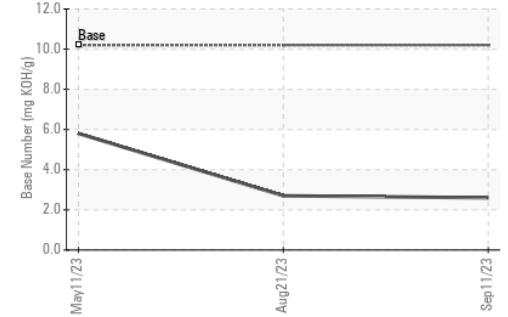
### Non-ferrous Metals



### Viscosity @ 100°C



### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0071728 **Received** : 13 Sep 2023  
**Lab Number** : 05950734 **Diagnosed** : 19 Sep 2023  
**Unique Number** : 10646693 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 883 - Orange City**  
 1378 South Volusia Ave  
 Orange City, FL  
 US 32763  
 Contact: Kenneth Pearce  
 kpearce@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)