



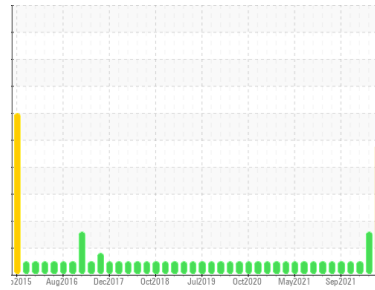
# PROBLEM SUMMARY

Sample Rating Trend

GLYCOL

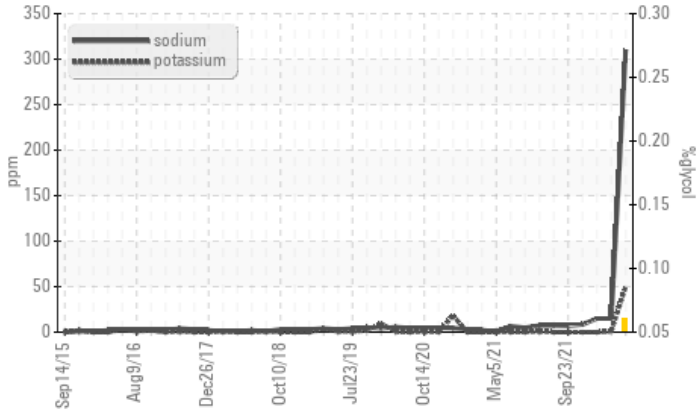


Machine Id  
**3647C**  
Component  
**Natural Gas Engine**  
Fluid  
**PETRO CANADA DURON GEO LD 15W40 (35 GAL)**



## COMPONENT CONDITION SUMMARY

### ▲ Glycol Contamination



## RECOMMENDATION

We advise that you check for possible coolant leak. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

## PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	NORMAL
Sodium	ppm	ASTM D5185m		▲ 310	15	15
Potassium	ppm	ASTM D5185m	>20	▲ 50	1	0
Glycol	%	*ASTM D2982		▲ 0.06	---	---

Customer Id: GFL005  
Sample No.: GFL0086421  
Lab Number: 05891026  
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Doug Bogart +1 (800)237-1369 x4016  
[dougb@wearcheckusa.com](mailto:dougb@wearcheckusa.com)

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.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Glycol Access	---	---	?	We advise that you check for the source of the coolant leak.

## HISTORICAL DIAGNOSIS

24 Jan 2023 Diag: Sean Felton

### WEAR



No corrective action is recommended at this time. Resample at the next service interval to monitor. Cylinder, crank, or cam shaft wear is indicated. 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 Jul 2022 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



20 Dec 2021 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.

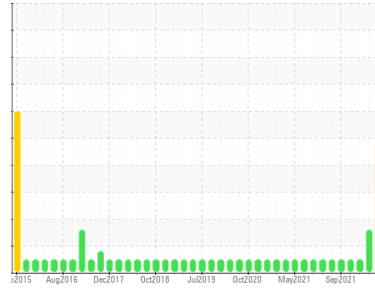
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id  
**3647C**

Component  
**Natural Gas Engine**

Fluid  
**PETRO CANADA DURON GEO LD 15W40 (35 GAL)**

## DIAGNOSIS

### Recommendation

We advise that you check for possible coolant leak. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal for time on oil.

### Contamination

Sodium and/or potassium levels are high. Trace concentration of anti-freeze present in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

## SAMPLE INFORMATION

method	limit/base	current	history 1	history 2
Sample Number	Client Info	<b>GFL0086421</b>	GFL0072392	GFL0048836
Sample Date	Client Info	<b>29 Jun 2023</b>	24 Jan 2023	11 Jul 2022
Machine Age	hrs	<b>18265</b>	18265	0
Oil Age	hrs	<b>762</b>	18265	230
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Not Changd
Sample Status		<b>ABNORMAL</b>	ABNORMAL	NORMAL

## WEAR METALS

method	limit/base	current	history 1	history 2
Iron ppm	ASTM D5185m >50	<b>59</b>	▲ 51	38
Chromium ppm	ASTM D5185m >4	<b>7</b>	▲ 5	4
Nickel ppm	ASTM D5185m >2	<b>3</b>	2	1
Titanium ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Silver ppm	ASTM D5185m >3	<b>0</b>	0	<1
Aluminum ppm	ASTM D5185m >9	<b>3</b>	5	4
Lead ppm	ASTM D5185m >30	<b>19</b>	20	19
Copper ppm	ASTM D5185m >35	<b>4</b>	4	2
Tin ppm	ASTM D5185m >4	<b>2</b>	3	3
Antimony ppm	ASTM D5185m	<b>---</b>	---	---
Vanadium ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history 1	history 2
Boron ppm	ASTM D5185m 50	<b>9</b>	12	12
Barium ppm	ASTM D5185m 5	<b>1</b>	0	0
Molybdenum ppm	ASTM D5185m 50	<b>105</b>	80	68
Manganese ppm	ASTM D5185m 0	<b>3</b>	3	3
Magnesium ppm	ASTM D5185m 560	<b>1196</b>	904	760
Calcium ppm	ASTM D5185m 1510	<b>2281</b>	2234	1990
Phosphorus ppm	ASTM D5185m 780	<b>1443</b>	1127	929
Zinc ppm	ASTM D5185m 870	<b>1775</b>	1373	1190
Sulfur ppm	ASTM D5185m 2040	<b>3904</b>	3265	3121

## CONTAMINANTS

method	limit/base	current	history 1	history 2
Silicon ppm	ASTM D5185m >+100	<b>16</b>	14	13
Sodium ppm	ASTM D5185m	▲ <b>310</b>	15	15
Potassium ppm	ASTM D5185m >20	▲ <b>50</b>	1	0
Glycol %	*ASTM D2982	▲ <b>0.06</b>	---	---

## INFRA-RED

method	limit/base	current	history 1	history 2
Soot %	% *ASTM D7844	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm *ASTM D7624 >20	<b>13.7</b>	14.8	14.8
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>33.0</b>	33.9	33.2

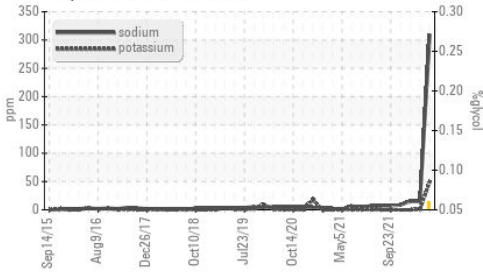
## FLUID DEGRADATION

method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>25.8</b>	29.6	30.2
Base Number (BN)	mg KOH/g ASTM D2896 10.2	<b>6.2</b>	3.5	3.2

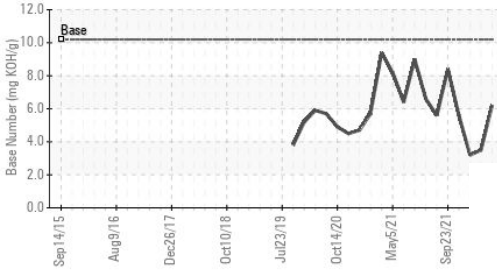


# OIL ANALYSIS REPORT

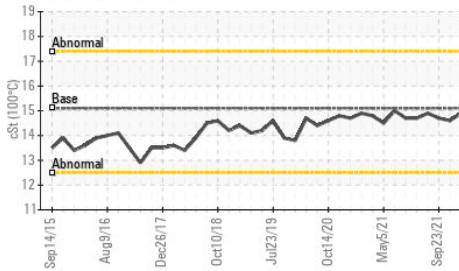
### ▲ Glycol Contamination



### Base Number



### Viscosity @ 100°C

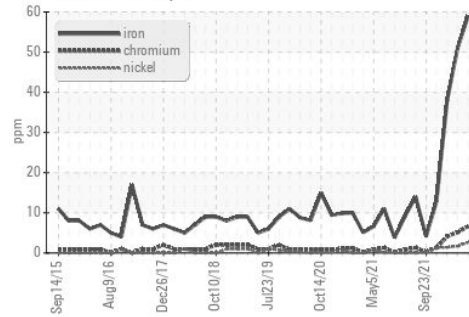


VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

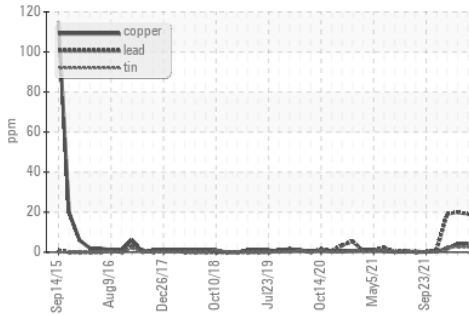
FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.1	15.2	15.2

### GRAPHS

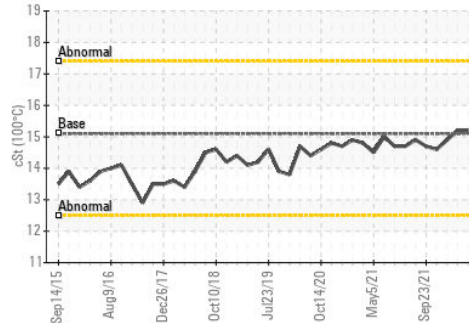
#### Ferrous Alloys



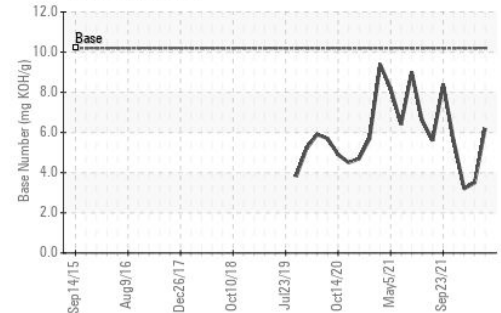
#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0086421 **Received** : 06 Jul 2023  
**Lab Number** : 05891026 **Diagnosed** : 09 Jul 2023  
**Unique Number** : 10546836 **Diagnostician** : Doug Bogart  
**Test Package** : FLEET ( Additional Tests: Glycol )

**GFL Environmental - 005 - Wilson/Tri-East(CNG)**  
 2810 Contentnea Road S  
 Wilson, NC  
 US 27893-8501  
 Contact: SPENCER LIGGON  
 spencer.liggon@gflenv.com  
 T: (800)207-6618  
 F:

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)