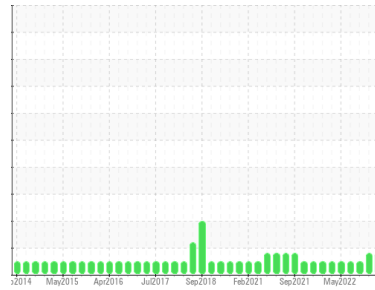




# PROBLEM SUMMARY

Sample Rating Trend



**WEAR**



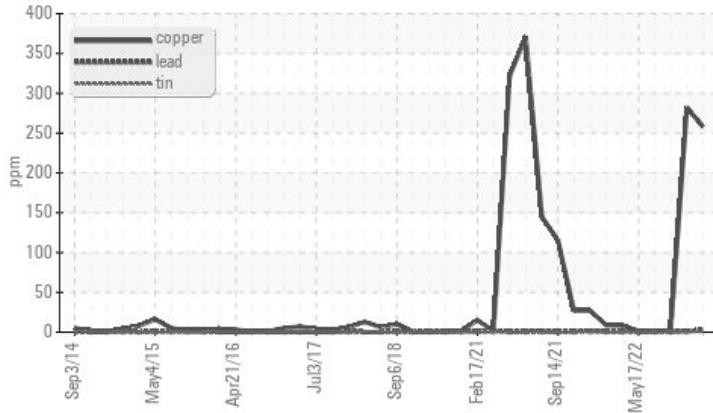
Machine Id  
**3439C**

Component  
**Natural Gas Engine**

Fluid  
**PETRO CANADA DURON GEO LD 15W40 (29 GAL)**

## COMPONENT CONDITION SUMMARY

### ▲ Non-ferrous Metals



## RECOMMENDATION

No corrective action is recommended at this time.  
Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status				<b>ABNORMAL</b>	ABNORMAL	NORMAL
Copper	ppm	ASTM D5185m	>35	▲ 258	▲ 282	2

Customer Id: GFL017  
Sample No.: GFL0088574  
Lab Number: 05900648  
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

There are no recommended actions for this sample.

## HISTORICAL DIAGNOSIS

### 09 May 2023 Diag: Jonathan Hester

#### WEAR



No corrective action is recommended at this time. Resample at the next service interval to monitor. 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). 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](#)



### 15 Nov 2022 Diag: Sean Felton

#### 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](#)



### 04 Aug 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.

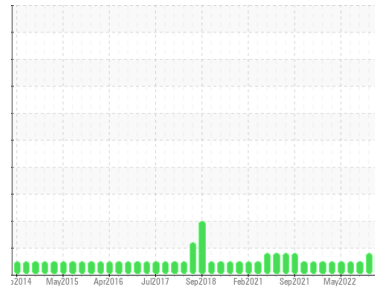
[view report](#)





# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Machine Id  
**3439C**  
 Component  
**Natural Gas Engine**  
 Fluid

**PETRO CANADA DURON GEO LD 15W40 (29 GAL)**

## DIAGNOSIS

### ▲ Recommendation

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 suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0088574</b>	GFL0061167	GFL0052727
Sample Date	Client Info		<b>17 Jul 2023</b>	09 May 2023	15 Nov 2022
Machine Age	hrs	Client Info	<b>15105</b>	15105	15105
Oil Age	hrs	Client Info	<b>395</b>	1099	679
Oil Changed		Client Info	<b>N/A</b>	N/A	Changed
Sample Status			<b>ABNORMAL</b>	ABNORMAL	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	<b>18</b>	18	16
Chromium	ppm	ASTM D5185m >4	<b>2</b>	2	1
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	1	0
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>6</b>	<1	3
Lead	ppm	ASTM D5185m >30	<b>3</b>	1	<1
Copper	ppm	ASTM D5185m >35	<b>▲ 258</b>	<b>▲ 282</b>	2
Tin	ppm	ASTM D5185m >4	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</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>11</b>	17	26
Barium	ppm	ASTM D5185m 5	<b>1</b>	0	2
Molybdenum	ppm	ASTM D5185m 50	<b>54</b>	53	54
Manganese	ppm	ASTM D5185m 0	<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 560	<b>623</b>	666	549
Calcium	ppm	ASTM D5185m 1510	<b>1735</b>	1443	1615
Phosphorus	ppm	ASTM D5185m 780	<b>770</b>	816	790
Zinc	ppm	ASTM D5185m 870	<b>1000</b>	1018	982
Sulfur	ppm	ASTM D5185m 2040	<b>2793</b>	2919	2940

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	<b>8</b>	10	10
Sodium	ppm	ASTM D5185m	<b>7</b>	7	4
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	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.3</b>	8.6	9.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.6</b>	17.8	20.5

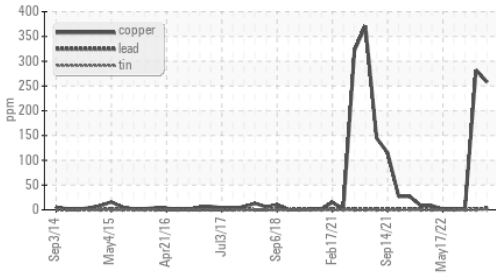
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>17.6</b>	15.6	17.2
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	<b>5.3</b>	5.7	8.2

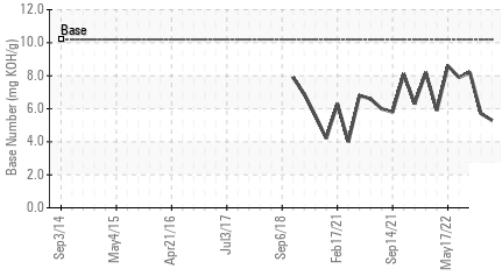


# OIL ANALYSIS REPORT

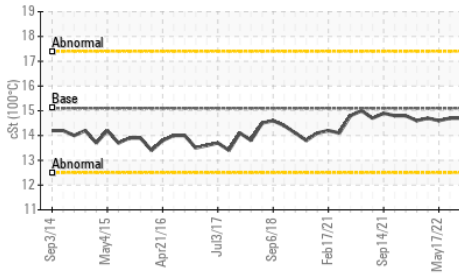
### ▲ Non-ferrous Metals



### Base Number



### Viscosity @ 100°C

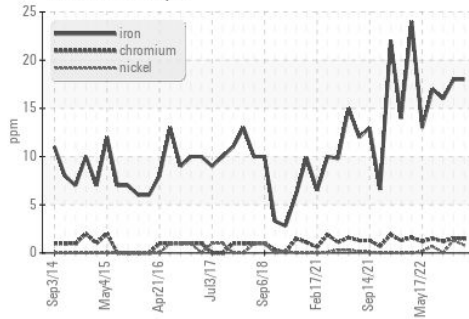


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

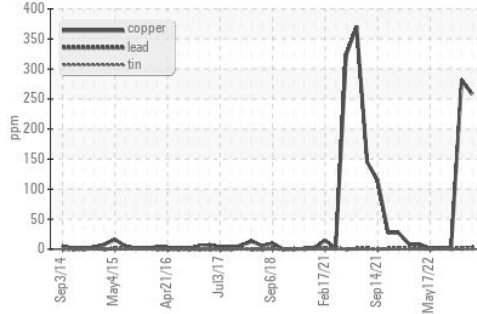
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.9	14.7

### GRAPHS

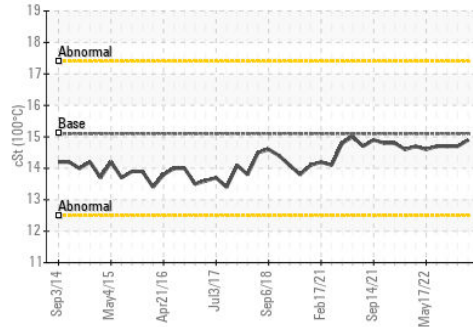
#### Ferrous Alloys



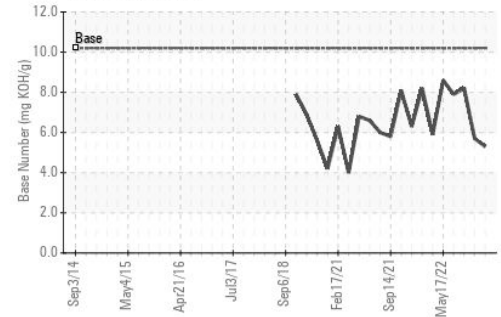
### ▲ Non-ferrous Metals



### Viscosity @ 100°C



### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0088574 **Received** : 17 Jul 2023  
**Lab Number** : 05900648 **Diagnosed** : 19 Jul 2023  
**Unique Number** : 10562004 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 017 - Durham**  
 148 Stone Park Court  
 Durham, NC  
 US 27703  
 Contact: Shane Parks  
 shane.parks@gflenv.com  
 T: (919)596-1363  
 F: (919)598-1852

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)