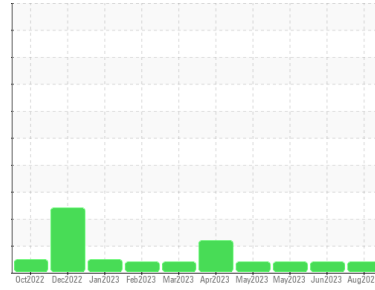




# PROBLEM SUMMARY

Sample Rating Trend



## VISCOSITY



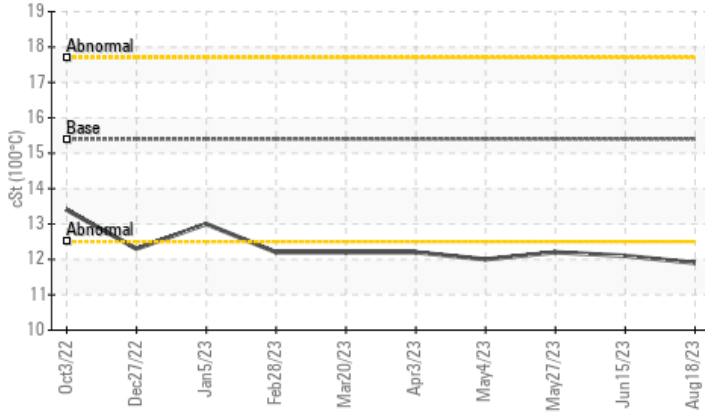
Machine Id  
**812043**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

### COMPONENT CONDITION SUMMARY

#### ▲ Viscosity @ 100°C



### RECOMMENDATION

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

### PROBLEMATIC TEST RESULTS

Sample Status				ATTENTION	ATTENTION	ATTENTION
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.9	▲ 12.1	▲ 12.2

Customer Id: GFL010  
Sample No.: GFL0088771  
Lab Number: 05929437  
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Jonathan Hester +1 919-379-4092 x4092  
[jhester@wearcheckusa.com](mailto:jhester@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.

## HISTORICAL DIAGNOSIS

### 15 Jun 2023 Diag: Angela Borella

#### VISCOSITY



No corrective action is recommended at this time. 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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

[view report](#)



### 27 May 2023 Diag: Don Baldrige

#### VISCOSITY



No corrective action is recommended at this time. 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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

[view report](#)



### 04 May 2023 Diag: Sean Felton

#### VISCOSITY



No corrective action is recommended at this time. 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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

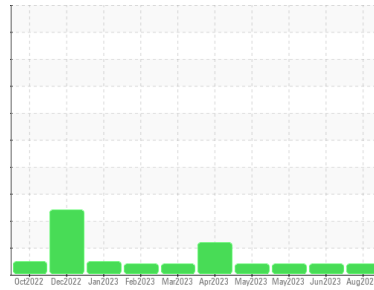
[view report](#)





# OIL ANALYSIS REPORT

Sample Rating Trend



## VISCOSITY



Machine Id  
**812043**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

### DIAGNOSIS

#### ▲ Recommendation

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. 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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

### SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0088771</b>	GFL0083270	GFL0082870
Sample Date	Client Info	<b>18 Aug 2023</b>	15 Jun 2023	27 May 2023
Machine Age	hrs	<b>4908</b>	4513	4382
Oil Age	hrs	<b>129</b>	270	139
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Not Changd
Sample Status		<b>ATTENTION</b>	ATTENTION	ATTENTION

### CONTAMINATION

method	limit/base	current	history1	history2
Glycol	WC Method	<b>NEG</b>	NEG	NEG

### WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >100	<b>22</b>	16	14
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >3	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m >20	<b>8</b>	7	6
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>2</b>	1	2
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

### ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	<b>4</b>	17	21
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>61</b>	60	56
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>716</b>	776	758
Calcium	ppm	ASTM D5185m 1070	<b>1149</b>	1199	1113
Phosphorus	ppm	ASTM D5185m 1150	<b>909</b>	969	929
Zinc	ppm	ASTM D5185m 1270	<b>1114</b>	1177	1141
Sulfur	ppm	ASTM D5185m 2060	<b>2873</b>	3547	3516

### CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	<b>2</b>	4	4
Sodium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Potassium	ppm	ASTM D5185m >20	<b>13</b>	10	9
Fuel	%	ASTM D3524 >5	<b>&lt;1.0</b>	<1.0	<1.0

### INFRA-RED

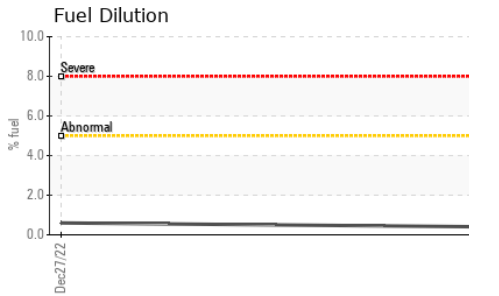
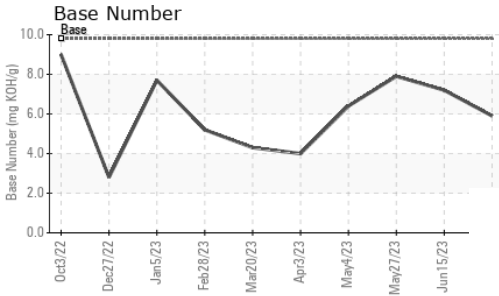
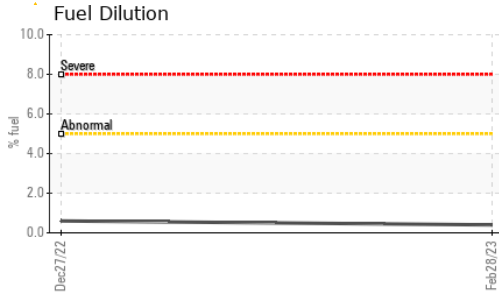
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	<b>0.6</b>	0.4	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.8</b>	6.7	6.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.8</b>	18.3	17.8

### FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.1</b>	13.7	12.0
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>5.9</b>	7.2	7.9



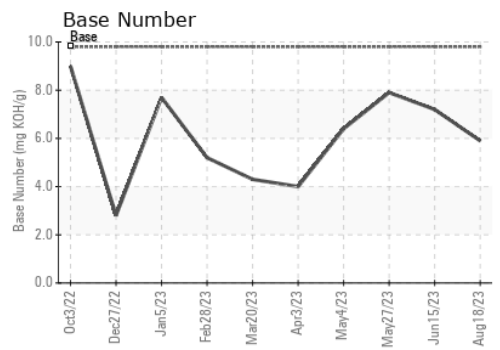
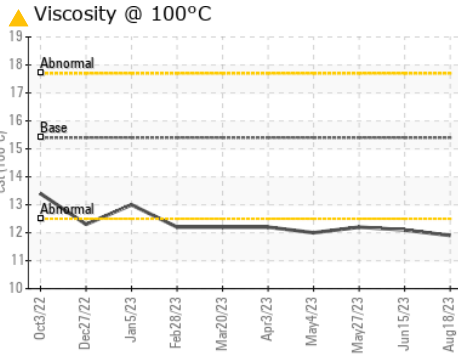
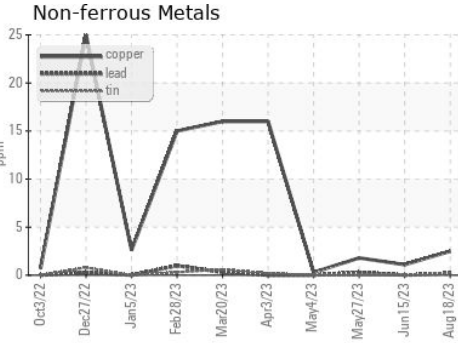
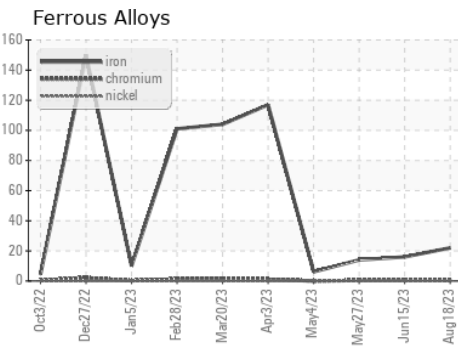
# OIL ANALYSIS REPORT



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	15.4	▲ 11.9	▲ 12.1

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0088771 **Received** : 21 Aug 2023  
**Lab Number** : 05929437 **Diagnosed** : 23 Aug 2023  
**Unique Number** : 10609384 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**GFL Environmental - 010 - Stockbridge**  
 1280 Rum Creek Parkway  
 Stockbridge, GA  
 US 30281  
 Contact: TECHNICIAN ACCOUNT  
 wcgfldemo@gmail.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)