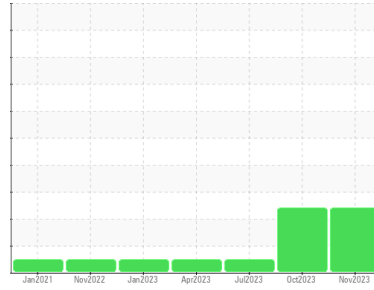




# PROBLEM SUMMARY

Sample Rating Trend



## VISCOSITY



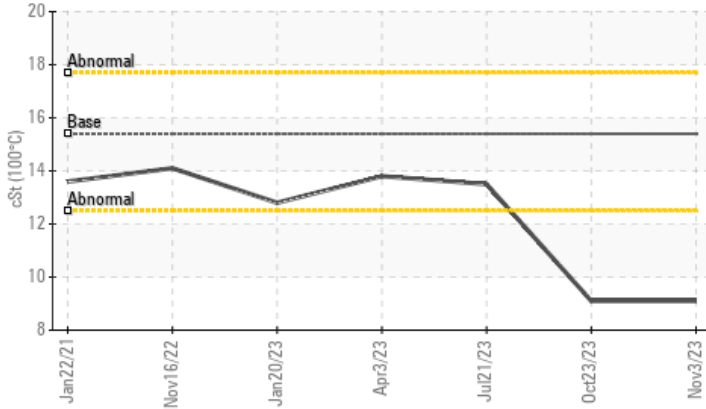
Machine Id  
**410010**

Component  
**Diesel Engine**

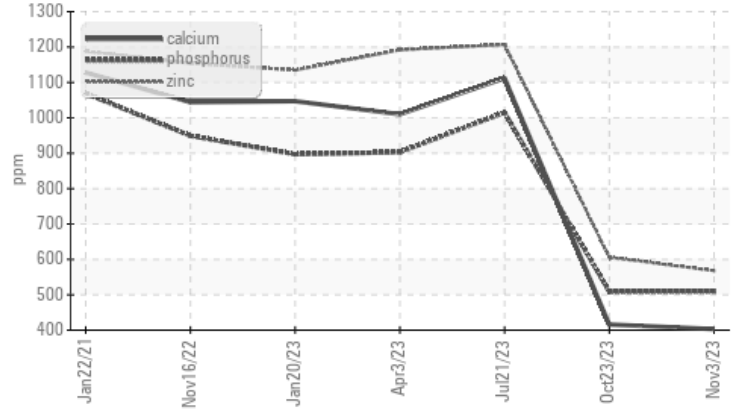
Fluid  
**PETRO CANADA DURON SHP 15W40 (11 GAL)**

## COMPONENT CONDITION SUMMARY

### ▲ Viscosity @ 100°C



### ▲ Additives



## 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	NORMAL
Magnesium	ppm	ASTM D5185m	1010	▲ 334	▲ 338	950
Calcium	ppm	ASTM D5185m	1070	▲ 403	▲ 416	1112
Phosphorus	ppm	ASTM D5185m	1150	▲ 510	▲ 509	1015
Zinc	ppm	ASTM D5185m	1270	▲ 568	▲ 606	1207
Sulfur	ppm	ASTM D5185m	2060	▲ 1343	▲ 1471	3557
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 9.1	▲ 9.1	13.5

Customer Id: GFL095  
Sample No.: GFL0092486  
Lab Number: 06000371  
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

### 23 Oct 2023 Diag: Jonathan Hester

#### VISCOSITY



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Fuel content negligible. 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. Additive levels indicate the addition of a different brand, or type of oil. Confirm oil type.

[view report](#)



### 21 Jul 2023 Diag: Wes Davis

#### NORMAL



Resample at the next service interval to monitor. Please specify the component make and model with your next sample. 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](#)



### 03 Apr 2023 Diag: Wes Davis

#### NORMAL



Resample at the next service interval to monitor. Please specify the component make and model with your next sample. 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.

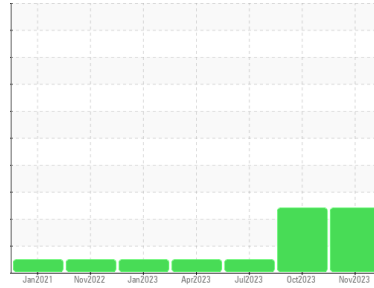
[view report](#)





# OIL ANALYSIS REPORT

Sample Rating Trend



## VISCOSITY



Machine Id  
**410010**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (11 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. Additive levels indicate the addition of a different brand, or type of oil. Confirm oil type.

### SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0092486</b>	GFL0092452	GFL0074609
Sample Date	Client Info	<b>03 Nov 2023</b>	23 Oct 2023	21 Jul 2023
Machine Age	hrs	<b>8130</b>	8026	7267
Oil Age	hrs	<b>592</b>	488	333
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Not Changd
Sample Status		<b>ATTENTION</b>	ATTENTION	NORMAL

### CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<b>&lt;1.0</b>	1.1	<1.0
Glycol	WC Method	<b>NEG</b>	NEG	NEG

### WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	<b>16</b>	13	6
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	<1	0
Nickel	ppm ASTM D5185m >4	<b>&lt;1</b>	0	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 >20	<b>4</b>	4	<1
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	<1	0
Copper	ppm ASTM D5185m >330	<b>&lt;1</b>	<1	0
Tin	ppm ASTM D5185m >15	<b>0</b>	0	0
Vanadium	ppm ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm ASTM D5185m	<b>&lt;1</b>	<1	0

### ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>2</b>	<1	3
Barium	ppm ASTM D5185m 0	<b>5</b>	3	0
Molybdenum	ppm ASTM D5185m 60	<b>25</b>	26	64
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm ASTM D5185m 1010	<b>▲ 334</b>	▲ 338	950
Calcium	ppm ASTM D5185m 1070	<b>▲ 403</b>	▲ 416	1112
Phosphorus	ppm ASTM D5185m 1150	<b>▲ 510</b>	▲ 509	1015
Zinc	ppm ASTM D5185m 1270	<b>▲ 568</b>	▲ 606	1207
Sulfur	ppm ASTM D5185m 2060	<b>▲ 1343</b>	▲ 1471	3557

### CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>2</b>	2	2
Sodium	ppm ASTM D5185m	<b>31</b>	22	4
Potassium	ppm ASTM D5185m >20	<b>27</b>	23	3

### INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>1.2</b>	1	0.5
Nitration	Abs/cm *ASTM D7624 >20	<b>6.0</b>	5.5	6.5
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>15.9</b>	15.4	18.0

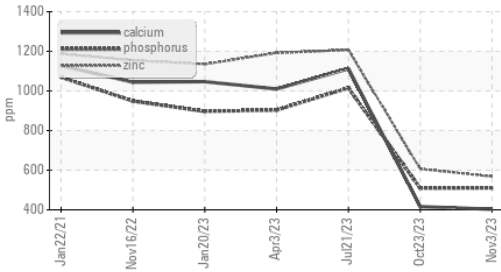
### FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>8.2</b>	7.7	12.8
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>3.7</b>	3.8	8.4

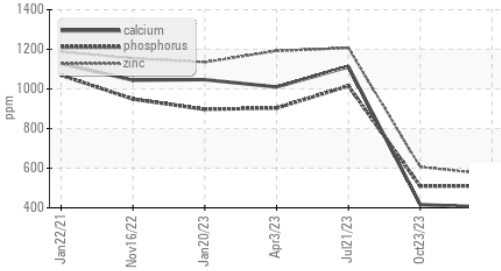


# OIL ANALYSIS REPORT

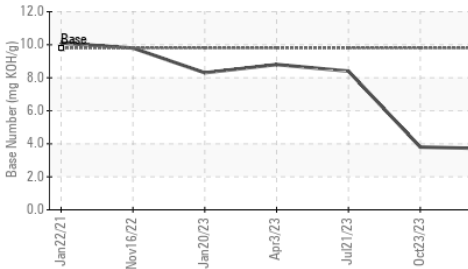
## ▲ Additives



## ▲ Additives



## Base Number

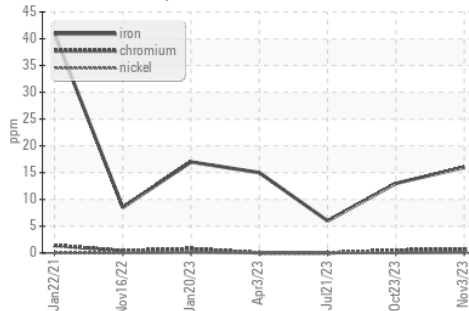


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

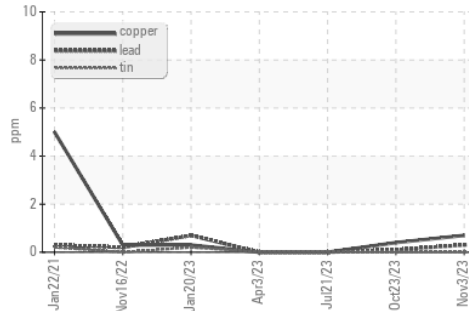
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4 ▲ 9.1	9.1	13.5

## GRAPHS

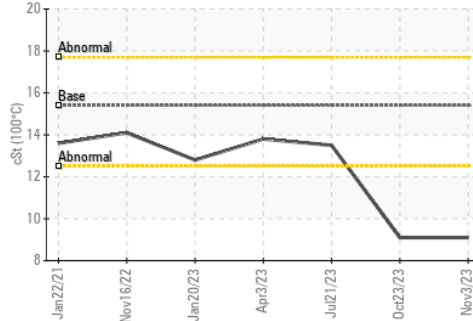
### Ferrous Alloys



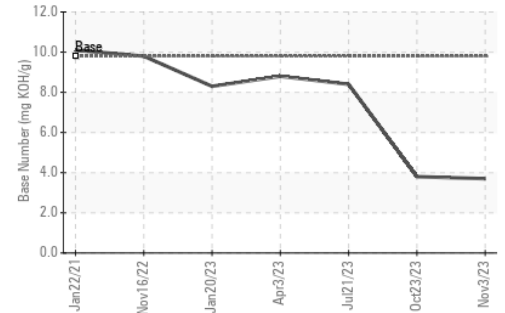
### Non-ferrous Metals



### ▲ Viscosity @ 100°C



### Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0092486 Received : 07 Nov 2023  
 Lab Number : 06000371 Diagnosed : 09 Nov 2023  
 Unique Number : 10728731 Diagnostician : Jonathan Hester  
 Test Package : FLEET

GFL Environmental - 095 - Atlanta West  
 2699 Cochran Industrial Blvd  
 Douglasville, GA  
 US 30127-1332  
 Contact: Darrell Welch  
 darrell.welch@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)