



# PROBLEM SUMMARY

Sample Rating Trend

WEAR

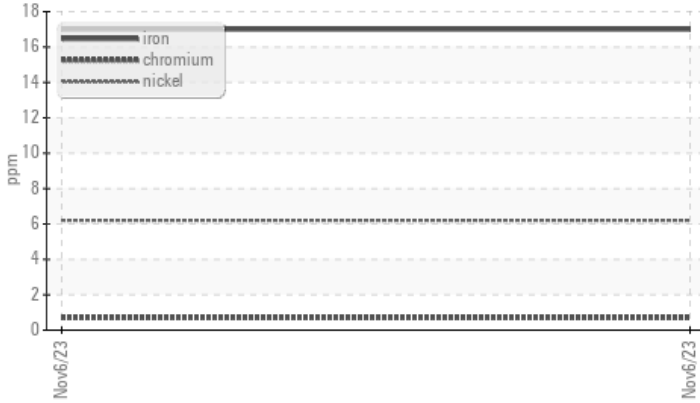


Machine Id  
**423087**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**



## 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				<b>ABNORMAL</b>	---	---
Nickel	ppm	ASTM D5185m	>5	▲ 6	---	---

Customer Id: GFL996  
Sample No.: GFL0091082  
Lab Number: 06037258  
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Sean Felton +1 919-379-4092  
[sfelton@wearcheckusa.com](mailto:sfelton@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



# OIL ANALYSIS REPORT

Sample Rating Trend

WEAR



Machine Id  
**423087**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 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

Exhaust valve 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 acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0091082</b>	---	---
Sample Date	Client Info		<b>06 Nov 2023</b>	---	---
Machine Age	hrs	Client Info	<b>2305</b>	---	---
Oil Age	hrs	Client Info	<b>605</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	---	---
Water	WC Method	>0.2	<b>NEG</b>	---	---
Glycol	WC Method		<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>17</b>	---	---
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185m >5	<b>▲ 6</b>	---	---
Titanium	ppm	ASTM D5185m >2	<b>0</b>	---	---
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	---	---
Aluminum	ppm	ASTM D5185m >20	<b>5</b>	---	---
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	---	---
Copper	ppm	ASTM D5185m >330	<b>53</b>	---	---
Tin	ppm	ASTM D5185m >15	<b>2</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>2</b>	---	---
Barium	ppm	ASTM D5185m 0	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m 60	<b>57</b>	---	---
Manganese	ppm	ASTM D5185m 0	<b>1</b>	---	---
Magnesium	ppm	ASTM D5185m 1010	<b>910</b>	---	---
Calcium	ppm	ASTM D5185m 1070	<b>1006</b>	---	---
Phosphorus	ppm	ASTM D5185m 1150	<b>929</b>	---	---
Zinc	ppm	ASTM D5185m 1270	<b>1204</b>	---	---
Sulfur	ppm	ASTM D5185m 2060	<b>2595</b>	---	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>6</b>	---	---
Sodium	ppm	ASTM D5185m	<b>2</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>16</b>	---	---

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.4</b>	---	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.0</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.6</b>	---	---

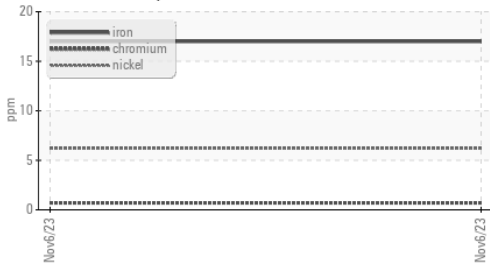
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.6</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>6.8</b>	---	---

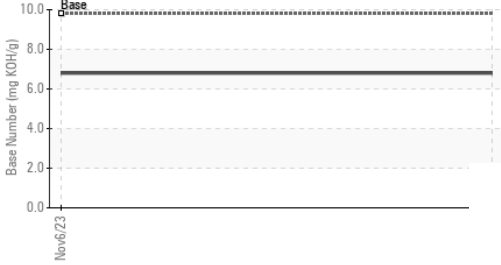


# OIL ANALYSIS REPORT

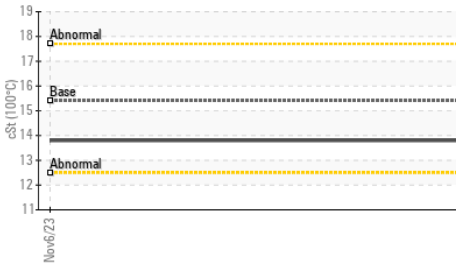
### ▲ Ferrous Alloys



### Base Number



### Viscosity @ 100°C

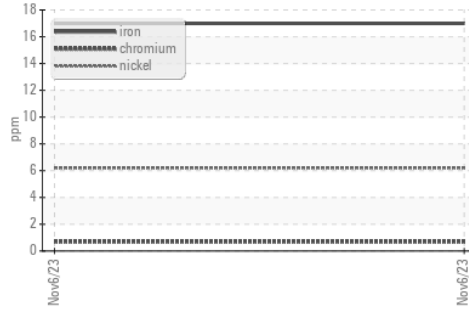


VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---
Free Water	scalar	*Visual		NEG	---	---

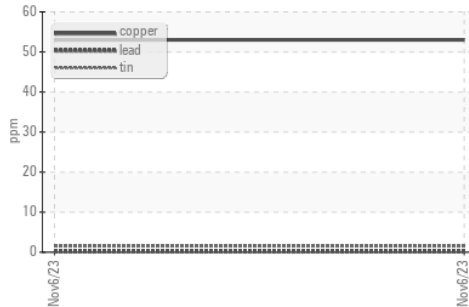
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	---	---

### GRAPHS

#### ▲ Ferrous Alloys



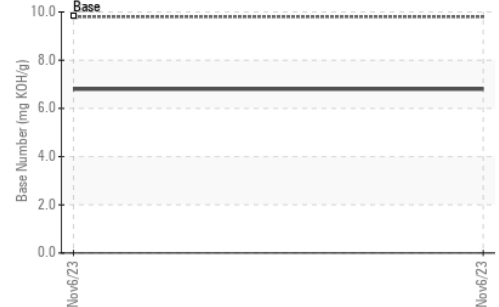
#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0091082 **Recieved** : 18 Dec 2023  
**Lab Number** : 06037258 **Diagnosed** : 20 Dec 2023  
**Unique Number** : 10792487 **Diagnostician** : Sean Felton  
**Test Package** : FLEET

**GFL Environmental - 996 - Viroqua WI Southwest**  
 950 Nelson Parkway  
 Viroqua, WI  
 US 54665  
 Contact: Shawn Burke  
 sburke@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)

T:  
F: