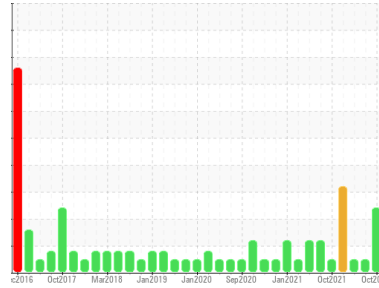




# PROBLEM SUMMARY

Sample Rating Trend



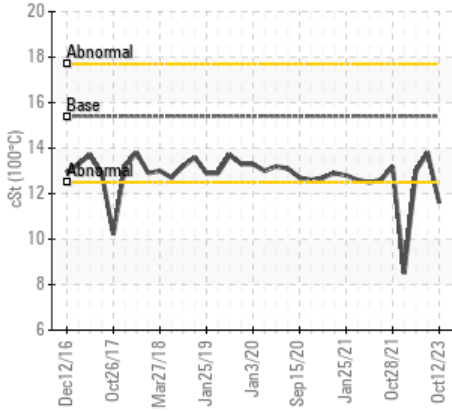
FUEL



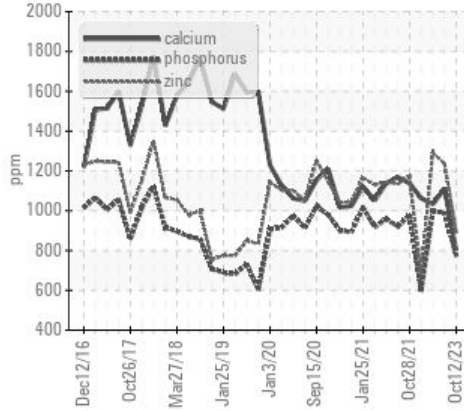
Machine Id  
**3725**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (11 GAL)**

## COMPONENT CONDITION SUMMARY

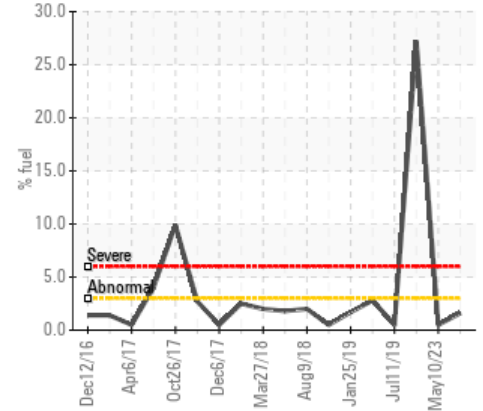
### ▲ Viscosity @ 100°C



### ▲ Additives



### ▲ Fuel Dilution



## RECOMMENDATION

Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	NORMAL	NORMAL
Magnesium	ppm	ASTM D5185m	1010	▲ 632	894	917
Calcium	ppm	ASTM D5185m	1070	▲ 802	1111	1033
Zinc	ppm	ASTM D5185m	1270	▲ 897	1236	1290
Fuel	%	ASTM D3524	>3.0	▲ 1.6	<1.0	0.5
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.6	13.8	13.0

Customer Id: GFL095  
 Sample No.: GFL0092474  
 Lab Number: 05979489  
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Wes Davis +1 905-569-8600 x223  
[wesd@wearcheck.ca](mailto:wesd@wearcheck.ca)

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

**30 Jun 2023 Diag: Wes Davis**

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



**10 May 2023 Diag: Wes Davis**

NORMAL



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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



**06 Feb 2022 Diag: Jonathan Hester**

FUEL



We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. The iron level is abnormal. All other component wear rates are normal. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

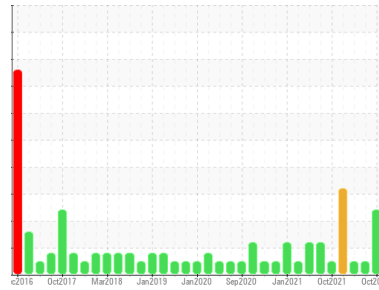
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id  
**3725**

Component

**Diesel Engine**

Fluid

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

## DIAGNOSIS

### ▲ Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### ▲ Contamination

Light fuel dilution occurring.

### ▲ Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0092474</b>	GFL0083641	GFL0074600
Sample Date	Client Info		<b>12 Oct 2023</b>	30 Jun 2023	10 May 2023
Machine Age	hrs	Client Info	<b>16874</b>	16874	16491
Oil Age	hrs	Client Info	<b>91</b>	383	13430
Oil Changed	Client Info		<b>Not Chngd</b>	Changed	Changed
Sample Status			<b>ABNORMAL</b>	NORMAL	NORMAL

## 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 >75	<b>12</b>	20	48
Chromium	ppm	ASTM D5185m >5	<b>&lt;1</b>	<1	2
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >15	<b>0</b>	1	6
Lead	ppm	ASTM D5185m >25	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m >100	<b>&lt;1</b>	1	0
Tin	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	<1
Antimony	ppm	ASTM D5185m	<b>---</b>	---	---
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>2</b>	11	10
Barium	ppm	ASTM D5185m 0	<b>2</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>51</b>	62	69
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>▲ 632</b>	894	917
Calcium	ppm	ASTM D5185m 1070	<b>▲ 802</b>	1111	1033
Phosphorus	ppm	ASTM D5185m 1150	<b>775</b>	992	996
Zinc	ppm	ASTM D5185m 1270	<b>▲ 897</b>	1236	1290
Sulfur	ppm	ASTM D5185m 2060	<b>2285</b>	3540	3839

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	5	6
Sodium	ppm	ASTM D5185m	<b>3</b>	58	62
Potassium	ppm	ASTM D5185m >20	<b>1</b>	3	4
Fuel	%	ASTM D3524 >3.0	<b>▲ 1.6</b>	<1.0	0.5

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>0.5</b>	0.6	0.8
Nitration	Abs/cm	*ASTM D7624 >20	<b>5.7</b>	7.5	7.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>16.6</b>	19.4	19.6

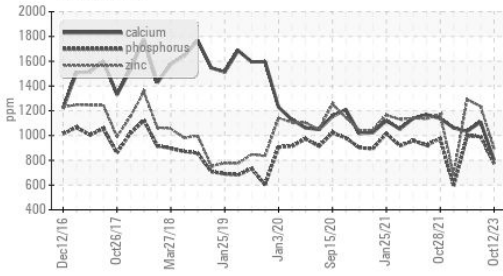
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>10.9</b>	13.9	13.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>6.4</b>	8.5	7.7

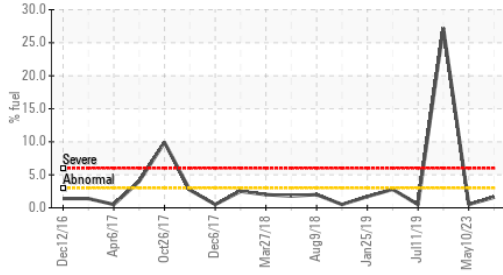


# OIL ANALYSIS REPORT

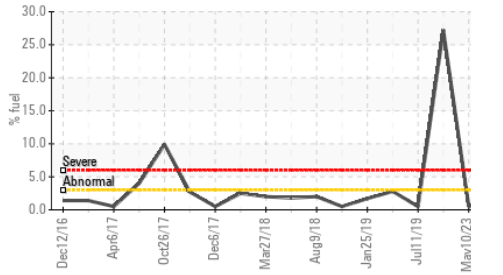
## ▲ Additives



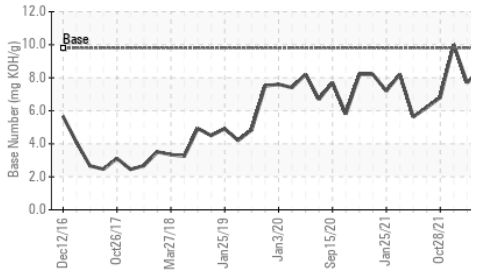
## ▲ Fuel Dilution



## ▲ Fuel Dilution



## Base Number



## VISUAL

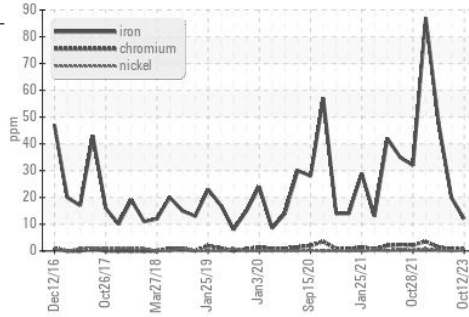
	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar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

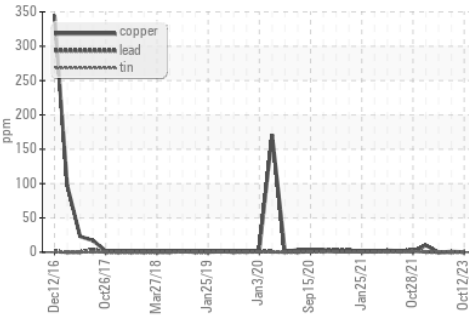
	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.6	13.8

## GRAPHS

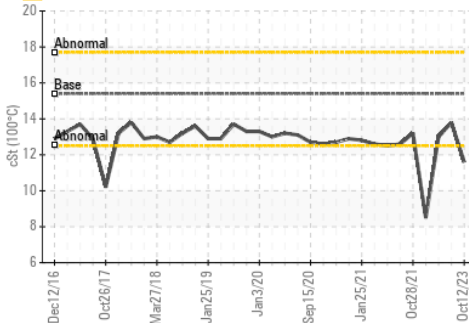
### Ferrous Alloys



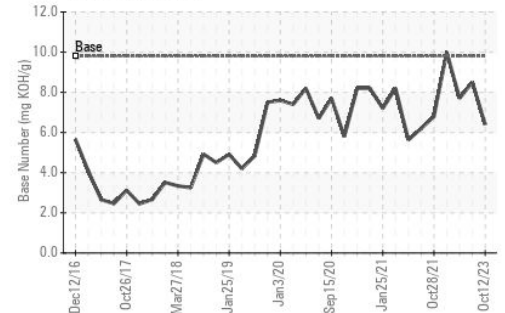
### Non-ferrous Metals



### ▲ Viscosity @ 100°C



### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0092474 **Received** : 16 Oct 2023  
**Lab Number** : 05979489 **Diagnosed** : 18 Oct 2023  
**Unique Number** : 10696784 **Diagnostician** : Wes Davis  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**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)