



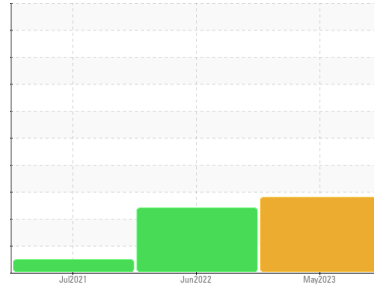
# PROBLEM SUMMARY

Sample Rating Trend

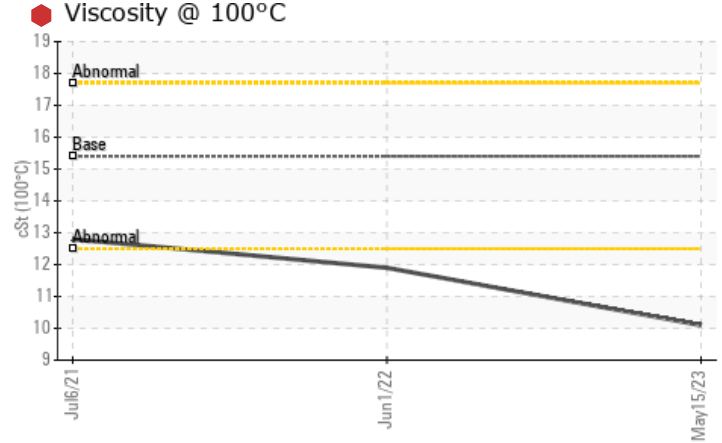
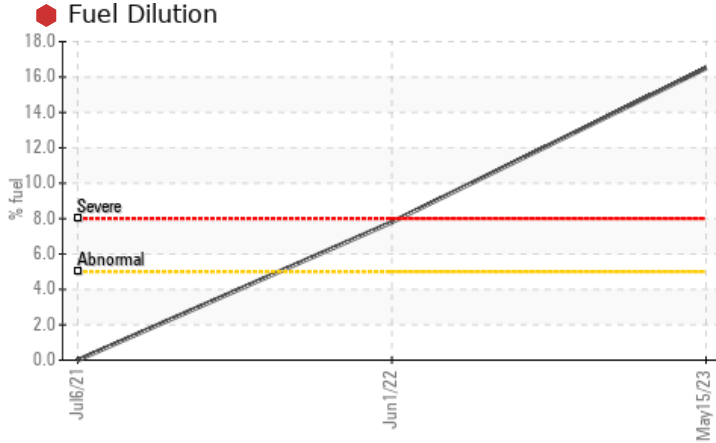
FUEL



Machine Id  
**923021**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (10 GAL)**



## COMPONENT CONDITION SUMMARY



## RECOMMENDATION

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.

## PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	SEVERE	NORMAL
Fuel	%	ASTM D3524	>5	16.5	7.8	<1.0
Visc @ 100°C	cSt	ASTM D445	15.4	10.1	11.9	12.8

Customer Id: GFL180  
Sample No.: GFL0070140  
Lab Number: 05848449  
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

Action	Status	Date	Done By	Description
Change Fluid	MISSED	May 30 2023	?	We recommend that you drain the oil from the component if this has not already been done.
Resample	MISSED	May 30 2023	?	We recommend an early resample to monitor this condition.
Check Fuel/injector System	MISSED	May 30 2023	?	We advise that you check the fuel injection system.

## HISTORICAL DIAGNOSIS

01 Jun 2022 Diag: Jonathan Hester

### FUEL



We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All 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.

view report



06 Jul 2021 Diag: Don Baldrige

### 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





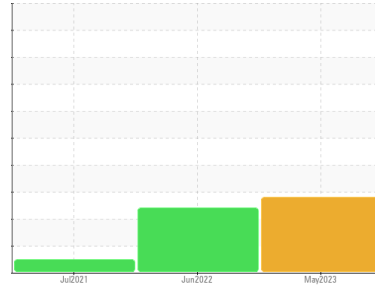
# OIL ANALYSIS REPORT

Sample Rating Trend

FUEL



Machine Id  
**923021**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (10 GAL)**



## DIAGNOSIS

### Recommendation

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.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

### 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 oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0070140</b>	GFL0031084	GFL0024703
Sample Date	Client Info		<b>15 May 2023</b>	01 Jun 2022	06 Jul 2021
Machine Age	hrs	Client Info	<b>0</b>	21297	4247
Oil Age	hrs	Client Info	<b>0</b>	3000	585
Oil Changed	Client Info		<b>N/A</b>	Changed	Changed
Sample Status			<b>SEVERE</b>	SEVERE	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 >120	<b>41</b>	29	17
Chromium	ppm	ASTM D5185m >20	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>0</b>	2	1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >20	<b>&lt;1</b>	9	4
Lead	ppm	ASTM D5185m >40	<b>0</b>	5	1
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	2	1
Tin	ppm	ASTM D5185m >15	<b>0</b>	1	<1
Antimony	ppm	ASTM D5185m	<b>---</b>	---	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>&lt;1</b>	64	64
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>49</b>	106	52
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>774</b>	546	270
Calcium	ppm	ASTM D5185m 1070	<b>881</b>	1403	1557
Phosphorus	ppm	ASTM D5185m 1150	<b>824</b>	600	631
Zinc	ppm	ASTM D5185m 1270	<b>1013</b>	771	805
Sulfur	ppm	ASTM D5185m 2060	<b>2548</b>	2335	2111

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>9</b>	11	1
Sodium	ppm	ASTM D5185m	<b>21</b>	17	9
Potassium	ppm	ASTM D5185m >20	<b>9</b>	4	3
Fuel	%	ASTM D3524 >5	<b>16.5</b>	7.8	<1.0

## INFRA-RED

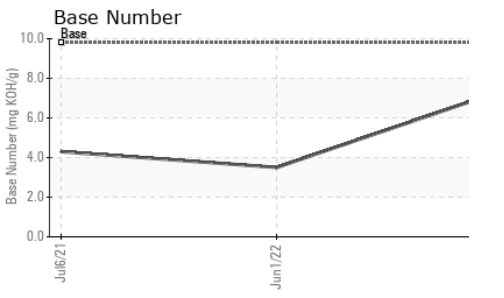
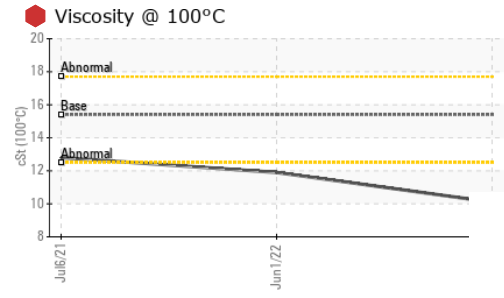
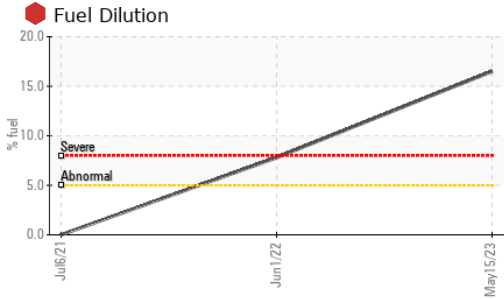
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>1.2</b>	0.5	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>11.1</b>	11.7	10.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>23.3</b>	28.4	23.5

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>22.4</b>	28.0	16.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.2</b>	3.5	4.3



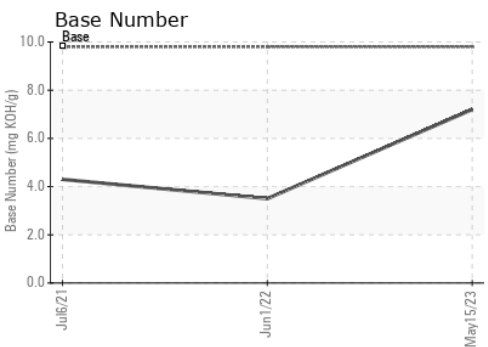
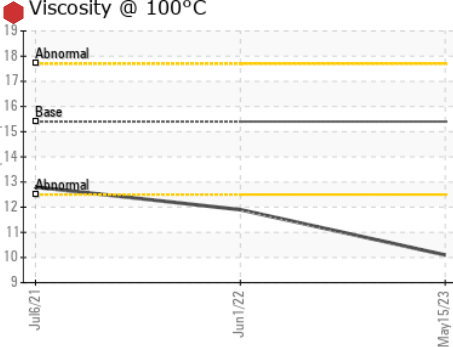
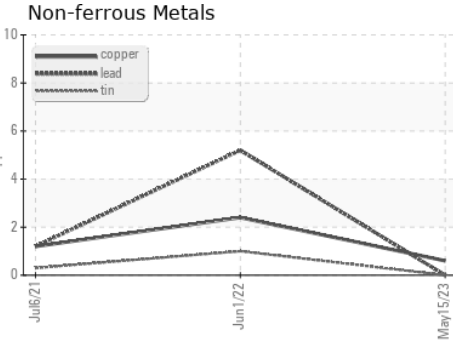
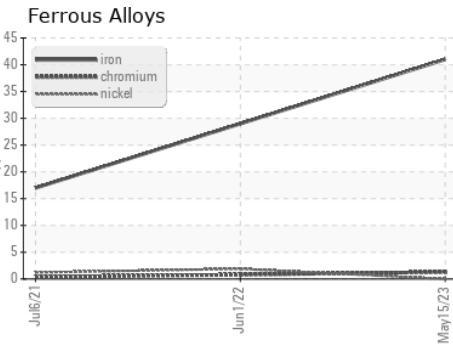
# OIL ANALYSIS REPORT



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 <span style="color: red;">♦</span> 10.1	11.9 <span style="color: yellow;">▲</span>	12.8

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0070140 **Received** : 16 May 2023  
**Lab Number** : 05848449 **Diagnosed** : 18 May 2023  
**Unique Number** : 10472556 **Diagnostician** : Wes Davis  
**Test Package** : FLEET ( Additional Tests: PercentFuel )

**GFL Environmental - 180 - Tuscaloosa Hauling**  
 4701 12TH ST NE  
 Tuscaloosa, AL  
 US 35404  
 Contact: FREDERICK ROGERS  
 fred.rogers@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: