



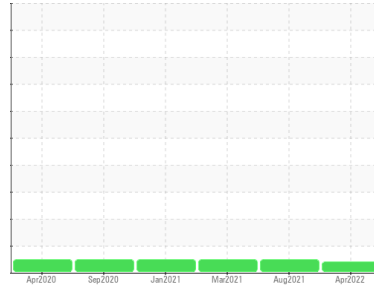
# PROBLEM SUMMARY

Sample Rating Trend

VISCOSITY

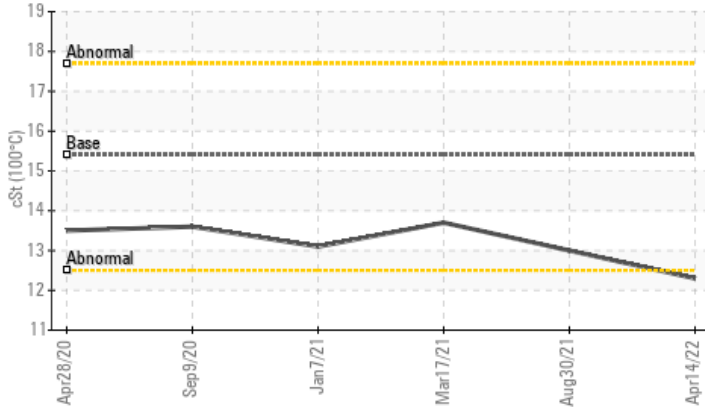


Machine Id  
**926017-9022**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**



## COMPONENT CONDITION SUMMARY

▲ Viscosity @ 100°C



## RECOMMENDATION

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				<b>MARGINAL</b>	NORMAL	NORMAL
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.3	13.0	13.7

Customer Id: GFL663  
Sample No.: GFL0049581  
Lab Number: 05524015  
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

### 30 Aug 2021 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](#)



### 17 Mar 2021 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](#)



### 07 Jan 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.

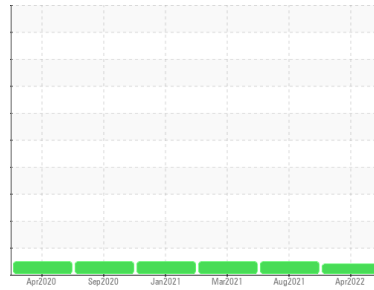
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# OIL ANALYSIS REPORT

## Sample Rating Trend



## VISCOSITY



Machine Id  
**926017-9022**

Component  
**Diesel Engine**

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

### DIAGNOSIS

#### ▲ Recommendation

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

Fuel content negligible. 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.

### SAMPLE INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	<b>GFL0049581</b>	GFL0030996	GFL0022608	
Sample Date	Client Info	<b>14 Apr 2022</b>	30 Aug 2021	17 Mar 2021	
Machine Age	hrs	Client Info	<b>16516</b>	15493	14924
Oil Age	hrs	Client Info	<b>16516</b>	0	0
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Not Changd	
Sample Status		<b>MARGINAL</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 >110	<b>18</b>	34	5
Chromium	ppm	ASTM D5185m >4	<b>&lt;1</b>	2	<1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>5</b>	5	2
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185m >25	<b>2</b>	0	0
Lead	ppm	ASTM D5185m >45	<b>1</b>	7	<1
Copper	ppm	ASTM D5185m >85	<b>&lt;1</b>	2	<1
Tin	ppm	ASTM D5185m >4	<b>&lt;1</b>	<1	<1
Antimony	ppm	ASTM D5185m	<b>---</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

### ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	<b>30</b>	16	19
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>54</b>	61	58
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>845</b>	856	811
Calcium	ppm	ASTM D5185m 1070	<b>1177</b>	1185	1039
Phosphorus	ppm	ASTM D5185m 1150	<b>999</b>	1012	954
Zinc	ppm	ASTM D5185m 1270	<b>1121</b>	1214	1084
Sulfur	ppm	ASTM D5185m 2060	<b>2658</b>	2460	2580

### CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >30	<b>6</b>	7	2
Sodium	ppm	ASTM D5185m	<b>7</b>	6	2
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	3	1
Fuel	%	ASTM D3524 >5	<b>0.3</b>	<1.0	<1.0

### INFRA-RED

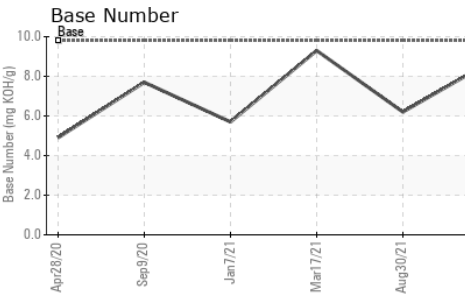
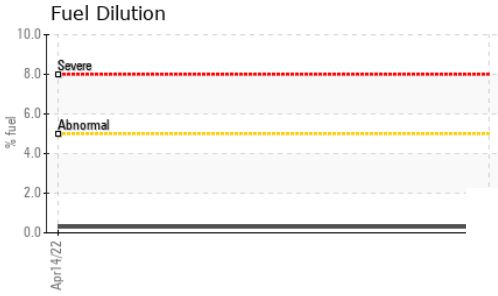
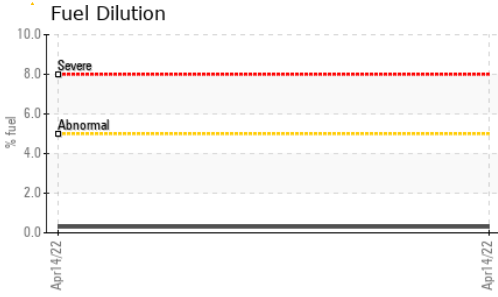
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	<b>0.3</b>	0.8	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.9</b>	10.7	5.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.7</b>	23	19.1

### FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.2</b>	18.4	13.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.7</b>	6.2	9.3



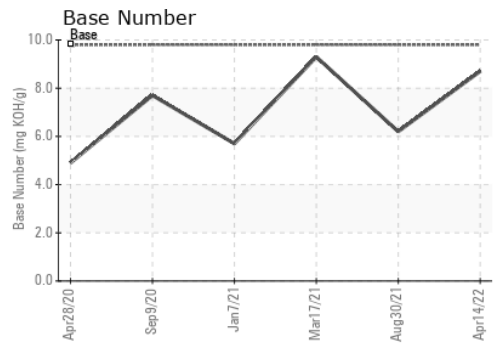
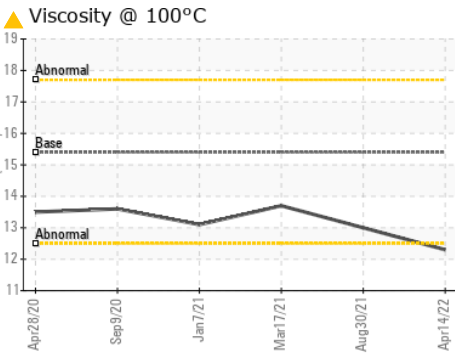
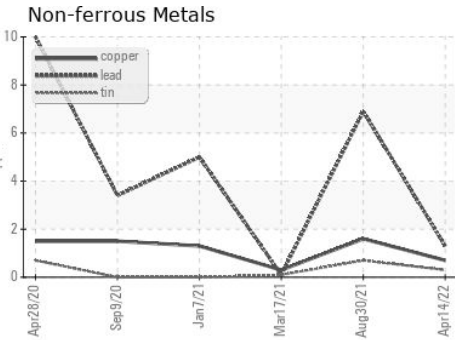
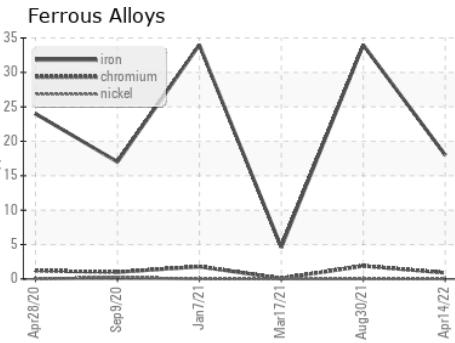
# OIL ANALYSIS REPORT



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	▲ 12.3	13.0	13.7

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0049581 **Received** : 20 Apr 2022  
**Lab Number** : 05524015 **Diagnosed** : 22 Apr 2022  
**Unique Number** : 9943295 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**GFL Environmental - 663 - Lake Ariel (Scranton Hauling)**  
 17 Industrial Park Rd  
 Lake Ariel, PA  
 US 18436  
 Contact: Eric Merone  
 emerone@countyclecycling.net

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: