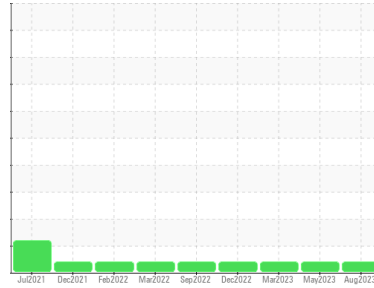




# PROBLEM SUMMARY

Sample Rating Trend



## VISCOSITY



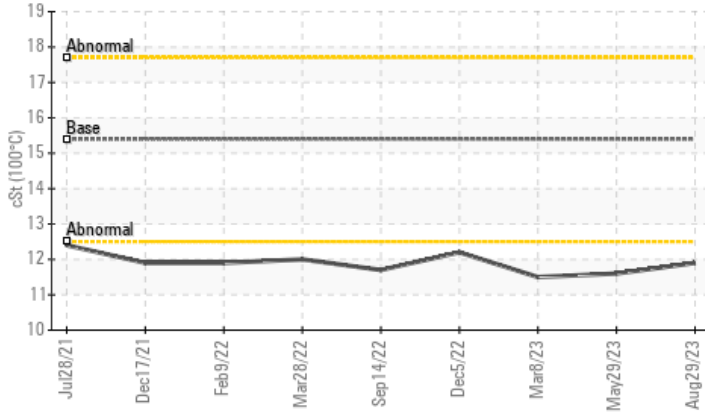
Machine Id  
**225067-20**

Component  
**Diesel Engine**

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

### COMPONENT CONDITION SUMMARY

▲ Viscosity @ 100°C



### RECOMMENDATION

No corrective action is recommended at this time.  
Resample at the next service interval to monitor.

### PROBLEMATIC TEST RESULTS

Sample Status				ATTENTION	ATTENTION	ATTENTION
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.9	▲ 11.6	▲ 11.5

Customer Id: GFL683  
Sample No.: GFL0091965  
Lab Number: 05938673  
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Doug Bogart +1 (800)237-1369 x4016  
[dougb@wearcheckusa.com](mailto:dougb@wearcheckusa.com)

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

### 29 May 2023 Diag: Sean Felton

#### VISCOSITY



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. All component wear rates are normal. 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. Confirm oil type.

view report



### 08 Mar 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. 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. Confirm oil type.

view report



### 05 Dec 2022 Diag: Sean Felton

#### VISCOSITY



Oil and filter change at the time of sampling has been noted. 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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

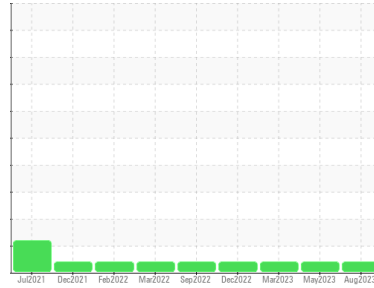
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



## VISCOSITY



Machine Id  
**225067-20**

Component  
**Diesel Engine**

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

### DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. 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. Confirm oil type.

### SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0091965</b>	GFL0075062	GFL0063157
Sample Date	Client Info	<b>29 Aug 2023</b>	29 May 2023	08 Mar 2023
Machine Age	hrs	<b>3847</b>	3621	3417
Oil Age	hrs	<b>226</b>	300	292
Oil Changed	Client Info	<b>N/A</b>	Changed	N/A
Sample Status		<b>ATTENTION</b>	ATTENTION	ATTENTION

### 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 >150	<b>25</b>	29	18
Chromium	ppm	ASTM D5185m >10	<b>1</b>	2	<1
Nickel	ppm	ASTM D5185m >10	<b>0</b>	<1	0
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>6</b>	4	4
Lead	ppm	ASTM D5185m >25	<b>5</b>	8	4
Copper	ppm	ASTM D5185m >45	<b>4</b>	4	3
Tin	ppm	ASTM D5185m >5	<b>1</b>	1	<1
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>3</b>	6	5
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>59</b>	62	57
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>975</b>	980	817
Calcium	ppm	ASTM D5185m 1070	<b>1087</b>	1091	1033
Phosphorus	ppm	ASTM D5185m 1150	<b>1079</b>	1067	948
Zinc	ppm	ASTM D5185m 1270	<b>1334</b>	1312	1112
Sulfur	ppm	ASTM D5185m 2060	<b>3840</b>	3756	2625

### CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	<b>4</b>	6	4
Sodium	ppm	ASTM D5185m	<b>2</b>	3	0
Potassium	ppm	ASTM D5185m >20	<b>1</b>	3	3
Fuel	%	ASTM D3524 >5	<b>&lt;1.0</b>	<1.0	<1.0

### INFRA-RED

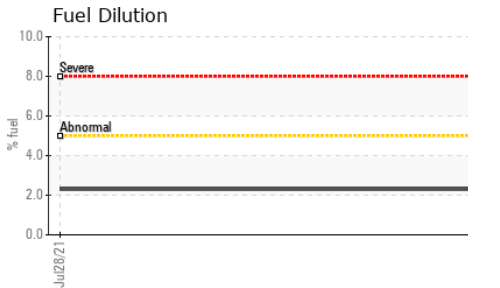
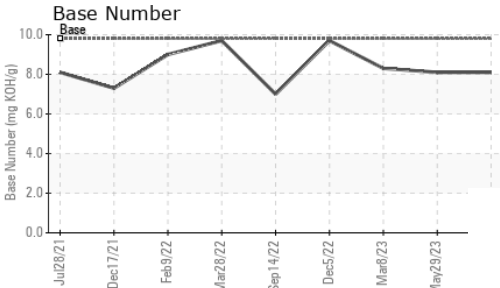
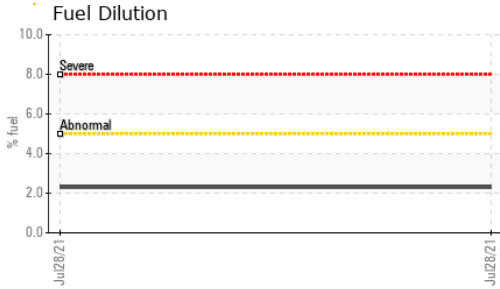
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.6</b>	10.8	9.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.3</b>	20.8	19.3

### FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>17.5</b>	20.9	18.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.1</b>	8.1	8.3



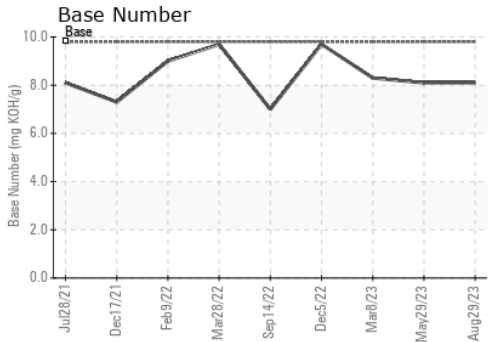
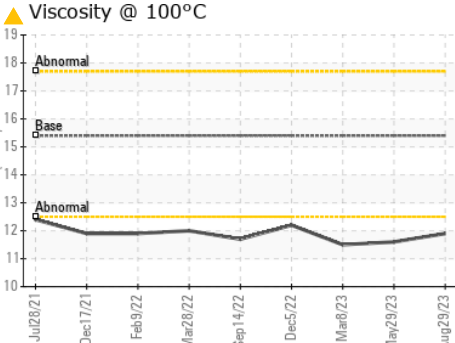
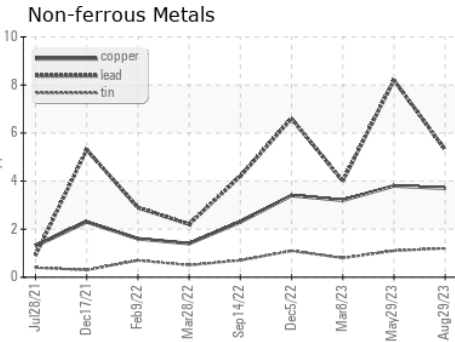
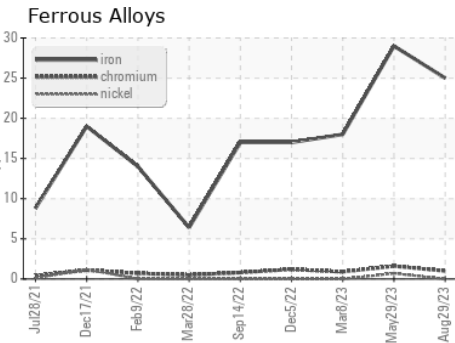
# OIL ANALYSIS REPORT



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	▲ 11.9	▲ 11.6

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0091965 **Received** : 30 Aug 2023  
**Lab Number** : 05938673 **Diagnosed** : 31 Aug 2023  
**Unique Number** : 10629285 **Diagnostician** : Doug Bogart  
**Test Package** : FLEET ( Additional Tests: FuelDilution )

**GFL Environmental - 683 - Ruckersville Hauling**  
 261 INDUSTRIAL DR  
 Ruckersville, VA  
 US 22698  
 Contact: Jaf Finney  
 jfinney@gflenv.com  
 T: (434)990-4972  
 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)