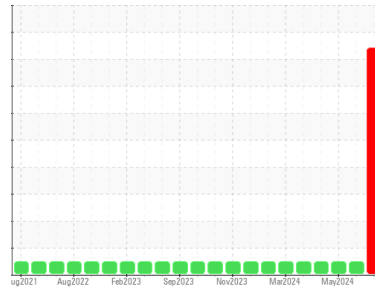




# PROBLEM SUMMARY

Machine Id  
**920077-205331**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## Sample Rating Trend

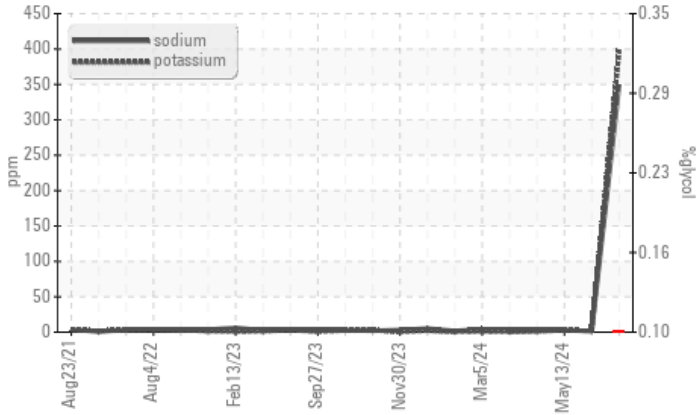


GLYCOL



## COMPONENT CONDITION SUMMARY

### ▲ Glycol Contamination



## RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

## PROBLEMATIC TEST RESULTS

Sample Status			SEVERE	NORMAL	NORMAL
Sodium	ppm	ASTM D5185m	▲ 349	1	3
Potassium	ppm	ASTM D5185m >20	▲ 398	2	3
Glycol	%	*ASTM D2982	▲ 0.10	NEG	NEG

Customer Id: GFL822  
 Sample No.: GFL0118259  
 Lab Number: 06238858  
 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	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Change Filter	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Glycol Access	---	---	?	We advise that you check for the source of the coolant leak.

## HISTORICAL DIAGNOSIS

NORMAL



### 03 Jun 2024 Diag: Don Baldrige

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



NORMAL



### 13 May 2024 Diag: Wes Davis

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.

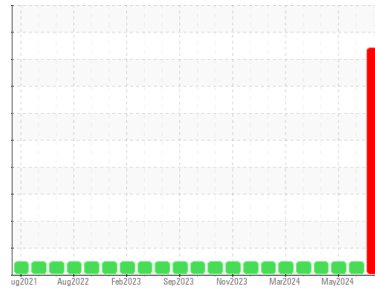
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id  
**920077-205331**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### ▲ Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### ▲ Contamination

Sodium and/or potassium levels are high. Test for glycol is positive.

### ▲ Fluid Condition

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.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	<b>GFL0118259</b>	GFL0118194	GFL0118240	
Sample Date	Client Info	<b>12 Jul 2024</b>	03 Jun 2024	13 May 2024	
Machine Age	hrs	Client Info	<b>12243</b>	11990	11820
Oil Age	hrs	Client Info	<b>700</b>	150	150
Oil Changed	Client Info	<b>Not Chngd</b>	Not Chngd	Not Chngd	
Sample Status		<b>SEVERE</b>	NORMAL	NORMAL	

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method >0.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	<b>48</b>	4	3
Chromium	ppm ASTM D5185m >20	<b>2</b>	<1	<1
Nickel	ppm ASTM D5185m >4	<b>0</b>	0	<1
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	<1	<1
Silver	ppm ASTM D5185m >3	<b>0</b>	0	1
Aluminum	ppm ASTM D5185m >20	<b>6</b>	2	1
Lead	ppm ASTM D5185m >40	<b>4</b>	<1	<1
Copper	ppm ASTM D5185m >330	<b>1</b>	<1	1
Tin	ppm ASTM D5185m >15	<b>0</b>	<1	<1
Vanadium	ppm ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>&lt;1</b>	0	<1
Barium	ppm ASTM D5185m 0	<b>&lt;1</b>	0	<1
Molybdenum	ppm ASTM D5185m 60	<b>129</b>	57	57
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm ASTM D5185m 1010	<b>905</b>	877	924
Calcium	ppm ASTM D5185m 1070	<b>1071</b>	1022	1038
Phosphorus	ppm ASTM D5185m 1150	<b>961</b>	950	998
Zinc	ppm ASTM D5185m 1270	<b>1175</b>	1136	1201
Sulfur	ppm ASTM D5185m 2060	<b>3248</b>	3041	3239

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>11</b>	3	4
Sodium	ppm ASTM D5185m	<b>▲ 349</b>	1	3
Potassium	ppm ASTM D5185m >20	<b>▲ 398</b>	2	3
Glycol	% *ASTM D2982	<b>▲ 0.10</b>	NEG	NEG

## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>1.9</b>	0.4	0.2
Nitration	Abs/cm *ASTM D7624 >20	<b>13.6</b>	6.2	5.2
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>25.9</b>	18.0	17.1

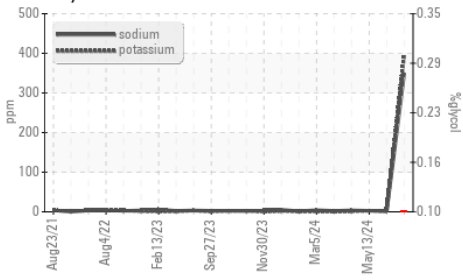
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>19.0</b>	13.1	12.7
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.1</b>	8.5	8.5

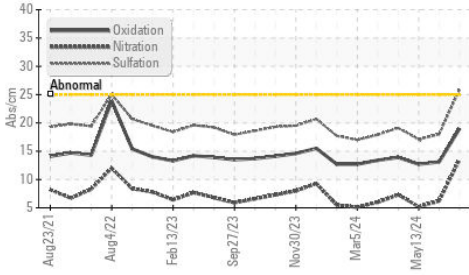


# OIL ANALYSIS REPORT

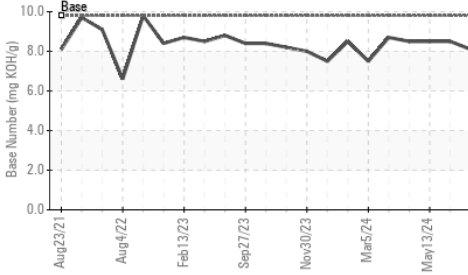
## Glycol Contamination



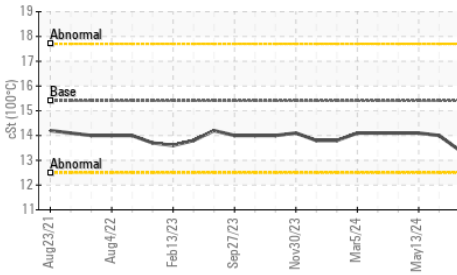
## FT-IR (Direct Trend)



## Base Number



## Viscosity @ 100°C



## VISUAL

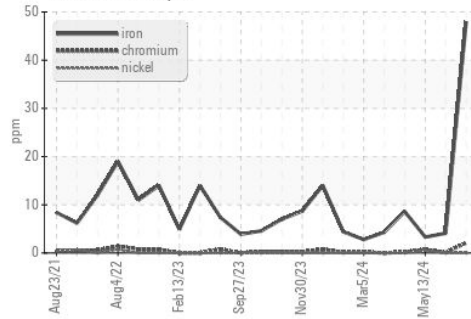
method	limit/base	current	history1	history2
White Metal	*Visual	NONE	NONE	NONE
Yellow Metal	*Visual	NONE	NONE	NONE
Precipitate	*Visual	NONE	NONE	NONE
Silt	*Visual	NONE	NONE	NONE
Debris	*Visual	NONE	NONE	NONE
Sand/Dirt	*Visual	NONE	NONE	NONE
Appearance	*Visual	NORML	NORML	NORML
Odor	*Visual	NORML	NORML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

## FLUID PROPERTIES

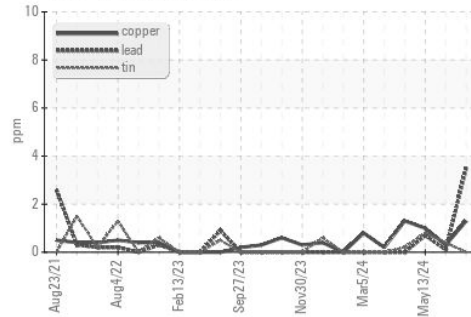
method	limit/base	current	history1	history2	
Visc @ 100°C	ASTM D445	15.4	13.4	14.0	14.1

## GRAPHS

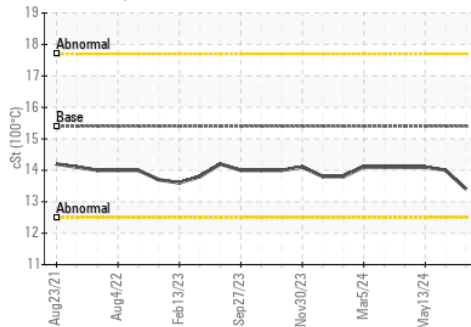
### Ferrous Alloys



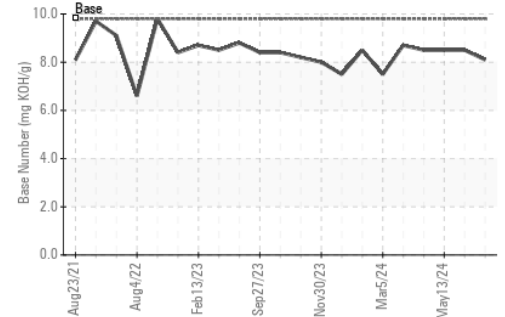
### Non-ferrous Metals



### Viscosity @ 100°C



### Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0118259

Lab Number : 06238858

Unique Number : 11127692

Test Package : FLEET ( Additional Tests: Glycol )

Received : 17 Jul 2024

Tested : 19 Jul 2024

Diagnosed : 19 Jul 2024 - Jonathan Hester

GFL Environmental - 822 - Springfield Hauling

2120 West Bennett Street

Springfield, MO

US 65807

Contact: Dennis Moore

dennis.moore@gflenv.com

T: (417)403-3641

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)