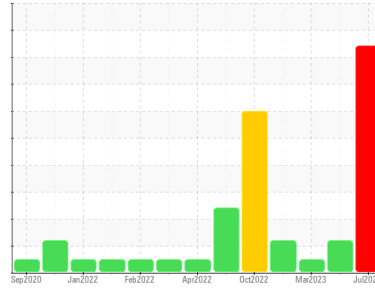




# PROBLEM SUMMARY

Sample Rating Trend



GLYCOL



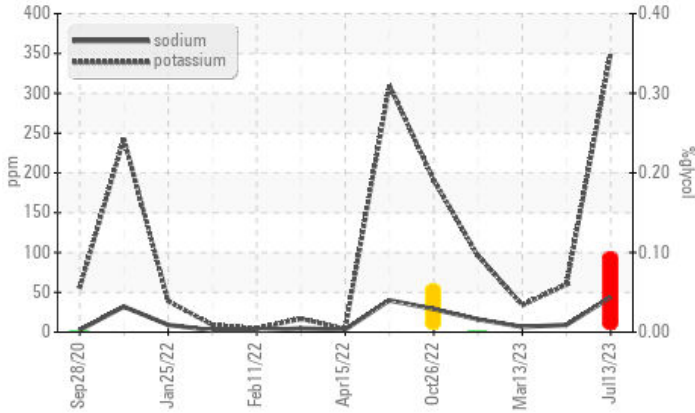
Machine Id  
**827020-1032**

Component  
**Diesel Engine**

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

## COMPONENT CONDITION SUMMARY

### Glycol Contamination



## RECOMMENDATION

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

## PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	NORMAL
Sodium	ppm	ASTM D5185m		▲ 44	9	7
Potassium	ppm	ASTM D5185m	>20	▲ 351	▲ 60	34
Glycol	%	*ASTM D2982		● 0.10	NEG	NEG

Customer Id: GFL654S  
Sample No.: GFL0067866  
Lab Number: 05901794  
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
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

### 25 Apr 2023 Diag: Jonathan Hester

GLYCOL



No corrective action is recommended at this time. We recommend an early resample to monitor this condition. All component wear rates are normal. Sodium and/or potassium levels are high. Test for glycol is negative. 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



### 13 Mar 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. 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



### 20 Feb 2023 Diag: Angela Borella

GLYCOL



Resample at the next service interval to monitor. All other component wear rates are normal. Sodium and/or potassium levels are high. Test for glycol is negative. No evidence of fuel present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

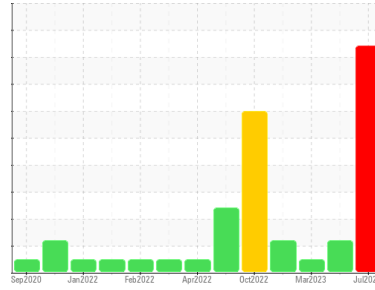
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id  
**827020-1032**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### Recommendation

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

Test for glycol is positive. There is a high concentration of glycol present in the oil.

### 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>GFL0067866</b>	GFL0067995	GFL0067933
Sample Date	Client Info		<b>13 Jul 2023</b>	25 Apr 2023	13 Mar 2023
Machine Age	mls	Client Info	<b>188422</b>	188422	16129
Oil Age	mls	Client Info	<b>544</b>	137800	0
Oil Changed	Client Info		<b>Changed</b>	N/A	N/A
Sample Status			<b>SEVERE</b>	ABNORMAL	NORMAL

## CONTAMINATION

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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >110	<b>17</b>	4	3
Chromium	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>4</b>	<1	1
Lead	ppm	ASTM D5185m >45	<b>13</b>	0	<1
Copper	ppm	ASTM D5185m >85	<b>4</b>	1	<1
Tin	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</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>4</b>	7	11
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>107</b>	72	62
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>1119</b>	1079	891
Calcium	ppm	ASTM D5185m 1070	<b>1267</b>	1197	1051
Phosphorus	ppm	ASTM D5185m 1150	<b>1123</b>	1132	972
Zinc	ppm	ASTM D5185m 1270	<b>1434</b>	1389	1175
Sulfur	ppm	ASTM D5185m 2060	<b>3933</b>	3699	3106

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	<b>14</b>	8	7
Sodium	ppm	ASTM D5185m	<b>44</b>	9	7
Potassium	ppm	ASTM D5185m >20	<b>351</b>	60	34
Glycol	%	*ASTM D2982	<b>0.10</b>	NEG	NEG

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.5</b>	0.2	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>11.7</b>	6.6	6.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>24.8</b>	17.1	18.5

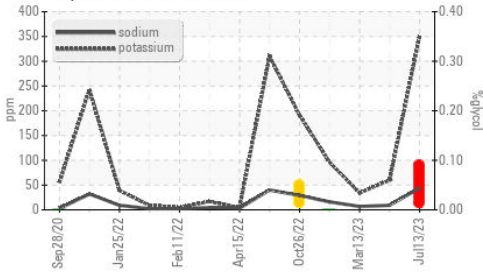
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>21.1</b>	14.0	14.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.3</b>	7.8	8.9



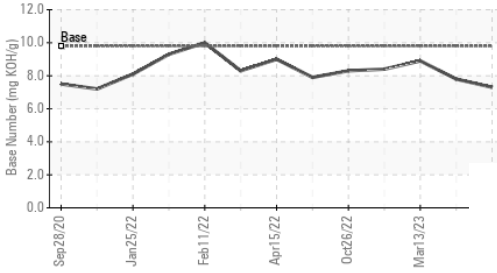
# OIL ANALYSIS REPORT

### Glycol Contamination



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

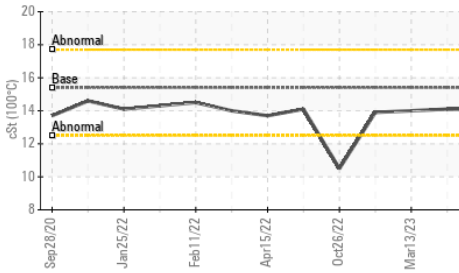
### Base Number



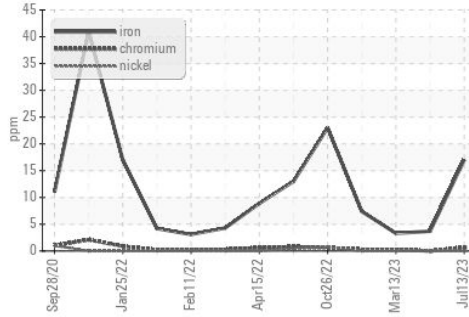
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.1	14.0

### GRAPHS

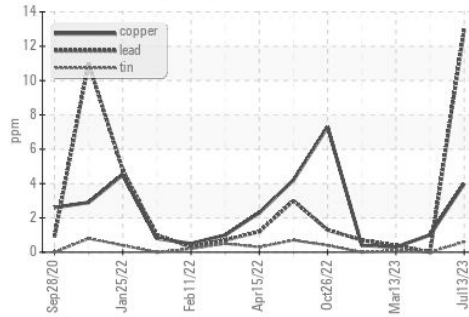
### Viscosity @ 100°C



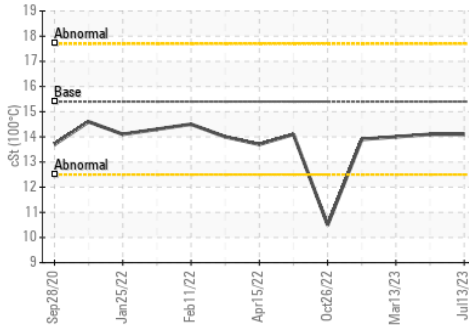
### Ferrous Alloys



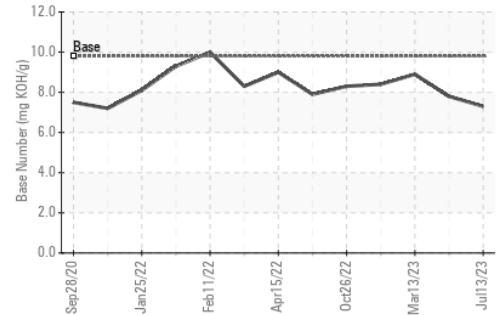
### Non-ferrous Metals



### Viscosity @ 100°C



### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0067866 **Received** : 18 Jul 2023  
**Lab Number** : 05901794 **Diagnosed** : 20 Jul 2023  
**Unique Number** : 10563150 **Diagnostician** : Wes Davis  
**Test Package** : FLEET ( Additional Tests: Glycol )

**GFL Environmental - 654S - Midlothian**  
 12230 Deergrove Road  
 Midlothian, VA  
 US 23112  
 Contact: Corbin Umphlet  
 cumphlet@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: