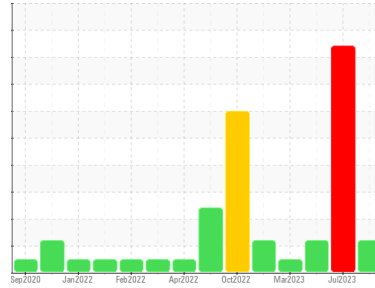




# PROBLEM SUMMARY

Sample Rating Trend



GLYCOL



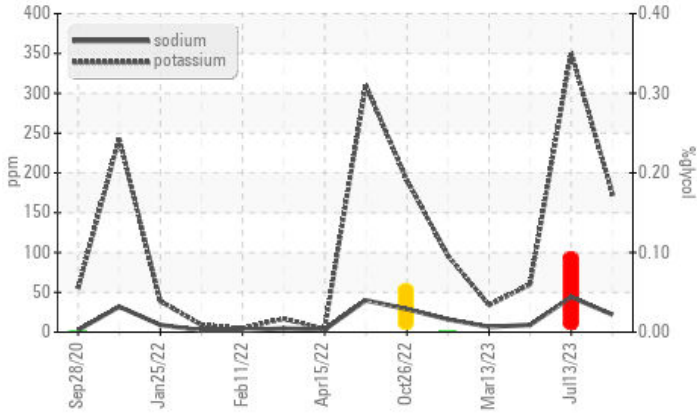
Machine Id  
**827020-1032**

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. Check for low coolant level. We recommend an early resample to monitor this condition. ( Customer Sample Comment: No obvious signs of coolant intrusion )

## PROBLEMATIC TEST RESULTS

Sample Status				<b>ABNORMAL</b>	SEVERE	ABNORMAL
Potassium	ppm	ASTM D5185m	>20	▲ 175	▲ 351	▲ 60

Customer Id: GFL654S  
Sample No.: GFL0089524  
Lab Number: 05922643  
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
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

**13 Jul 2023 Diag: Wes Davis**

GLYCOL



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. All component wear rates are normal. Test for glycol is positive. There is a high concentration of glycol present in the oil. 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.

view report



**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.

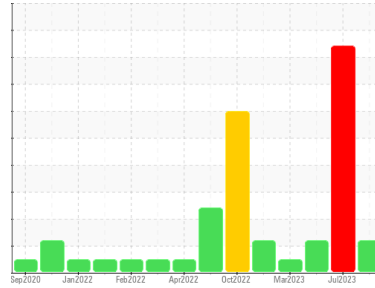
view report





# 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. Check for low coolant level. We recommend an early resample to monitor this condition. ( Customer Sample Comment: No obvious signs of coolant intrusion )

### Wear

All component wear rates are normal.

### Contamination

Sodium and/or potassium levels remain high.

### Fluid Condition

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>GFL0089524</b>	GFL0067866	GFL0067995
Sample Date	Client Info	<b>07 Aug 2023</b>	13 Jul 2023	25 Apr 2023
Machine Age	mls	<b>16877</b>	188422	188422
Oil Age	mls	<b>169</b>	544	137800
Oil Changed	Client Info	<b>Not Chngd</b>	Changed	N/A
Sample Status		<b>ABNORMAL</b>	SEVERE	ABNORMAL

## 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>5</b>	17	4
Chromium	ppm ASTM D5185m >4	<b>&lt;1</b>	<1	0
Nickel	ppm ASTM D5185m >2	<b>&lt;1</b>	0	0
Titanium	ppm ASTM D5185m	<b>0</b>	<1	0
Silver	ppm ASTM D5185m >2	<b>&lt;1</b>	0	0
Aluminum	ppm ASTM D5185m >25	<b>2</b>	4	<1
Lead	ppm ASTM D5185m >45	<b>2</b>	13	0
Copper	ppm ASTM D5185m >85	<b>&lt;1</b>	4	1
Tin	ppm ASTM D5185m >4	<b>&lt;1</b>	<1	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>5</b>	4	7
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>79</b>	107	72
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>999</b>	1119	1079
Calcium	ppm ASTM D5185m 1070	<b>1090</b>	1267	1197
Phosphorus	ppm ASTM D5185m 1150	<b>1110</b>	1123	1132
Zinc	ppm ASTM D5185m 1270	<b>1359</b>	1434	1389
Sulfur	ppm ASTM D5185m 2060	<b>4016</b>	3933	3699

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >30	<b>6</b>	14	8
Sodium	ppm ASTM D5185m	<b>22</b>	▲ 44	9
Potassium	ppm ASTM D5185m >20	▲ <b>175</b>	▲ 351	▲ 60
Glycol	% *ASTM D2982	<b>NEG</b>	◆ 0.10	NEG

## INFRA-RED

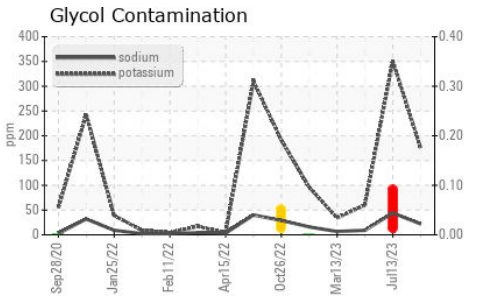
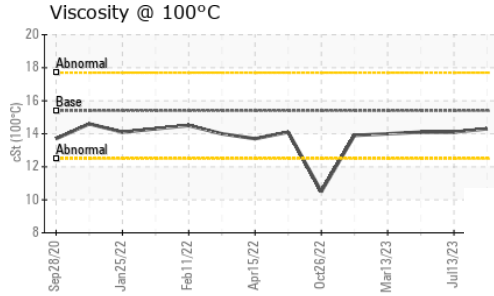
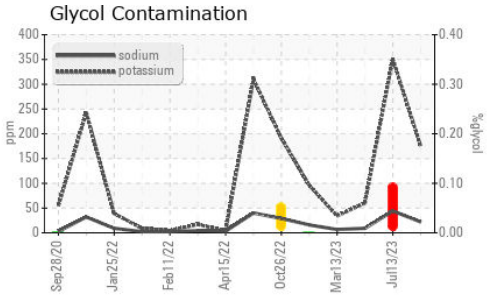
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.2</b>	0.5	0.2
Nitration	Abs/cm *ASTM D7624 >20	<b>7.6</b>	11.7	6.6
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>20.3</b>	24.8	17.1

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>16.0</b>	21.1	14.0
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.4</b>	7.3	7.8



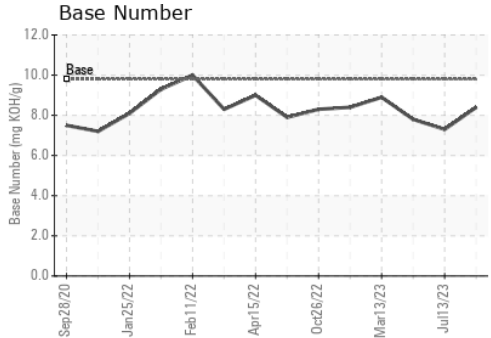
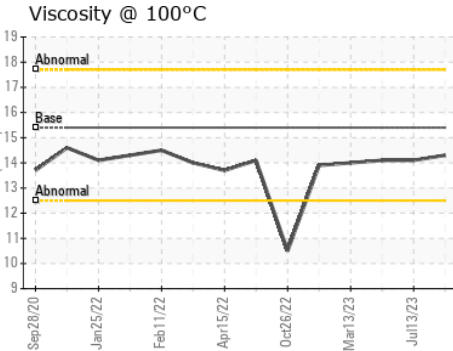
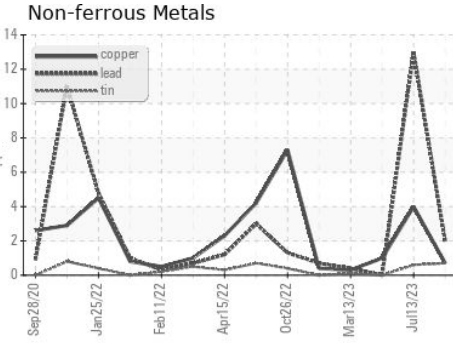
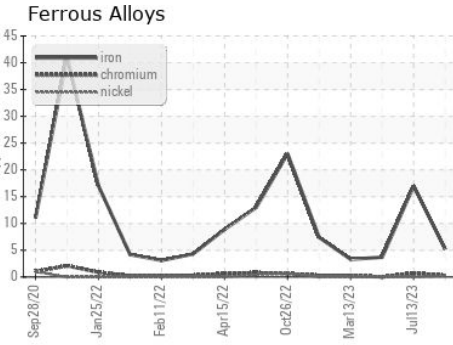
# OIL ANALYSIS REPORT



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	14.3	14.1

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0089524 **Received** : 11 Aug 2023  
**Lab Number** : 05922643 **Diagnosed** : 14 Aug 2023  
**Unique Number** : 10602590 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET

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