



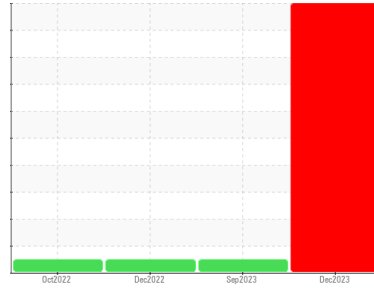
# PROBLEM SUMMARY

Sample Rating Trend

GLYCOL

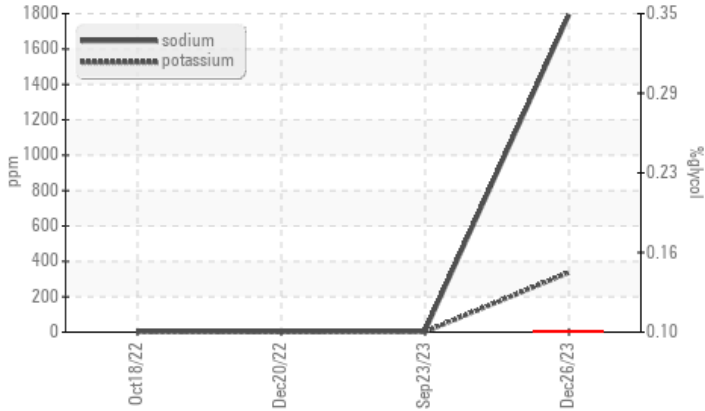


Machine Id  
**929036**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

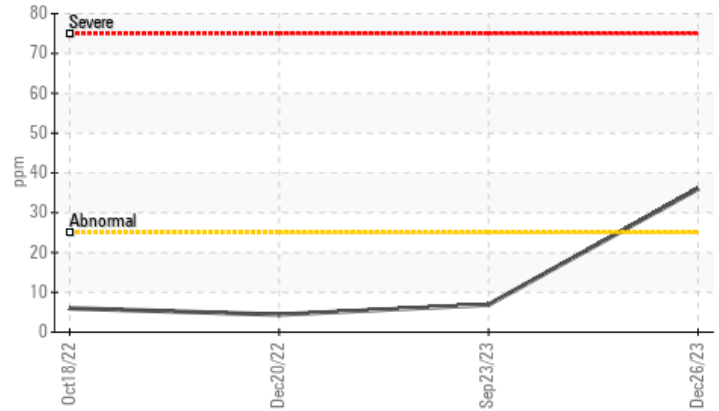


## COMPONENT CONDITION SUMMARY

### ● Glycol Contamination



### ▲ Silicon (ppm)



## RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. 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	NORMAL	NORMAL
Silicon	ppm	ASTM D5185m	>25	▲ <b>36</b>	7	4
Sodium	ppm	ASTM D5185m		▲ <b>1793</b>	8	6
Potassium	ppm	ASTM D5185m	>20	▲ <b>337</b>	2	0
Glycol	%	*ASTM D2982		● <b>0.10</b>	NEG	NEG

Customer Id: GFL932  
Sample No.: GFL0080365  
Lab Number: 06068237  
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

### 23 Sep 2023 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



### 20 Dec 2022 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



### 18 Oct 2022 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. Metal levels are typical for a components first oil change. 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.

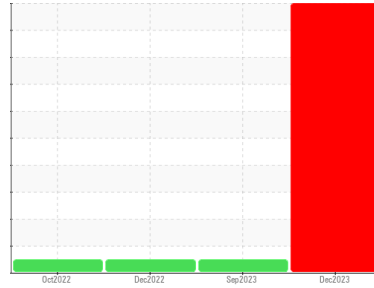
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id  
**929036**  
 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. 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

Sodium and/or potassium levels are high. There is a high concentration of glycol present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material.

### 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>GFL0080365</b>	GFL0080376	GFL0065043
Sample Date	Client Info		<b>26 Dec 2023</b>	23 Sep 2023	20 Dec 2022
Machine Age	hrs	Client Info	<b>34123</b>	33933	32368
Oil Age	hrs	Client Info	<b>190</b>	33933	32368
Oil Changed	Client Info		<b>Changed</b>	Changed	Not Changed
Sample Status			<b>SEVERE</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<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 >120	<b>48</b>	31	15
Chromium	ppm	ASTM D5185m >20	<b>10</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>2</b>	1	1
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>4</b>	0	3
Lead	ppm	ASTM D5185m >40	<b>2</b>	9	2
Copper	ppm	ASTM D5185m >330	<b>2</b>	2	2
Tin	ppm	ASTM D5185m >15	<b>2</b>	1	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>28</b>	<1	3
Barium	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	0
Molybdenum	ppm	ASTM D5185m 60	<b>126</b>	59	59
Manganese	ppm	ASTM D5185m 0	<b>2</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>793</b>	871	924
Calcium	ppm	ASTM D5185m 1070	<b>1397</b>	1004	1095
Phosphorus	ppm	ASTM D5185m 1150	<b>806</b>	921	948
Zinc	ppm	ASTM D5185m 1270	<b>1029</b>	1141	1232
Sulfur	ppm	ASTM D5185m 2060	<b>2831</b>	2699	3177

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>▲ 36</b>	7	4
Sodium	ppm	ASTM D5185m	<b>▲ 1793</b>	8	6
Potassium	ppm	ASTM D5185m >20	<b>▲ 337</b>	2	0
Glycol	%	*ASTM D2982	<b>◆ 0.10</b>	NEG	NEG

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0</b>	0.9	0.7
Nitration	Abs/cm	*ASTM D7624 >20	<b>16.0</b>	12.1	10.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>24.2</b>	25.0	20.8

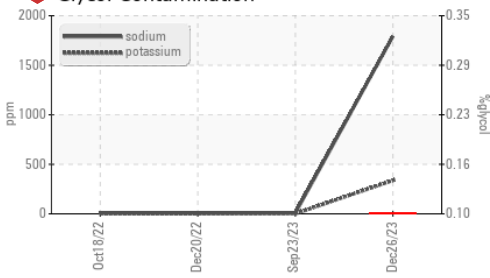
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>19.2</b>	22.5	17.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.3</b>	4.9	6.7

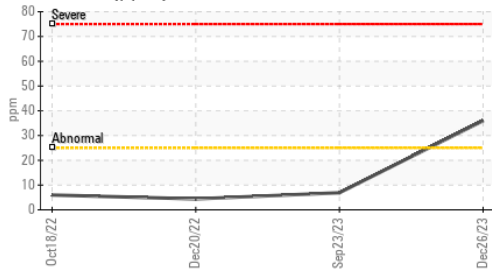


# OIL ANALYSIS REPORT

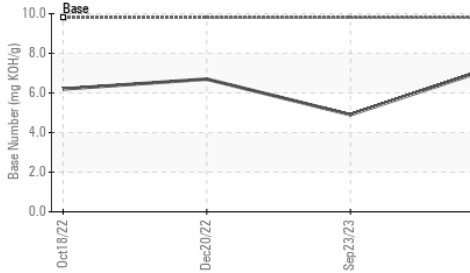
### Glycol Contamination



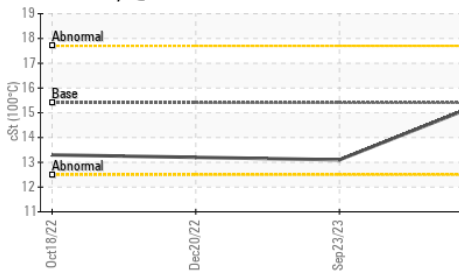
### Silicon (ppm)



### Base Number



### Viscosity @ 100°C

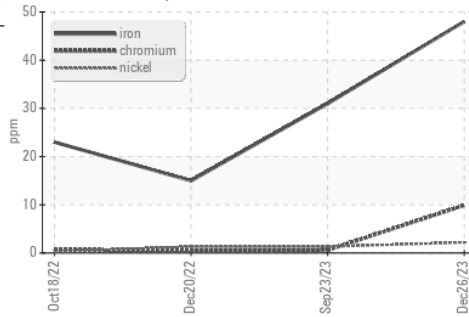


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

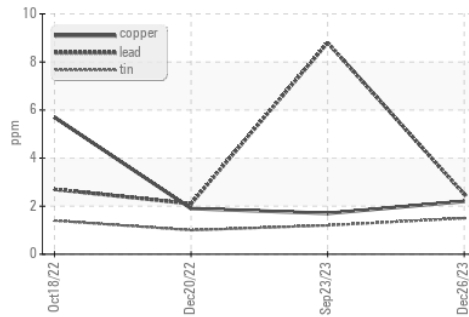
PARAMETER	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.1	13.2

### GRAPHS

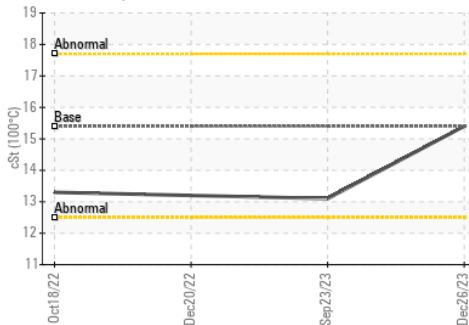
#### Ferrous Alloys



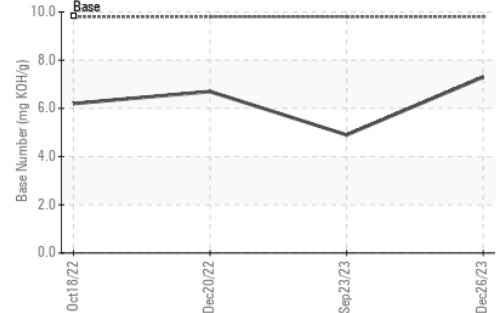
#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0080365 **Received** : 23 Jan 2024  
**Lab Number** : 06068237 **Diagnosed** : 25 Jan 2024  
**Unique Number** : 10844914 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: Glycol )

**GFL Environmental - 932 - Muskego HC**  
 W144 S6400 College Ct.  
 Muskego, WI  
 US 53150  
 Contact: Brian Schlomann  
 brian.schlomann@gflenv.com  
 T: (262)510-4586  
 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)