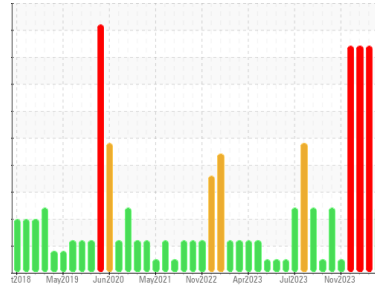




# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id  
**10682**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (40 GAL)**

## 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.

### 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>GFL0098938</b>	GFL0098964	GFL0099010
Sample Date	Client Info	<b>05 Feb 2024</b>	11 Jan 2024	26 Dec 2023
Machine Age	hrs	<b>18697</b>	18544	18386
Oil Age	hrs	<b>18544</b>	17922	17922
Oil Changed	Client Info	<b>N/A</b>	Changed	N/A
Sample Status		<b>ABNORMAL</b>	SEVERE	SEVERE

## 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 >75	<b>6</b>	30	24
Chromium	ppm ASTM D5185m >5	<b>&lt;1</b>	1	<1
Nickel	ppm ASTM D5185m >4	<b>0</b>	0	<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 >15	<b>1</b>	3	2
Lead	ppm ASTM D5185m >25	<b>0</b>	<1	<1
Copper	ppm ASTM D5185m >100	<b>&lt;1</b>	<1	<1
Tin	ppm ASTM D5185m >4	<b>0</b>	<1	<1
Vanadium	ppm ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>2</b>	0	3
Barium	ppm ASTM D5185m 0	<b>11</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>59</b>	82	76
Manganese	ppm ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>792</b>	1058	958
Calcium	ppm ASTM D5185m 1070	<b>1072</b>	1253	1070
Phosphorus	ppm ASTM D5185m 1150	<b>897</b>	987	1098
Zinc	ppm ASTM D5185m 1270	<b>1102</b>	1279	1336
Sulfur	ppm ASTM D5185m 2060	<b>3155</b>	3090	3069

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>6</b>	7	6
Sodium	ppm ASTM D5185m	<b>▲ 113</b>	▲ 323	▲ 300
Potassium	ppm ASTM D5185m >20	<b>▲ 129</b>	▲ 415	▲ 330
Glycol	% *ASTM D2982	<b>NEG</b>	◈ 0.10	◈ 0.10

## INFRA-RED

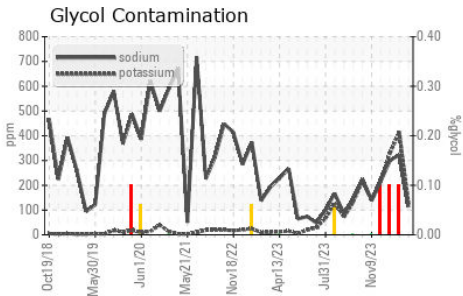
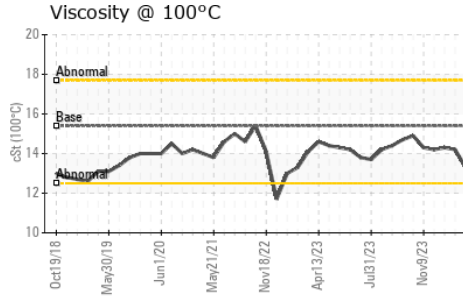
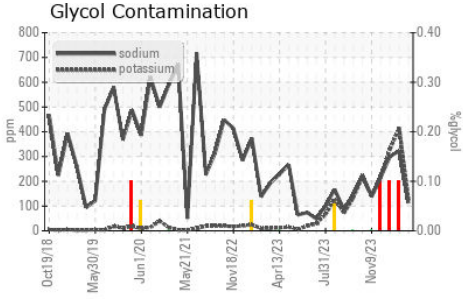
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	<b>0.1</b>	0.4	0.4
Nitration	Abs/cm *ASTM D7624 >20	<b>6.3</b>	12.5	11.8
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>17.5</b>	22.6	22.4

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>13.2</b>	19.7	19.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>9.1</b>	8.8	8.7



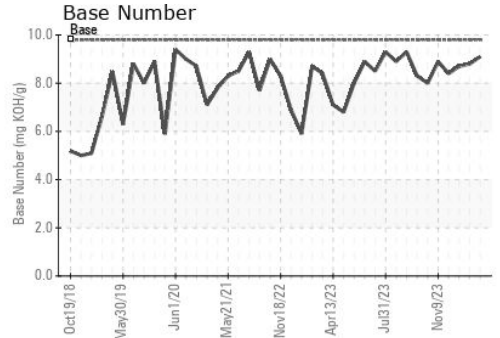
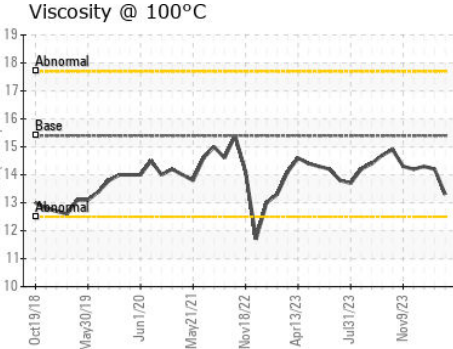
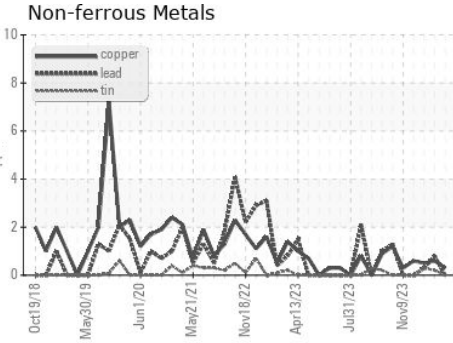
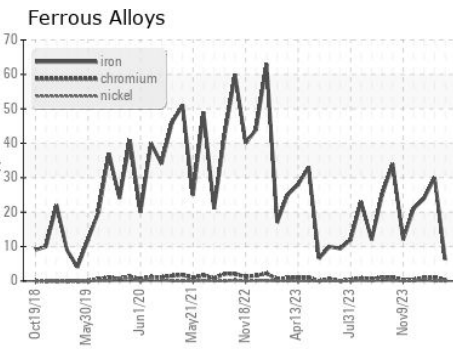
# OIL ANALYSIS REPORT



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	<b>13.3</b>	14.2	14.3

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0098938  
**Lab Number** : 06089901  
**Unique Number** : 10882754  
**Test Package** : FLEET

**Received** : 15 Feb 2024  
**Tested** : 19 Feb 2024  
**Diagnosed** : 19 Feb 2024 - Jonathan Hester

**GFL Environmental - 084 - Clarksville**  
 699 Jack Miller Boulevard  
 Clarksville, TN  
 US 37042

Contact: ROBERT THIBAUT  
 robert.thibault@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)

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