



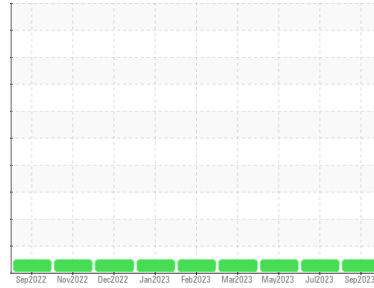
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**425113**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0069110</b>	GFL0068750	GFL0068771
Sample Date	Client Info		<b>27 Sep 2023</b>	05 Jul 2023	23 May 2023
Machine Age	hrs	Client Info	<b>18357</b>	18273	18160
Oil Age	hrs	Client Info	<b>197</b>	113	159
Oil Changed	Client Info		<b>Changed</b>	Not Changd	Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>10</b>	2	5
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m >5	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	2
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m >20	<b>7</b>	0	2
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m >330	<b>2</b>	<1	3
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	0	<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>6</b>	9	15
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>65</b>	65	62
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>842</b>	849	872
Calcium	ppm	ASTM D5185m 1070	<b>1042</b>	1093	1173
Phosphorus	ppm	ASTM D5185m 1150	<b>975</b>	988	996
Zinc	ppm	ASTM D5185m 1270	<b>1160</b>	1138	1227
Sulfur	ppm	ASTM D5185m 2060	<b>3171</b>	2921	3454

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>7</b>	3	6
Sodium	ppm	ASTM D5185m	<b>2</b>	0	4
Potassium	ppm	ASTM D5185m >20	<b>4</b>	3	3

## INFRA-RED

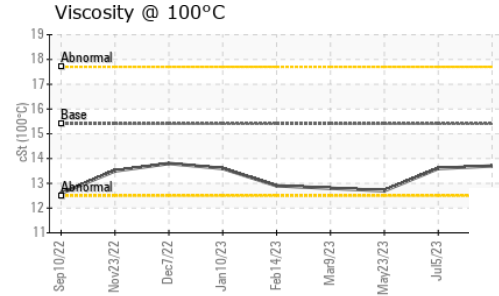
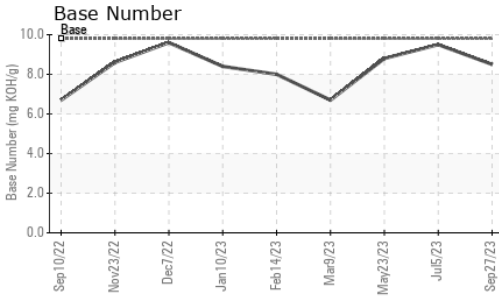
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.8</b>	0.1	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.2</b>	5.9	7.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.5</b>	17.7	17.3

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.6</b>	13.7	13.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.5</b>	9.5	8.8



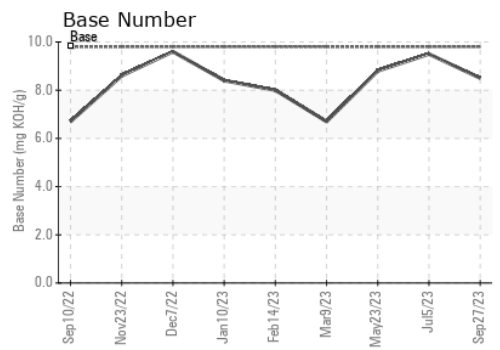
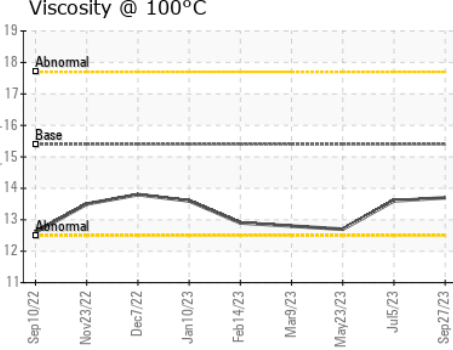
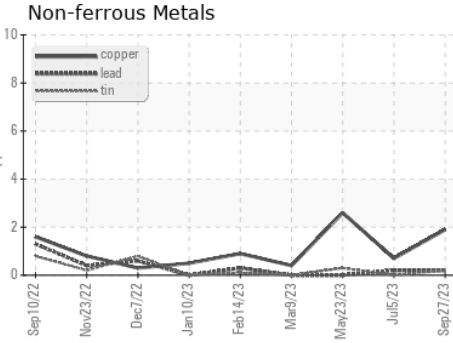
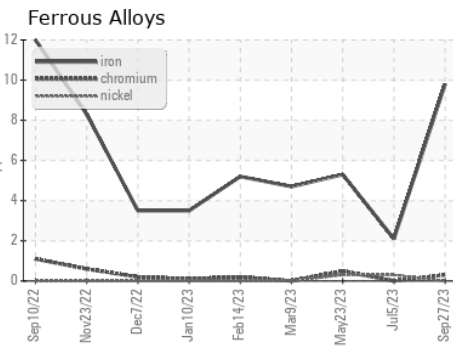
# OIL ANALYSIS REPORT



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	<b>13.7</b>	13.6	12.7

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0069110 **Received** : 29 Sep 2023  
**Lab Number** : **05965075** **Diagnosed** : 02 Oct 2023  
**Unique Number** : 10671626 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 073 - Warner Robins - Transwaste**  
 155 Story Road  
 Warner Robins, GA  
 US 31093  
 Contact: JOSH MALONEY  
 jmaloney@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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