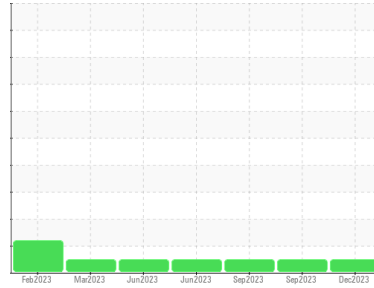




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**429103**

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>GFL0086958</b>	GFL0086915	GFL0086941
Sample Date	Client Info		<b>04 Dec 2023</b>	18 Sep 2023	07 Sep 2023
Machine Age	hrs	Client Info	<b>5450</b>	5247	5182
Oil Age	hrs	Client Info	<b>203</b>	600	538
Oil Changed	Client Info		<b>N/A</b>	Changed	Not Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>11</b>	18	18
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	2	2
Nickel	ppm	ASTM D5185m >4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	9	8
Lead	ppm	ASTM D5185m >40	<b>0</b>	<1	1
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	0	<1
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>3</b>	6	4
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>57</b>	64	61
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>966</b>	1023	995
Calcium	ppm	ASTM D5185m 1070	<b>1052</b>	1176	1167
Phosphorus	ppm	ASTM D5185m 1150	<b>1054</b>	1109	1043
Zinc	ppm	ASTM D5185m 1270	<b>1259</b>	1348	1268
Sulfur	ppm	ASTM D5185m 2060	<b>2987</b>	3916	3684

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>5</b>	5	7
Sodium	ppm	ASTM D5185m	<b>3</b>	4	5
Potassium	ppm	ASTM D5185m >20	<b>5</b>	23	24

## INFRA-RED

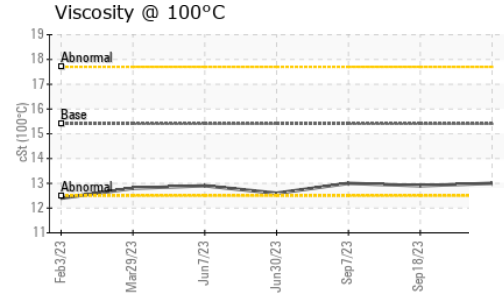
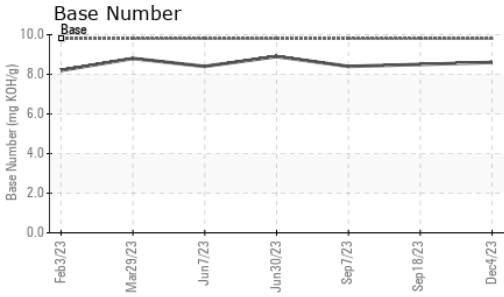
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.5</b>	0.6	0.6
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.5</b>	8.5	7.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.5</b>	19.2	18.7

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.3</b>	14.9	14.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.6</b>	8.5	8.4



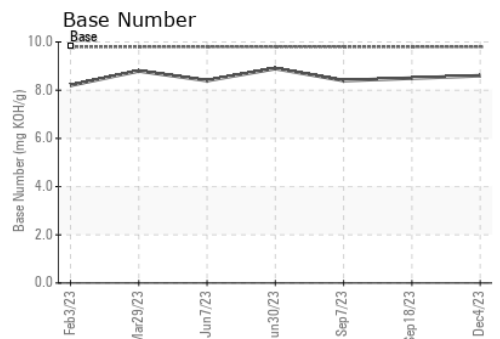
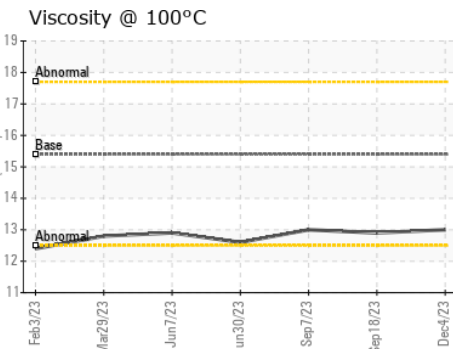
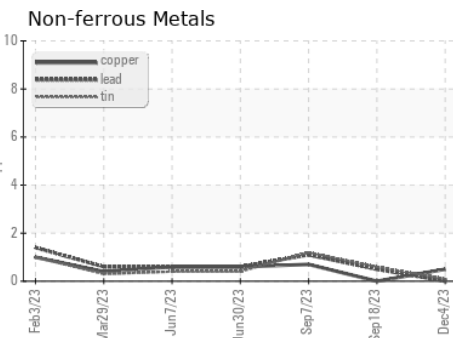
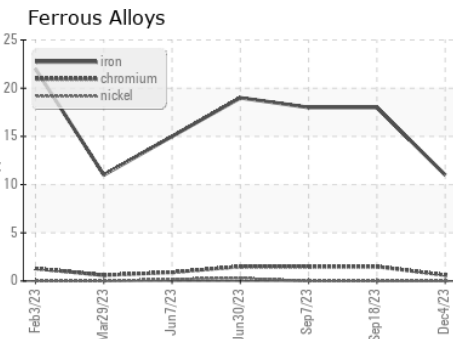
# OIL ANALYSIS REPORT



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>13.0</b>	12.9	13.0

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0086958 **Received** : 07 Dec 2023  
**Lab Number** : **06028512** **Diagnosed** : 09 Dec 2023  
**Unique Number** : 10778303 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 408 - Brown City**  
 4235 M-53  
 BROWN CITY, MI  
 US 48416  
 Contact: WILLIAM DEOLA  
 bdeola@gflenv.com  
 T: (810)238-2836  
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Certificate L2367  
 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)