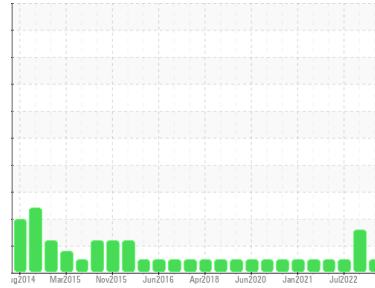




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id

**2564**

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>GFL0072242</b>	GFL0059050	GFL0049620
Sample Date	Client Info		<b>12 Jul 2023</b>	07 Nov 2022	05 Jul 2022
Machine Age	mls	Client Info	<b>216167</b>	216167	21468
Oil Age	mls	Client Info	<b>23200</b>	216167	0
Oil Changed	Client Info		<b>Changed</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	MARGINAL	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 >165	<b>12</b>	80	28
Chromium	ppm	ASTM D5185m >5	<b>&lt;1</b>	3	1
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>&lt;1</b>	3	1
Lead	ppm	ASTM D5185m >150	<b>0</b>	12	7
Copper	ppm	ASTM D5185m >90	<b>&lt;1</b>	2	1
Tin	ppm	ASTM D5185m >5	<b>&lt;1</b>	1	<1
Vanadium	ppm	ASTM D5185m	<b>0</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>6</b>	4	6
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>62</b>	63	62
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>862</b>	970	961
Calcium	ppm	ASTM D5185m 1070	<b>1067</b>	1227	1120
Phosphorus	ppm	ASTM D5185m 1150	<b>1017</b>	1017	1028
Zinc	ppm	ASTM D5185m 1270	<b>1148</b>	1302	1244
Sulfur	ppm	ASTM D5185m 2060	<b>2874</b>	3235	3454

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >35	<b>7</b>	14	7
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	7	5
Potassium	ppm	ASTM D5185m >20	<b>3</b>	6	0

## INFRA-RED

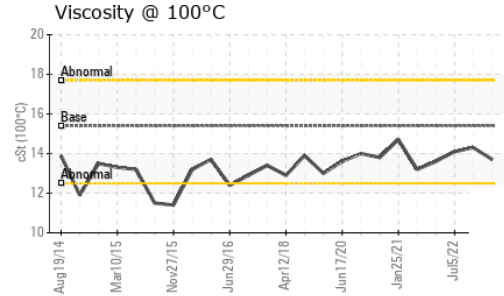
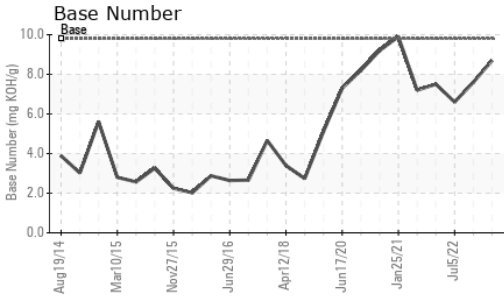
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >7.5	<b>0.8</b>	2.2	1.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.2</b>	17	14.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.9</b>	31.9	27.1

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.6</b>	26.3	22.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.7</b>	7.6	6.6



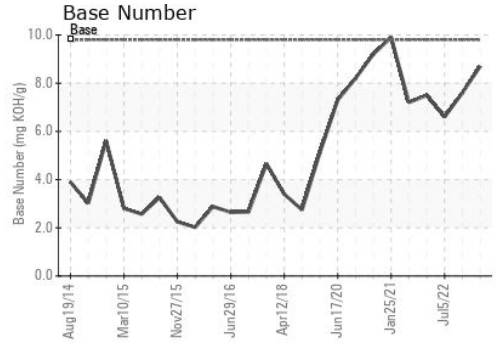
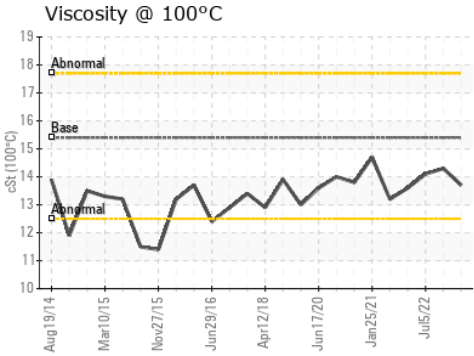
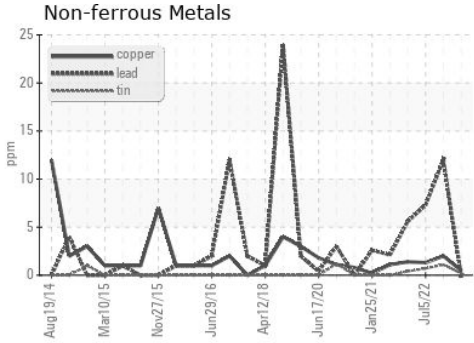
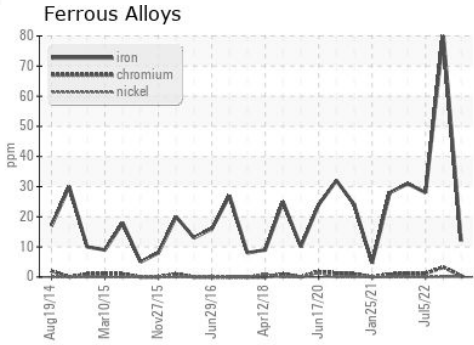
# OIL ANALYSIS REPORT



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	13.7	14.3	14.1

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0072242 **Received** : 17 Jul 2023  
**Lab Number** : 05899697 **Diagnosed** : 18 Jul 2023  
**Unique Number** : 10561053 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 004 - Newport - Central Coast**  
 427 Roberts Road  
 Newport, NC  
 US 28570  
 Contact: Marquis Williams  
 marquis.williams@gflenv.com  
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 F: (252)223-6010

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)