



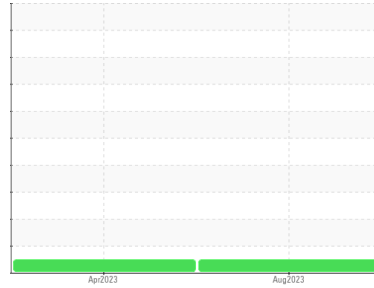
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**822029**  
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>GFL0066952</b>	GFL0067022	---
Sample Date	Client Info	<b>15 Aug 2023</b>	07 Apr 2023	---
Machine Age	hrs	Client Info	<b>16314</b>	16016
Oil Age	hrs	Client Info	<b>0</b>	0
Oil Changed	Client Info	<b>Changed</b>	Changed	---
Sample Status		<b>NORMAL</b>	NORMAL	---

## CONTAMINATION

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

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>120	<b>17</b>	13
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0
Aluminum	ppm	ASTM D5185m	>20	<b>11</b>	4
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0
Copper	ppm	ASTM D5185m	>330	<b>5</b>	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	0	<b>9</b>	45
Barium	ppm	ASTM D5185m	0	<b>0</b>	0
Molybdenum	ppm	ASTM D5185m	60	<b>61</b>	67
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1
Magnesium	ppm	ASTM D5185m	1010	<b>939</b>	820
Calcium	ppm	ASTM D5185m	1070	<b>1135</b>	1091
Phosphorus	ppm	ASTM D5185m	1150	<b>1020</b>	895
Zinc	ppm	ASTM D5185m	1270	<b>1243</b>	1130
Sulfur	ppm	ASTM D5185m	2060	<b>3689</b>	3067

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	4
Sodium	ppm	ASTM D5185m		<b>8</b>	4
Potassium	ppm	ASTM D5185m	>20	<b>9</b>	0

## INFRA-RED

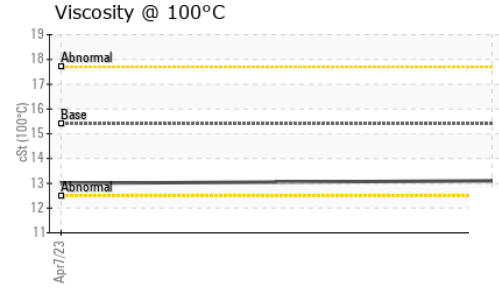
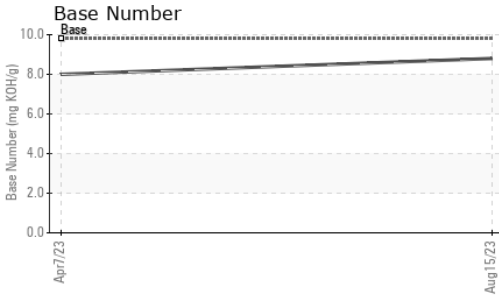
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>4	<b>0.3</b>	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.8</b>	7.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.6</b>	17.3

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.0</b>	14.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.8</b>	8.0



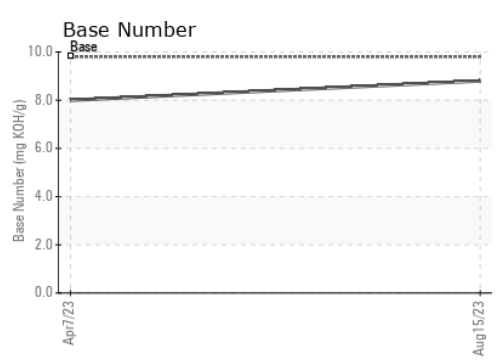
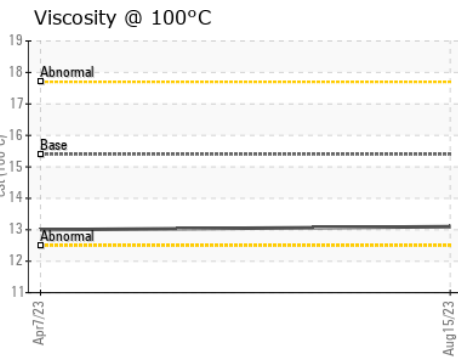
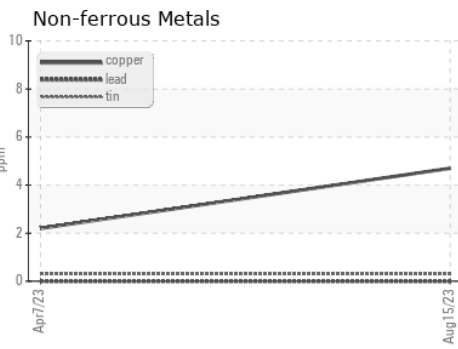
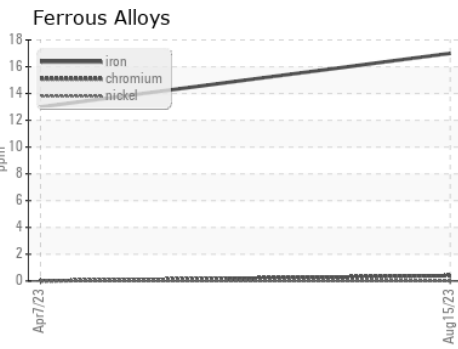
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.1</b>	13.0

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0066952 **Received** : 29 Aug 2023  
**Lab Number** : **05937028** **Diagnosed** : 29 Aug 2023  
**Unique Number** : 10622299 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 916 - Greenbay HC**  
 1799 County Trunk PP  
 DePere, WI  
 US 54115  
 Contact: Travis Runge  
 travis.runge@gflenv.com  
 T: (920)351-2341  
 F:

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)