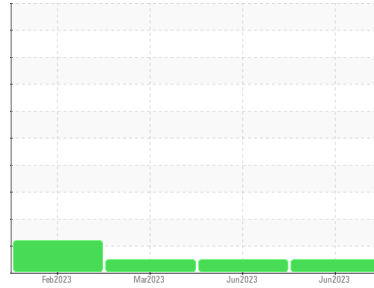




# OIL ANALYSIS REPORT

## 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	history 1	history 2
Sample Number	Client Info	<b>GFL0083990</b>	GFL0069285	GFL0069272
Sample Date	Client Info	<b>30 Jun 2023</b>	07 Jun 2023	29 Mar 2023
Machine Age	hrs	<b>4644</b>	4487	4032
Oil Age	hrs	<b>600</b>	142	600
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Not Changd
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

### CONTAMINATION

method	limit/base	current	history 1	history 2
Fuel	WC Method >5	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method	<b>NEG</b>	NEG	NEG

### WEAR METALS

method	limit/base	current	history 1	history 2
Iron	ppm ASTM D5185m >100	<b>19</b>	15	11
Chromium	ppm ASTM D5185m >20	<b>2</b>	<1	<1
Nickel	ppm ASTM D5185m >4	<b>&lt;1</b>	<1	0
Titanium	ppm ASTM D5185m	<b>0</b>	0	0
Silver	ppm ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>3</b>	2	5
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	<1	<1
Copper	ppm ASTM D5185m >330	<b>&lt;1</b>	<1	<1
Tin	ppm ASTM D5185m >15	<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	history 1	history 2
Boron	ppm ASTM D5185m 0	<b>1</b>	3	6
Barium	ppm ASTM D5185m 0	<b>0</b>	2	<1
Molybdenum	ppm ASTM D5185m 60	<b>60</b>	64	63
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>908</b>	890	893
Calcium	ppm ASTM D5185m 1070	<b>1059</b>	1087	1113
Phosphorus	ppm ASTM D5185m 1150	<b>999</b>	1022	1019
Zinc	ppm ASTM D5185m 1270	<b>1193</b>	1223	1217
Sulfur	ppm ASTM D5185m 2060	<b>2933</b>	3380	3337

### CONTAMINANTS

method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185m >25	<b>4</b>	4	4
Sodium	ppm ASTM D5185m	<b>4</b>	2	0
Potassium	ppm ASTM D5185m >20	<b>8</b>	6	9

### INFRA-RED

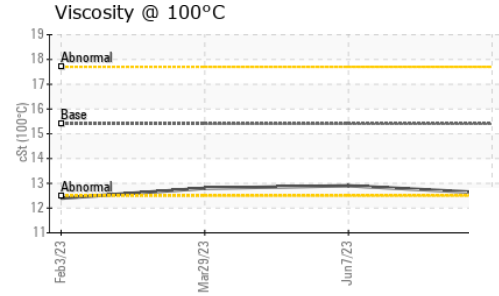
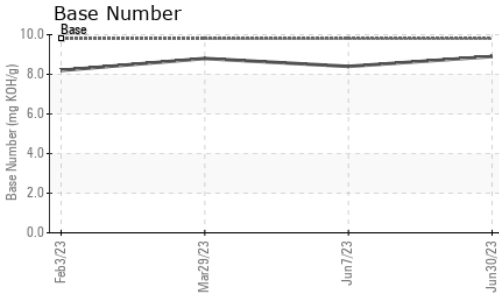
method	limit/base	current	history 1	history 2
Soot %	% *ASTM D7844 >3	<b>0.6</b>	0.4	0.4
Nitration	Abs/cm *ASTM D7624 >20	<b>8.7</b>	7.3	7.2
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>19.5</b>	19.3	18.4

### FLUID DEGRADATION

method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>15.2</b>	15.7	13.9
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.9</b>	8.4	8.8



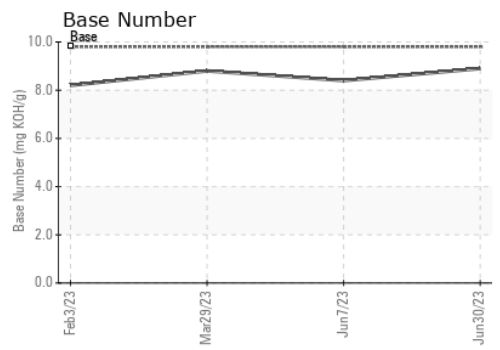
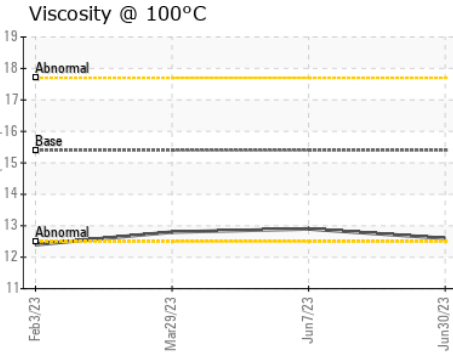
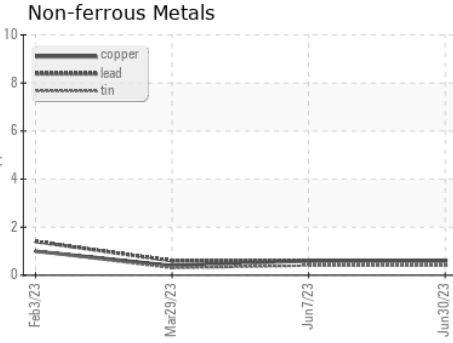
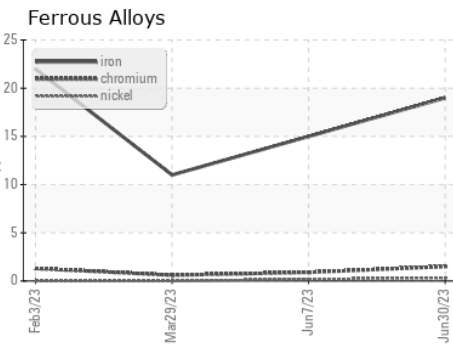
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
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	history 1	history 2	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.6</b>	12.9	12.8

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0083990 **Received** : 07 Jul 2023  
**Lab Number** : **05892809** **Diagnosed** : 10 Jul 2023  
**Unique Number** : 10548619 **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  
 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)