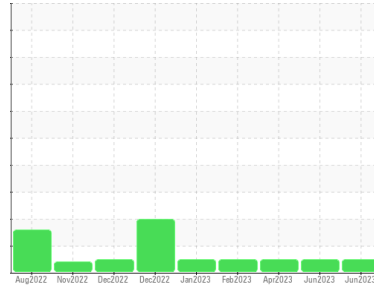




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**412044**  
 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>GFL0045431</b>	GFL0045407	GFL0064601
Sample Date	Client Info		<b>22 Jun 2023</b>	02 Jun 2023	11 Apr 2023
Machine Age	hrs	Client Info	<b>0</b>	2663	0
Oil Age	hrs	Client Info	<b>0</b>	1372	0
Oil Changed	Client Info		<b>N/A</b>	Not Changd	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history 1	history 2
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	history 1	history 2
Iron	ppm	ASTM D5185m >120	<b>12</b>	9	11
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m >5	<b>2</b>	2	1
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m >20	<b>1</b>	2	4
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	0	1
Copper	ppm	ASTM D5185m >330	<b>4</b>	2	6
Tin	ppm	ASTM D5185m >15	<b>1</b>	2	2
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	1
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1

## ADDITIVES

	method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m 0	<b>12</b>	16	120
Barium	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>66</b>	65	83
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	2
Magnesium	ppm	ASTM D5185m 1010	<b>936</b>	958	634
Calcium	ppm	ASTM D5185m 1070	<b>1154</b>	1153	1136
Phosphorus	ppm	ASTM D5185m 1150	<b>977</b>	1053	741
Zinc	ppm	ASTM D5185m 1270	<b>1262</b>	1363	976
Sulfur	ppm	ASTM D5185m 2060	<b>3224</b>	3639	2615

## CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m >25	<b>6</b>	5	6
Sodium	ppm	ASTM D5185m	<b>3</b>	2	5
Potassium	ppm	ASTM D5185m >20	<b>8</b>	6	5

## INFRA-RED

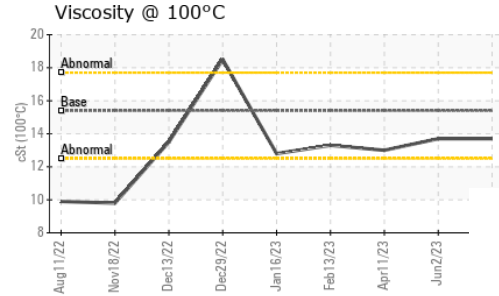
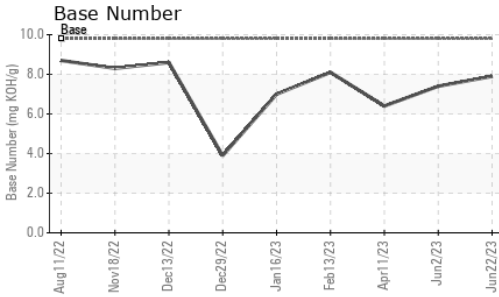
	method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844 >4	<b>0.4</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.3</b>	7.3	7.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.6</b>	20.3	20.8

## FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.4</b>	16.6	15.7
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.9</b>	7.4	6.4



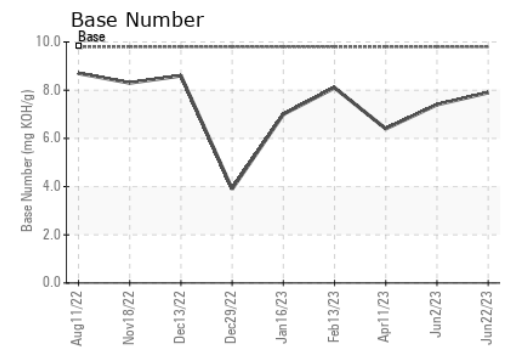
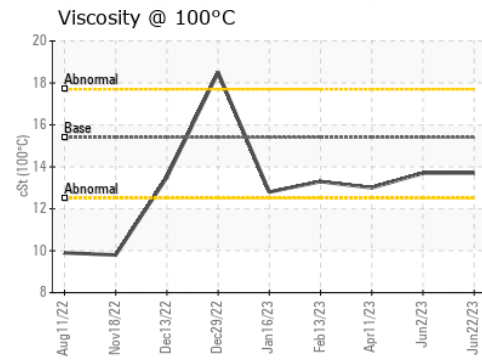
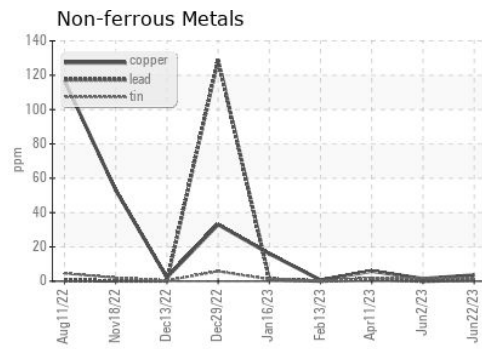
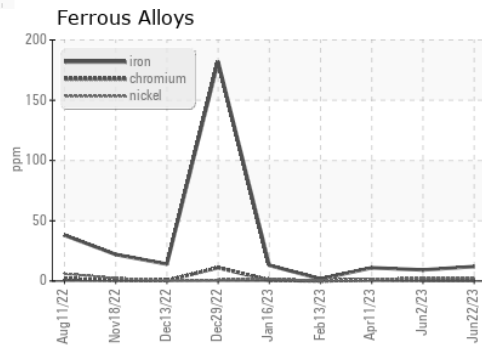
# OIL ANALYSIS REPORT



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>13.7</b>	13.7	13.0

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0045431 **Received** : 28 Jun 2023  
**Lab Number** : **05885387** **Diagnosed** : 30 Jun 2023  
**Unique Number** : 10535870 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL environmental - 867 - Trafford (Blount Hauling)**  
 1130 County Line Rd  
 Trafford, AL  
 US 35172  
 Contact: Jonathan Williams  
 jonathan.williams@gflenv.com  
 T:  
 F:

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)