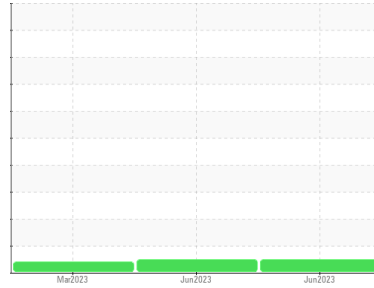




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**413075**

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>GFL0083421</b>	GFL0083501	GFL0065211
Sample Date	Client Info		<b>06 Jun 2023</b>	02 Jun 2023	16 Mar 2023
Machine Age	hrs	Client Info	<b>1185</b>	2204	594
Oil Age	hrs	Client Info	<b>1185</b>	2204	594
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	ATTENTION

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	0.4
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >110	<b>4</b>	21	44
Chromium	ppm	ASTM D5185m >4	<b>0</b>	<1	1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >25	<b>9</b>	64	54
Lead	ppm	ASTM D5185m >45	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m >85	<b>4</b>	16	21
Tin	ppm	ASTM D5185m >4	<b>0</b>	<1	1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>&lt;1</b>	1	28
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>59</b>	57	24
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	3
Magnesium	ppm	ASTM D5185m 1010	<b>1024</b>	1041	936
Calcium	ppm	ASTM D5185m 1070	<b>1094</b>	1177	1601
Phosphorus	ppm	ASTM D5185m 1150	<b>1049</b>	1063	902
Zinc	ppm	ASTM D5185m 1270	<b>1324</b>	1335	1145
Sulfur	ppm	ASTM D5185m 2060	<b>3925</b>	3819	3859

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	<b>3</b>	4	11
Sodium	ppm	ASTM D5185m	<b>1</b>	2	4
Potassium	ppm	ASTM D5185m >20	<b>24</b>	123	129

## INFRA-RED

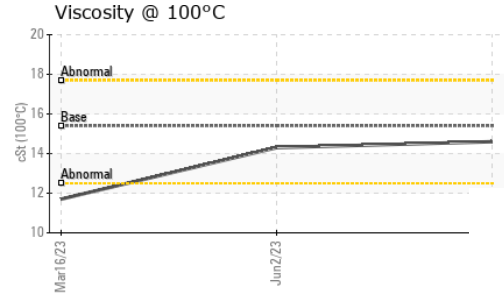
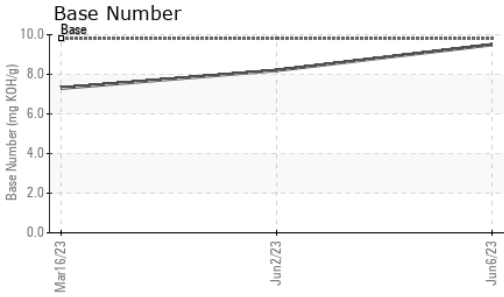
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.1</b>	0.4	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>5.1</b>	8.9	10.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.1</b>	20.3	21.9

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.5</b>	16.1	16.5
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>9.5</b>	8.2	7.3



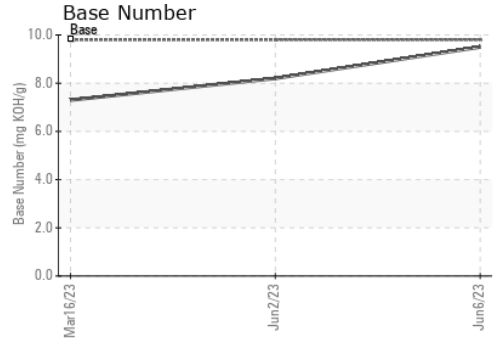
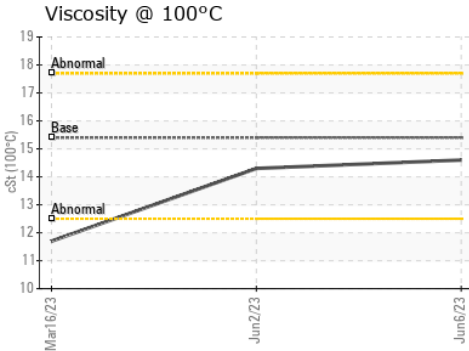
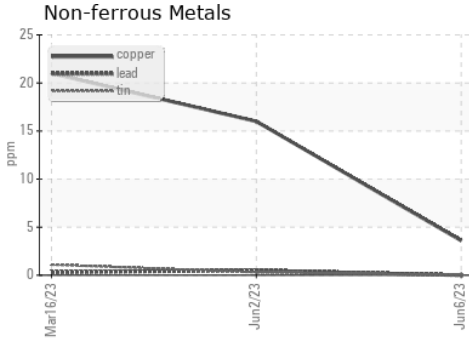
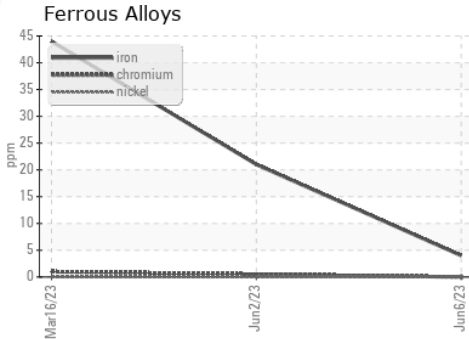
# OIL ANALYSIS REPORT



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>14.6</b>	14.3 ▲ 11.7

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0083421 **Received** : 14 Jun 2023  
**Lab Number** : **05872872** **Diagnosed** : 14 Jun 2023  
**Unique Number** : 10512656 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 865 - East Mount Hauling**  
 7213 East Mount Houston Road  
 Houston, TX  
 US 77050  
 Contact: Saul Castillo  
 saul.castillo@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)