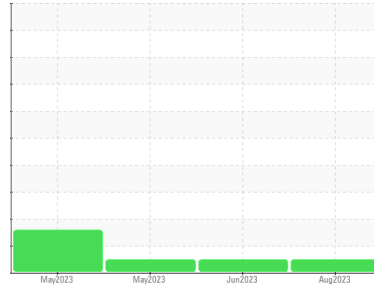




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**427182-SW4722**

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>GFL0089457</b>	GFL0085457	GFL0075337
Sample Date	Client Info		<b>23 Aug 2023</b>	10 Jun 2023	20 May 2023
Machine Age	mls	Client Info	<b>329041</b>	320031	317984
Oil Age	mls	Client Info	<b>329041</b>	317984	0
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
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	history1	history2
Iron	ppm	ASTM D5185m >100	<b>7</b>	2	2
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	<1	2
Lead	ppm	ASTM D5185m >40	<b>1</b>	<1	2
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>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	0	2
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>46</b>	41	36
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>12</b>	19	48
Calcium	ppm	ASTM D5185m 1070	<b>2680</b>	2400	2336
Phosphorus	ppm	ASTM D5185m 1150	<b>1180</b>	1108	973
Zinc	ppm	ASTM D5185m 1270	<b>1405</b>	1311	1233
Sulfur	ppm	ASTM D5185m 2060	<b>4139</b>	4106	3610

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>15</b>	10	9
Sodium	ppm	ASTM D5185m	<b>2</b>	2	<1
Potassium	ppm	ASTM D5185m >20	<b>1</b>	3	4

## INFRA-RED

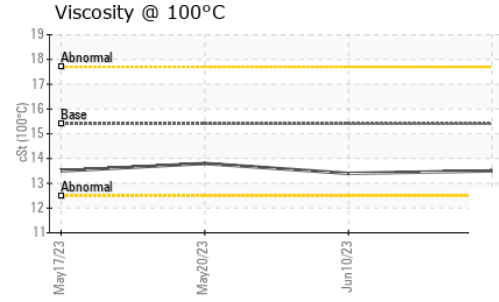
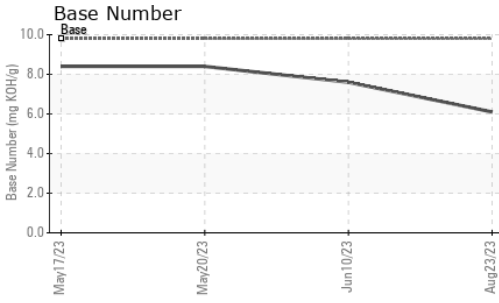
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.1	0
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.8</b>	5.3	4.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.1</b>	15.8	13.7

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>12.6</b>	10.3	6.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>6.1</b>	7.6	8.4



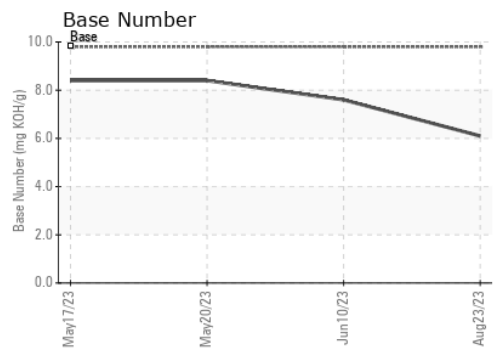
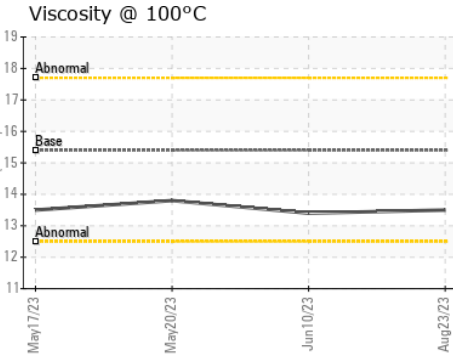
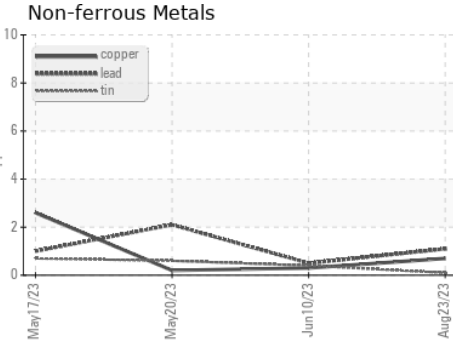
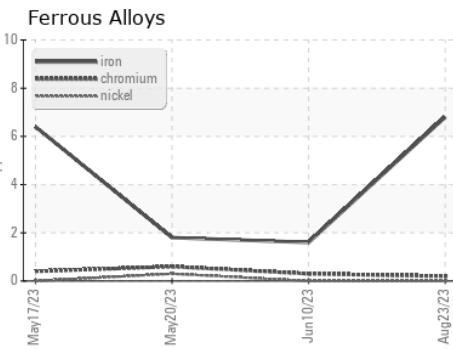
# OIL ANALYSIS REPORT



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>13.5</b>	13.4	13.8

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0089457 **Received** : 29 Aug 2023  
**Lab Number** : **05937020** **Diagnosed** : 30 Aug 2023  
**Unique Number** : 10622291 **Diagnostician** : Sean Felton  
**Test Package** : FLEET

**GFL Environmental - 983 - Sugar Land Hauling**  
 16011 West Belfort Street  
 Sugar Land, TX  
 US 77498  
 Contact: Gino Griego  
 ggriego@gflenv.com  
 T:  
 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)