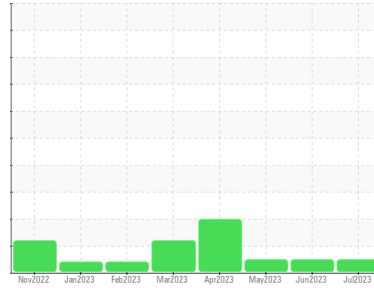




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**223032-2**

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>GFL0087844</b>	GFL0081144	GFL0081150
Sample Date	Client Info	<b>06 Jul 2023</b>	09 Jun 2023	22 May 2023
Machine Age	hrs	<b>18929</b>	600	223857
Oil Age	hrs	<b>200</b>	600	0
Oil Changed	Client Info	<b>Not Chngd</b>	Not Chngd	Not Chngd
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>73</b>	45	29
Chromium	ppm ASTM D5185m >20	<b>4</b>	2	2
Nickel	ppm ASTM D5185m >4	<b>2</b>	<1	1
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	0	<1
Silver	ppm ASTM D5185m >3	<b>3</b>	2	<1
Aluminum	ppm ASTM D5185m >20	<b>17</b>	8	8
Lead	ppm ASTM D5185m >40	<b>0</b>	<1	1
Copper	ppm ASTM D5185m >330	<b>6</b>	3	2
Tin	ppm ASTM D5185m >15	<b>0</b>	0	<1
Vanadium	ppm ASTM D5185m	<b>0</b>	<1	<1
Cadmium	ppm ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	3
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>74</b>	69	62
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>920</b>	1041	1024
Calcium	ppm ASTM D5185m 1070	<b>1082</b>	1131	1103
Phosphorus	ppm ASTM D5185m 1150	<b>1042</b>	1085	1005
Zinc	ppm ASTM D5185m 1270	<b>1244</b>	1350	1306
Sulfur	ppm ASTM D5185m 2060	<b>3143</b>	3707	3566

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>23</b>	16	13
Sodium	ppm ASTM D5185m	<b>49</b>	33	22
Potassium	ppm ASTM D5185m >20	<b>5</b>	4	4

## INFRA-RED

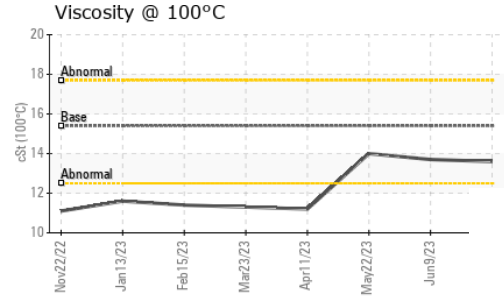
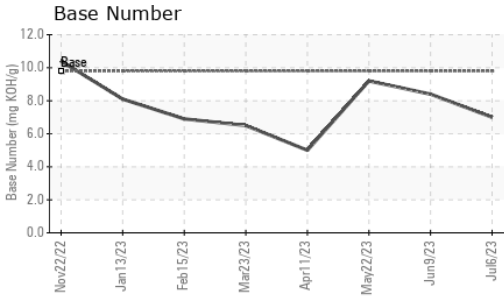
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.5</b>	0.3	0.2
Nitration	Abs/cm *ASTM D7624 >20	<b>10.2</b>	9.2	7.3
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>20.8</b>	19.2	18.6

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>19.1</b>	16.5	15.0
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>7.0</b>	8.4	9.2



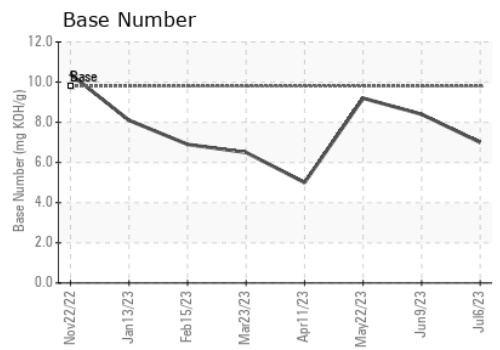
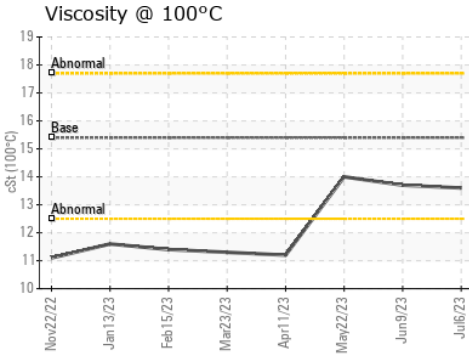
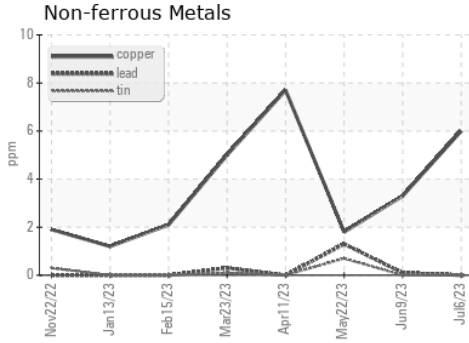
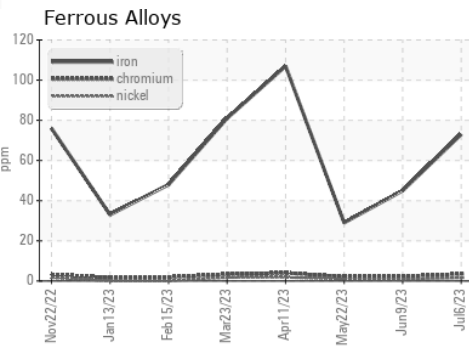
# OIL ANALYSIS REPORT



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>13.6</b>	13.7	14.0

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0087844 **Received** : 13 Jul 2023  
**Lab Number** : **05897224** **Diagnosed** : 14 Jul 2023  
**Unique Number** : 10553034 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 166 - Phenix City**  
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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)