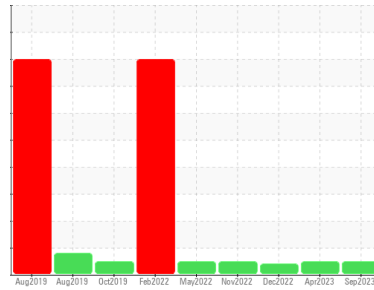




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**429056-402461**

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>GFL0093229</b>	GFL0074166	GFL0065185
Sample Date	Client Info	<b>07 Sep 2023</b>	14 Apr 2023	09 Dec 2022
Machine Age	hrs	<b>11479</b>	10304	216711
Oil Age	hrs	<b>21826</b>	10304	2283
Oil Changed	Client Info	<b>Changed</b>	Changed	Not Chngd
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	1.4
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >110	<b>16</b>	13	12
Chromium	ppm ASTM D5185m >4	<b>1</b>	<1	<1
Nickel	ppm ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm ASTM D5185m	<b>0</b>	0	0
Silver	ppm ASTM D5185m >2	<b>0</b>	0	1
Aluminum	ppm ASTM D5185m >25	<b>3</b>	2	2
Lead	ppm ASTM D5185m >45	<b>3</b>	2	1
Copper	ppm ASTM D5185m >85	<b>&lt;1</b>	<1	1
Tin	ppm ASTM D5185m >4	<b>&lt;1</b>	0	<1
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>0</b>	0	3
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>62</b>	64	62
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>1039</b>	1040	908
Calcium	ppm ASTM D5185m 1070	<b>1163</b>	1146	1095
Phosphorus	ppm ASTM D5185m 1150	<b>1043</b>	1053	1031
Zinc	ppm ASTM D5185m 1270	<b>1319</b>	1364	1215
Sulfur	ppm ASTM D5185m 2060	<b>3641</b>	3310	3774

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >30	<b>7</b>	5	3
Sodium	ppm ASTM D5185m	<b>4</b>	4	2
Potassium	ppm ASTM D5185m >20	<b>2</b>	2	2

## INFRA-RED

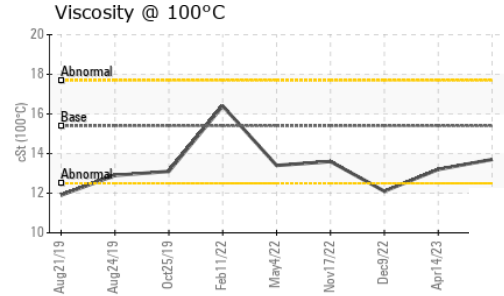
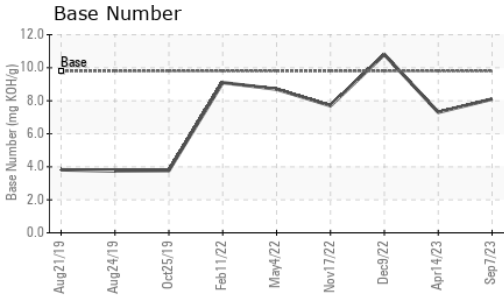
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.7</b>	0.5	0.3
Nitration	Abs/cm *ASTM D7624 >20	<b>7.8</b>	10.0	8.2
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>18.9</b>	20.8	18.9

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>13.5</b>	17.3	15.9
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.1</b>	7.3	10.8



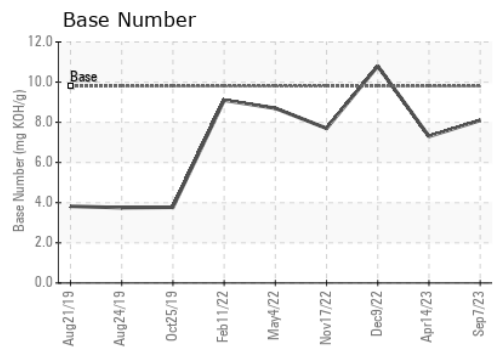
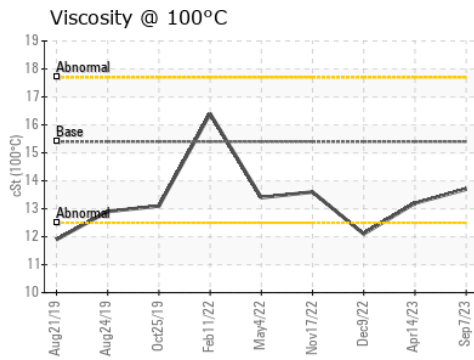
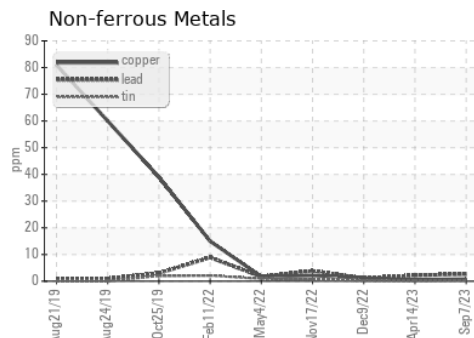
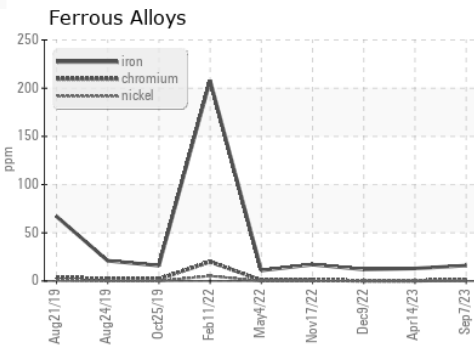
# OIL ANALYSIS REPORT



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	13.7	13.2 ▲ 12.1

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0093229 **Received** : 14 Sep 2023  
**Lab Number** : 05951021 **Diagnosed** : 16 Sep 2023  
**Unique Number** : 10646980 **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:

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)