



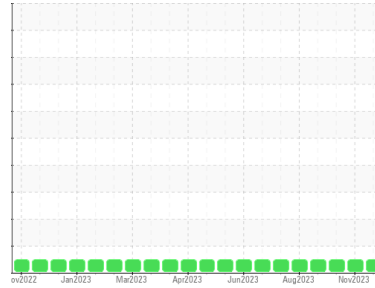
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**ALEXANDER CITY**  
 Machine Id  
**411000-411000**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- LTR)**



## 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>GFL0079752</b>	GFL0092381	GFL0089915
Sample Date	Client Info	<b>13 Dec 2023</b>	27 Nov 2023	19 Oct 2023
Machine Age	hrs Client Info	<b>8183</b>	8052	7881
Oil Age	hrs Client Info	<b>2347</b>	2216	2045
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method >0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >120	<b>6</b>	2	3
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	0	<1
Nickel	ppm ASTM D5185m >5	<b>2</b>	0	<1
Titanium	ppm ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>3</b>	1	2
Lead	ppm ASTM D5185m >40	<b>1</b>	0	0
Copper	ppm ASTM D5185m >330	<b>2</b>	<1	<1
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	0	0
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>6</b>	18	16
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>62</b>	65	75
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	0	0
Magnesium	ppm ASTM D5185m 1010	<b>908</b>	1045	1052
Calcium	ppm ASTM D5185m 1070	<b>1053</b>	1234	1271
Phosphorus	ppm ASTM D5185m 1150	<b>876</b>	1183	1184
Zinc	ppm ASTM D5185m 1270	<b>1187</b>	1488	1367
Sulfur	ppm ASTM D5185m 2060	<b>2969</b>	3740	3823

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>11</b>	4	7
Sodium	ppm ASTM D5185m	<b>2</b>	<1	3
Potassium	ppm ASTM D5185m >20	<b>1</b>	2	1

## INFRA-RED

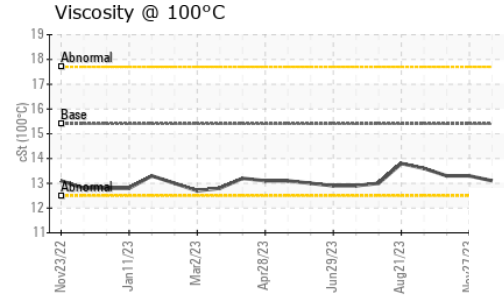
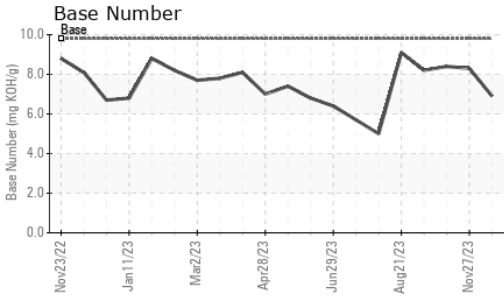
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	<b>0.4</b>	0.1	0.2
Nitration	Abs/cm *ASTM D7624 >20	<b>9.3</b>	5.4	6.6
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>18.7</b>	17.4	17.7

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>15.5</b>	13.1	13.9
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>6.9</b>	8.3	8.4



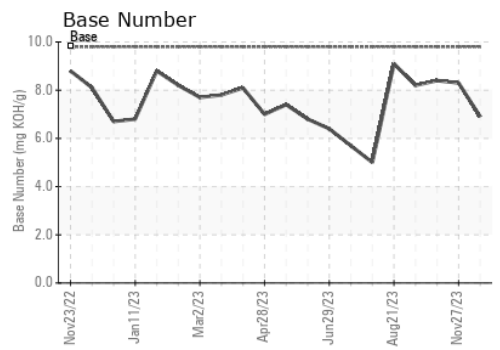
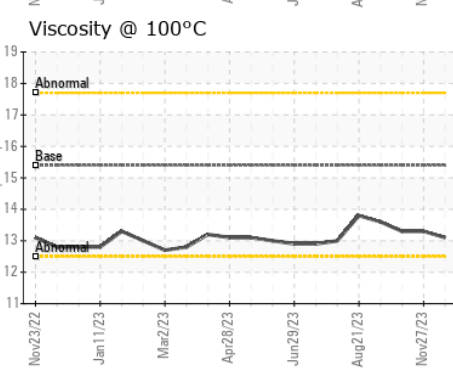
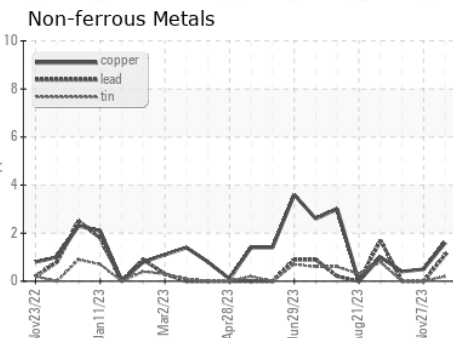
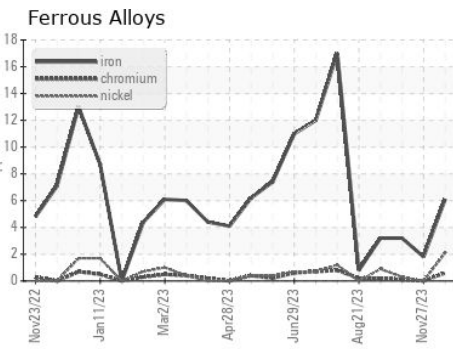
# OIL ANALYSIS REPORT



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>13.1</b>	13.3	13.3

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0079752 **Received** : 19 Dec 2023  
**Lab Number** : **06039992** **Diagnosed** : 20 Dec 2023  
**Unique Number** : 10795221 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

GFL Environmental - 172 - Montgomery-Alexander City-Tallahassee  
 Multiple Sites  
 Montgomery, AL  
 US 36108  
 Contact: RICHARD HATFIELD  
 rhatfield@gflenv.com  
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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)