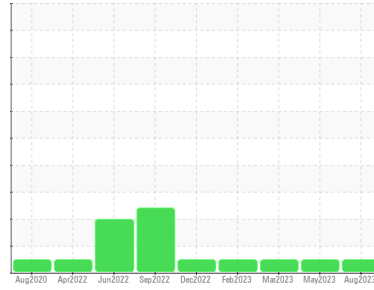




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**828031-1041**

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>GFL0089521</b>	GFL0067882	GFL0067840
Sample Date	Client Info	<b>03 Aug 2023</b>	30 May 2023	14 Mar 2023
Machine Age	hrs	<b>13234</b>	76835	76835
Oil Age	hrs	<b>511</b>	76835	76835
Oil Changed	Client Info	<b>Changed</b>	N/A	N/A
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 >110	<b>16</b>	7	10
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>&lt;1</b>	0	<1
Silver	ppm ASTM D5185m >2	<b>&lt;1</b>	0	0
Aluminum	ppm ASTM D5185m >25	<b>&lt;1</b>	2	2
Lead	ppm ASTM D5185m >45	<b>&lt;1</b>	0	0
Copper	ppm ASTM D5185m >85	<b>7</b>	4	2
Tin	ppm ASTM D5185m >4	<b>&lt;1</b>	0	<1
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	0	<1
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>4</b>	8	8
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>62</b>	58	60
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	1
Magnesium	ppm ASTM D5185m 1010	<b>1016</b>	979	941
Calcium	ppm ASTM D5185m 1070	<b>1122</b>	1072	1123
Phosphorus	ppm ASTM D5185m 1150	<b>1024</b>	1041	1007
Zinc	ppm ASTM D5185m 1270	<b>1281</b>	1312	1208
Sulfur	ppm ASTM D5185m 2060	<b>3349</b>	3786	3186

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >30	<b>8</b>	8	10
Sodium	ppm ASTM D5185m	<b>6</b>	2	4
Potassium	ppm ASTM D5185m >20	<b>3</b>	2	<1

## INFRA-RED

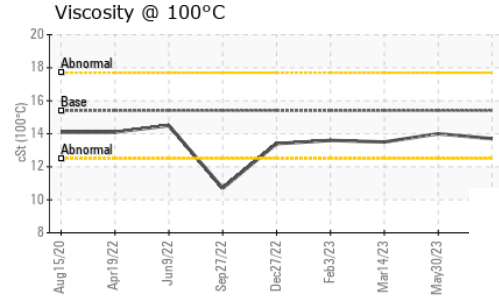
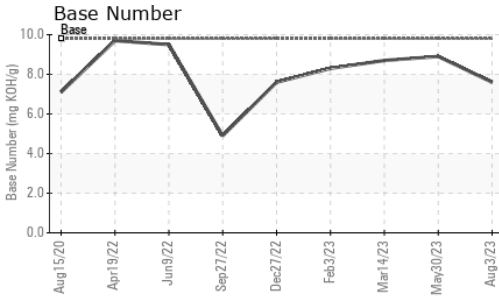
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.6</b>	0.2	0.3
Nitration	Abs/cm *ASTM D7624 >20	<b>8.9</b>	6.1	7.0
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>21.2</b>	18.7	18.8

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>16.3</b>	14.1	14.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>7.6</b>	8.9	8.7



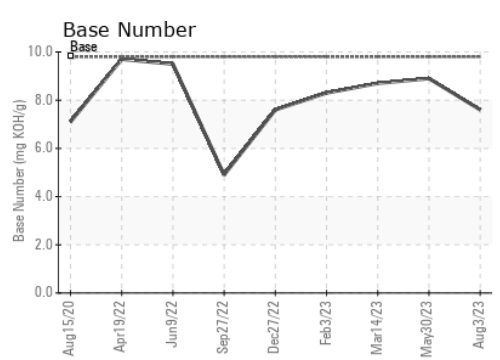
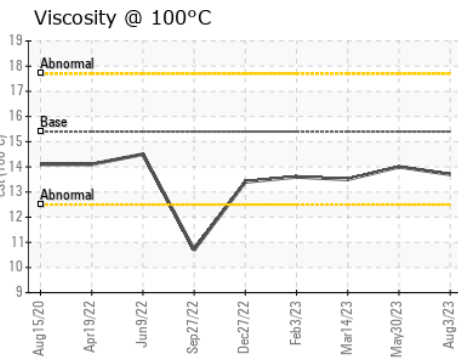
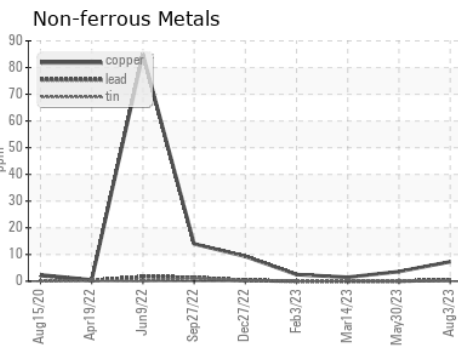
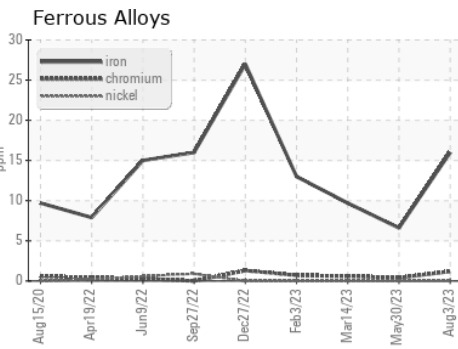
# OIL ANALYSIS REPORT



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>13.7</b>	14.0	13.5

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0089521 **Received** : 07 Aug 2023  
**Lab Number** : **05918108** **Diagnosed** : 08 Aug 2023  
**Unique Number** : 10590022 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 654S - Midlothian**  
 12230 Deergrove Road  
 Midlothian, VA  
 US 23112  
 Contact: Corbin Umphlet  
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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)