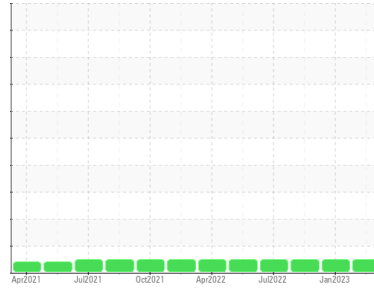




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**811004**  
 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>GFL0058123</b>	GFL0058021	GFL0057985
Sample Date	Client Info	<b>16 Nov 2023</b>	16 Jan 2023	02 Nov 2022
Machine Age	hrs	<b>4413</b>	4189	3778
Oil Age	hrs	<b>224</b>	270	577
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 >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>25</b>	8	14
Chromium	ppm ASTM D5185m >20	<b>1</b>	<1	<1
Nickel	ppm ASTM D5185m >5	<b>3</b>	1	4
Titanium	ppm ASTM D5185m >2	<b>&lt;1</b>	0	0
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>5</b>	<1	<1
Lead	ppm ASTM D5185m >40	<b>0</b>	<1	0
Copper	ppm ASTM D5185m >330	<b>14</b>	2	5
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	<1	<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>5</b>	5	4
Barium	ppm ASTM D5185m 0	<b>0</b>	2	0
Molybdenum	ppm ASTM D5185m 60	<b>57</b>	62	62
Manganese	ppm ASTM D5185m 0	<b>1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>838</b>	880	968
Calcium	ppm ASTM D5185m 1070	<b>1047</b>	1114	1114
Phosphorus	ppm ASTM D5185m 1150	<b>876</b>	928	967
Zinc	ppm ASTM D5185m 1270	<b>1129</b>	1153	1241
Sulfur	ppm ASTM D5185m 2060	<b>2318</b>	2758	3416

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>4</b>	4	5
Sodium	ppm ASTM D5185m	<b>8</b>	4	4
Potassium	ppm ASTM D5185m >20	<b>3</b>	2	2

## INFRA-RED

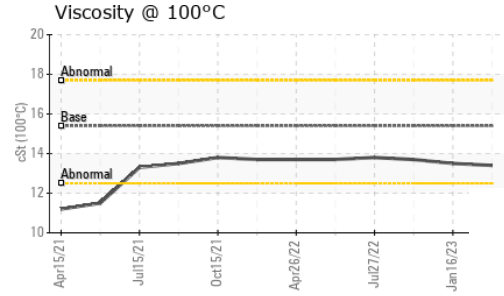
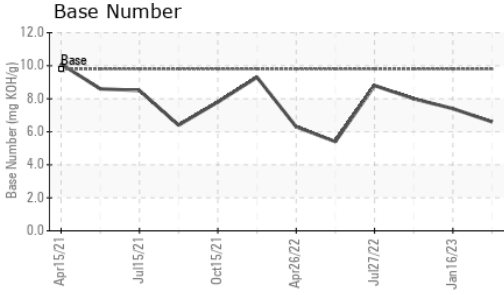
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	<b>0.5</b>	0.4	0.7
Nitration	Abs/cm *ASTM D7624 >20	<b>9.3</b>	7.7	9.2
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>20.4</b>	19.0	21.9

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>15.3</b>	14.6	17.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>6.6</b>	7.4	8



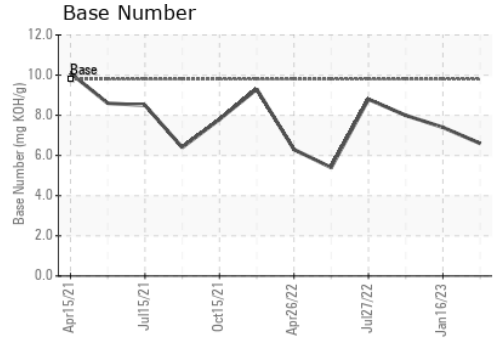
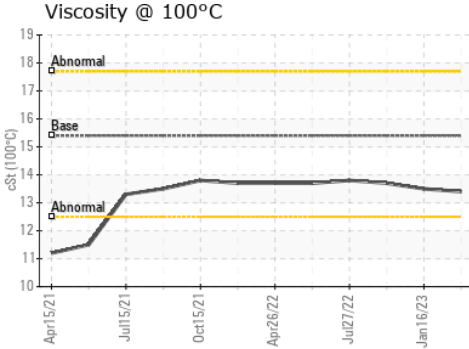
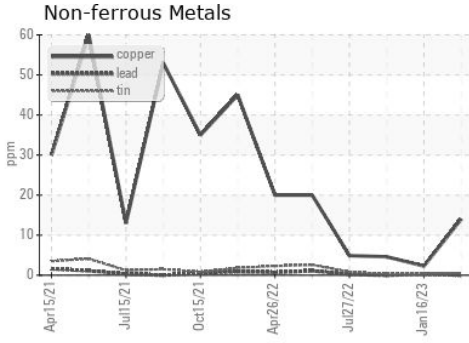
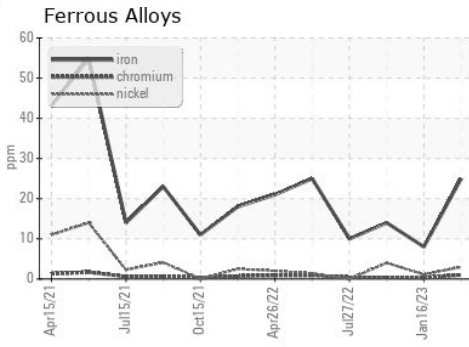
# OIL ANALYSIS REPORT



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	<b>13.4</b>	13.5	13.7

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0058123 **Received** : 17 Nov 2023  
**Lab Number** : **06010471** **Diagnosed** : 20 Nov 2023  
**Unique Number** : 10749615 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 657 - Charlottesville Hauling**  
 5498 Richmond Road  
 Troy, VA  
 US 22974  
 Contact: Brian Ulickas  
 bulickas@gflenv.com

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)

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F: