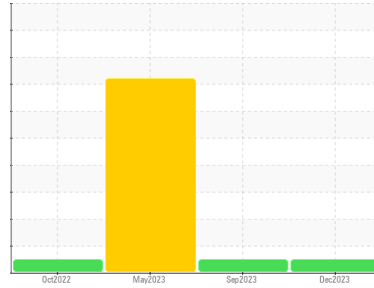




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**820M**  
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>GFL0096610</b>	GFL0091538	GFL0081265
Sample Date	Client Info		<b>19 Dec 2023</b>	18 Sep 2023	10 May 2023
Machine Age	hrs	Client Info	<b>13350</b>	13347	13346
Oil Age	hrs	Client Info	<b>600</b>	600	600
Oil Changed	Client Info		<b>Changed</b>	N/A	Not Changd
Sample Status			<b>NORMAL</b>	NORMAL	SEVERE

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<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 >80	<b>22</b>	2	35
Chromium	ppm	ASTM D5185m >5	<b>&lt;1</b>	0	1
Nickel	ppm	ASTM D5185m >2	<b>6</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m >3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >30	<b>1</b>	1	<1
Lead	ppm	ASTM D5185m >30	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >150	<b>4</b>	<1	20
Tin	ppm	ASTM D5185m >5	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>0</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>2</b>	4	97
Barium	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>61</b>	55	325
Manganese	ppm	ASTM D5185m 0	<b>1</b>	0	<1
Magnesium	ppm	ASTM D5185m 1010	<b>921</b>	895	871
Calcium	ppm	ASTM D5185m 1070	<b>1109</b>	1048	998
Phosphorus	ppm	ASTM D5185m 1150	<b>1026</b>	957	975
Zinc	ppm	ASTM D5185m 1270	<b>1246</b>	1169	1181
Sulfur	ppm	ASTM D5185m 2060	<b>2599</b>	3514	3441

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>4</b>	3	64
Sodium	ppm	ASTM D5185m	<b>6</b>	4	3983
Potassium	ppm	ASTM D5185m >20	<b>2</b>	2	30

## INFRA-RED

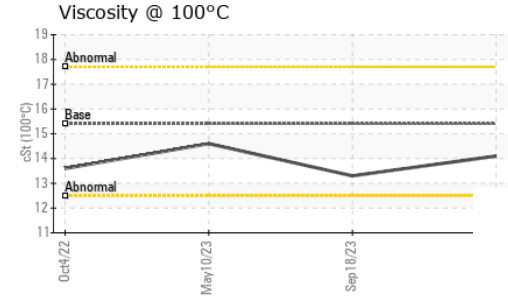
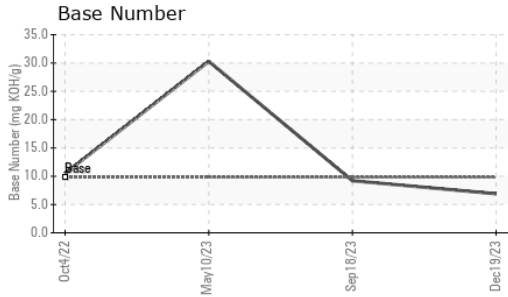
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>1.3</b>	0.1	1.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.6</b>	4.4	17.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.4</b>	16.8	23.8

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.2</b>	12.6	17.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>6.9</b>	9.2	30.3



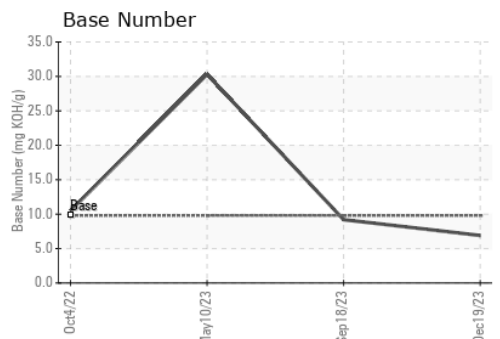
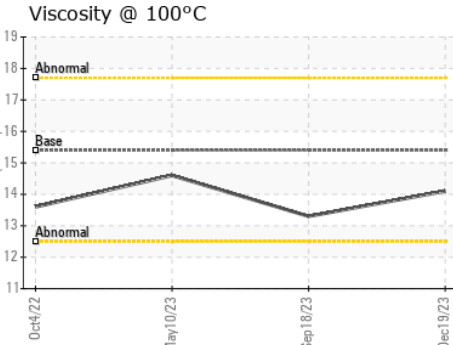
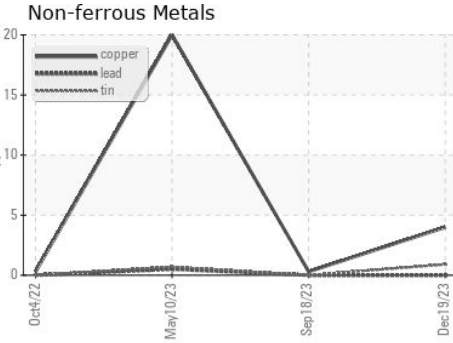
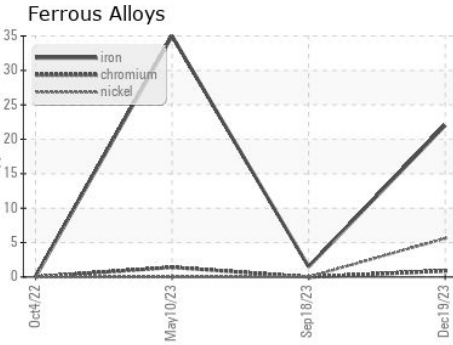
# OIL ANALYSIS REPORT



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>14.1</b>	13.3	14.6

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0096610 **Received** : 26 Dec 2023  
**Lab Number** : **06044312** **Diagnosed** : 27 Dec 2023  
**Unique Number** : 10804920 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 465 - Pontiac**  
 888 Baldwin  
 Pontiac, MI  
 US 48340  
 Contact: Ricky Matthews  
 rickymathews@gflenv.com  
 T: (586)825-9514  
 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)