



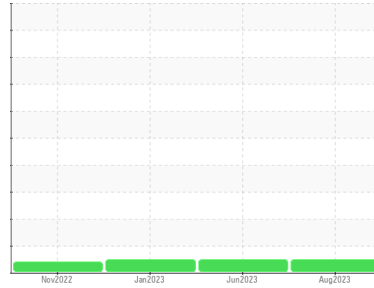
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**913028**  
 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>GFL0091491</b>	GFL0082819	GFL0063314
Sample Date	Client Info		<b>22 Aug 2023</b>	06 Jun 2023	04 Jan 2023
Machine Age	hrs	Client Info	<b>2909</b>	2307	1126
Oil Age	hrs	Client Info	<b>600</b>	600	600
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
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>22</b>	52	14
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	2	<1
Nickel	ppm	ASTM D5185m >5	<b>2</b>	8	4
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	0	1
Lead	ppm	ASTM D5185m >40	<b>0</b>	<1	1
Copper	ppm	ASTM D5185m >330	<b>6</b>	24	56
Tin	ppm	ASTM D5185m >15	<b>1</b>	2	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>	2	6
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>63</b>	62	56
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>1015</b>	925	861
Calcium	ppm	ASTM D5185m 1070	<b>1156</b>	1116	1160
Phosphorus	ppm	ASTM D5185m 1150	<b>1081</b>	985	975
Zinc	ppm	ASTM D5185m 1270	<b>1345</b>	1240	1231
Sulfur	ppm	ASTM D5185m 2060	<b>3520</b>	2346	3354

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	6	3
Sodium	ppm	ASTM D5185m	<b>4</b>	3	3
Potassium	ppm	ASTM D5185m >20	<b>0</b>	2	<1

## INFRA-RED

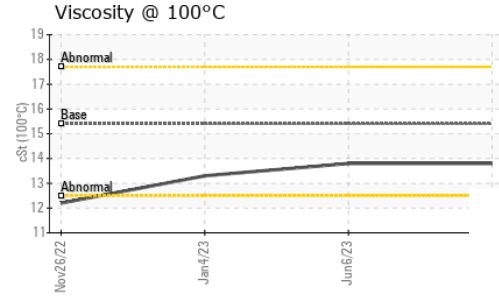
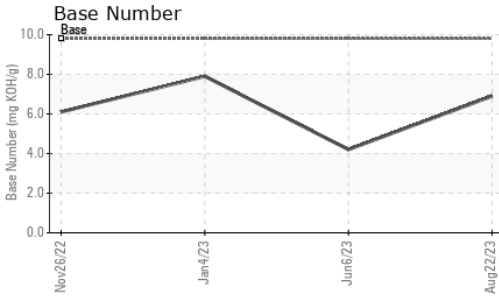
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.7</b>	1.1	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.1</b>	12.4	7.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.1</b>	25.5	19.7

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>17.8</b>	23.2	15.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>6.9</b>	4.2	7.9



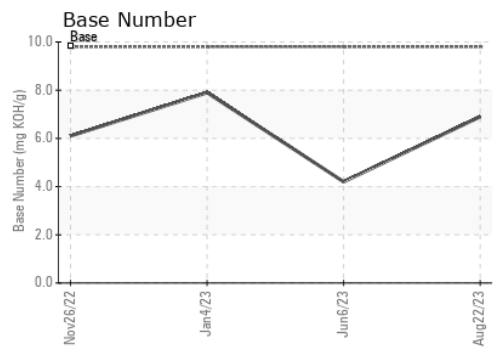
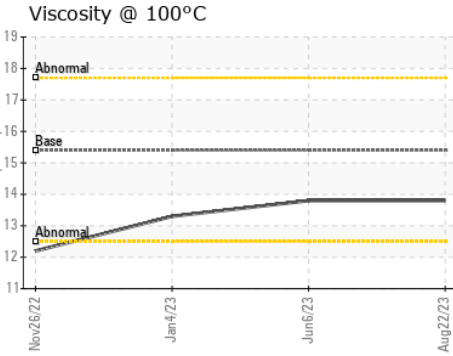
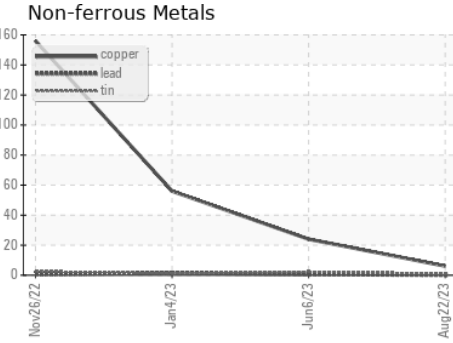
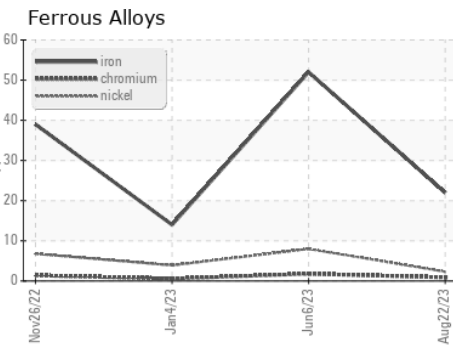
# OIL ANALYSIS REPORT



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>13.8</b>	13.8	13.3

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0091491 **Received** : 25 Aug 2023  
**Lab Number** : **05935271** **Diagnosed** : 28 Aug 2023  
**Unique Number** : 10620542 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

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