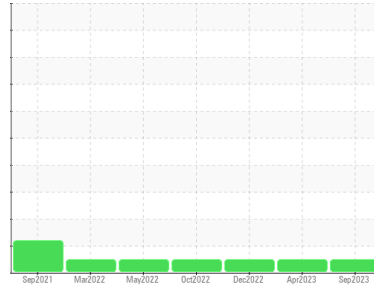




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**422010-406**

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>GFL0090921</b>	GFL0061969	GFL0062019
Sample Date	Client Info		<b>18 Sep 2023</b>	24 Apr 2023	08 Dec 2022
Machine Age	hrs	Client Info	<b>14626</b>	14054	13581
Oil Age	hrs	Client Info	<b>14626</b>	473	181
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>10</b>	9	4
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m >5	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>7</b>	4	3
Lead	ppm	ASTM D5185m >40	<b>2</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>2</b>	5	3
Tin	ppm	ASTM D5185m >15	<b>2</b>	<1	<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>6</b>	22	33
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>63</b>	63	61
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>939</b>	851	875
Calcium	ppm	ASTM D5185m 1070	<b>1144</b>	1144	1109
Phosphorus	ppm	ASTM D5185m 1150	<b>997</b>	908	1015
Zinc	ppm	ASTM D5185m 1270	<b>1261</b>	1230	1254
Sulfur	ppm	ASTM D5185m 2060	<b>3740</b>	3268	3709

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>9</b>	6	5
Sodium	ppm	ASTM D5185m	<b>4</b>	3	<1
Potassium	ppm	ASTM D5185m >20	<b>4</b>	<1	0

## INFRA-RED

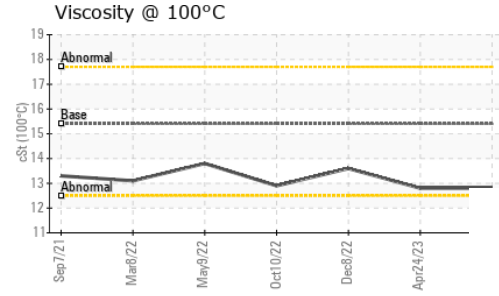
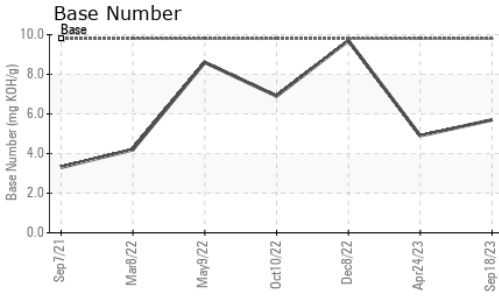
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>11.3</b>	9.8	8.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>24.6</b>	18.3	19.7

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>19.8</b>	16.4	15.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>5.7</b>	4.9	9.7



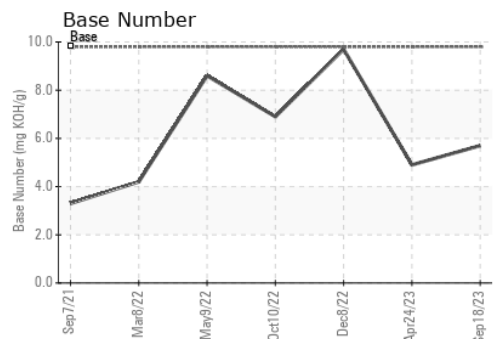
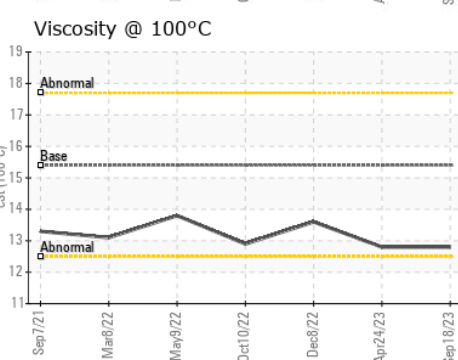
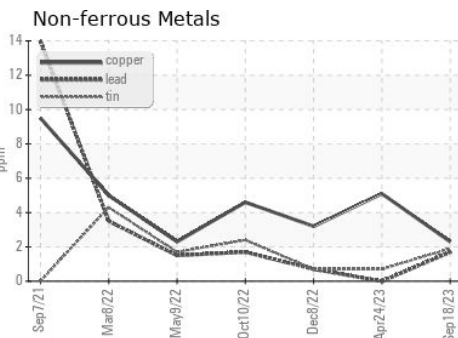
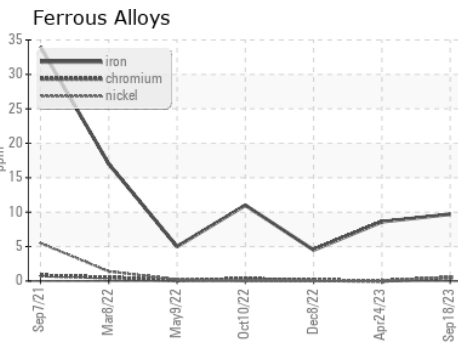
# OIL ANALYSIS REPORT



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>12.8</b>	12.8	13.6

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0090921 **Received** : 21 Sep 2023  
**Lab Number** : **05958094** **Diagnosed** : 22 Sep 2023  
**Unique Number** : 10659307 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 656 - Culpeper Hauling**  
 15490 Montanus Drive  
 Culpeper, VA  
 US 22701  
 Contact: Matt Hanna  
 mhanna@gflenv.com  
 T: (540)727-0887  
 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)