



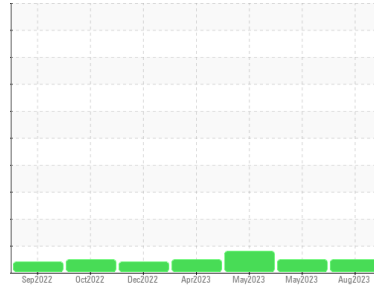
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**819017**  
 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>GFL0080830</b>	GFL0082781	GFL0080766
Sample Date	Client Info		<b>28 Aug 2023</b>	30 May 2023	23 May 2023
Machine Age	hrs	Client Info	<b>3453</b>	2682	0
Oil Age	hrs	Client Info	<b>0</b>	600	0
Oil Changed	Client Info		<b>Not Chngd</b>	Changed	Not Chngd
Sample Status			<b>NORMAL</b>	NORMAL	ABNORMAL

## 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 >80	<b>65</b>	15	10
Chromium	ppm	ASTM D5185m >5	<b>3</b>	<1	1
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	▲ 6
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>17</b>	<1	2
Lead	ppm	ASTM D5185m >30	<b>0</b>	0	1
Copper	ppm	ASTM D5185m >150	<b>4</b>	5	4
Tin	ppm	ASTM D5185m >5	<b>&lt;1</b>	<1	1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>4</b>	<1	9
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>73</b>	57	53
Manganese	ppm	ASTM D5185m 0	<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>1056</b>	937	977
Calcium	ppm	ASTM D5185m 1070	<b>1154</b>	1056	1120
Phosphorus	ppm	ASTM D5185m 1150	<b>1087</b>	921	923
Zinc	ppm	ASTM D5185m 1270	<b>1336</b>	1213	1248
Sulfur	ppm	ASTM D5185m 2060	<b>3431</b>	3066	3094

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>10</b>	3	4
Sodium	ppm	ASTM D5185m	<b>11</b>	3	3
Potassium	ppm	ASTM D5185m >20	<b>34</b>	<1	4

## INFRA-RED

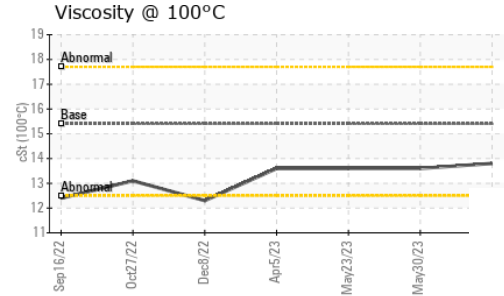
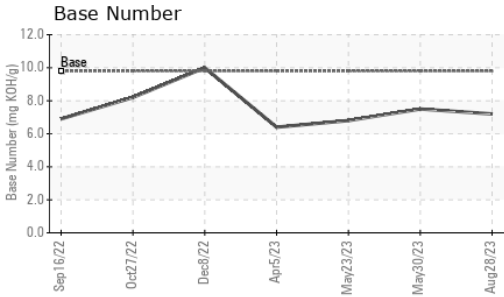
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.8</b>	0.7	0.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.6</b>	8.3	8.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.3</b>	20.3	20.2

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>19.0</b>	15.8	16.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.2</b>	7.5	6.8



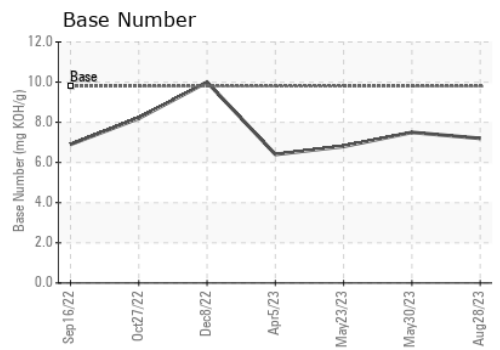
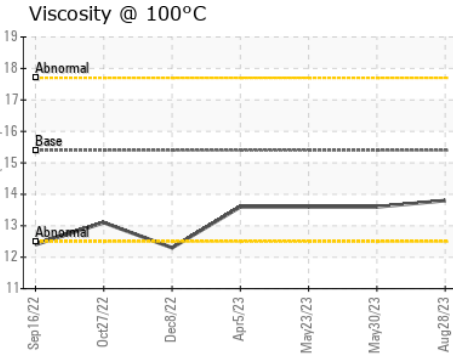
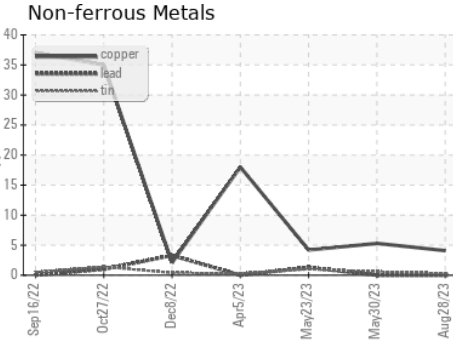
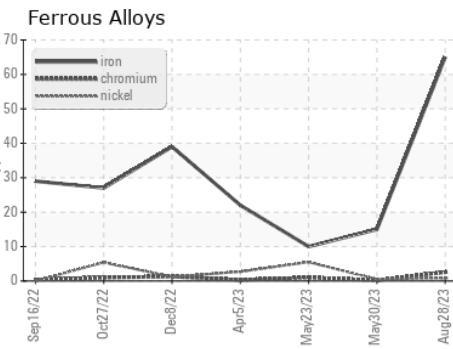
# OIL ANALYSIS REPORT



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>13.8</b>	13.6	13.6

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0080830 **Received** : 01 Sep 2023  
**Lab Number** : **05940579** **Diagnosed** : 05 Sep 2023  
**Unique Number** : 10631191 **Diagnostician** : Sean Felton  
**Test Package** : FLEET

**GFL Environmental - 455 - Flint**  
 2051 W. Bristol Rd  
 Flint Township, MI  
 US 48507  
 Contact: MARK WOMBLE  
 mwomble@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)