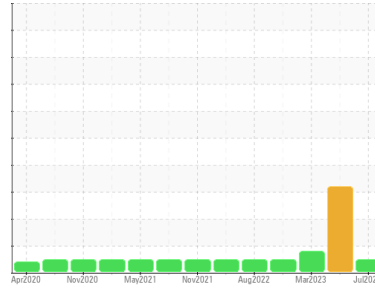




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**726000**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

### Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0090840</b>	GFL0082562	GFL0063911
Sample Date	Client Info		<b>31 Jul 2023</b>	10 May 2023	23 Mar 2023
Machine Age	hrs	Client Info	<b>0</b>	19363	19069
Oil Age	hrs	Client Info	<b>19958</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	Changed
Sample Status			<b>NORMAL</b>	ABNORMAL	MARGINAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	▲ 2.9	▲ 3.5
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>120	<b>20</b>	4	8
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	1	2
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185(m)	>330	<b>6</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	<1
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	0	<b>54</b>	▲ 37	3
Barium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>14</b>	40	58
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>188</b>	▲ 496	932
Calcium	ppm	ASTM D5185(m)	1070	<b>2049</b>	▲ 1607	1108
Phosphorus	ppm	ASTM D5185(m)	1150	<b>1025</b>	▲ 774	1016
Zinc	ppm	ASTM D5185(m)	1270	<b>1204</b>	▲ 845	1155
Sulfur	ppm	ASTM D5185(m)	2060	<b>2780</b>	2081	2395
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>8</b>	4	3
Sodium	ppm	ASTM D5185(m)		<b>5</b>	2	4
Potassium	ppm	ASTM D5185(m)	>20	<b>5</b>	0	0

## INFRA-RED

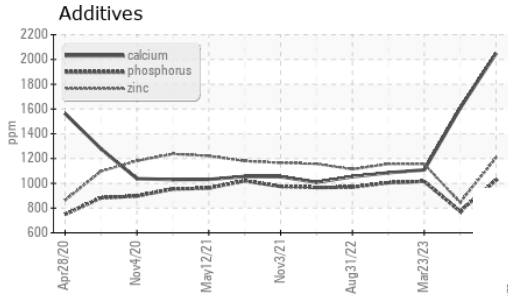
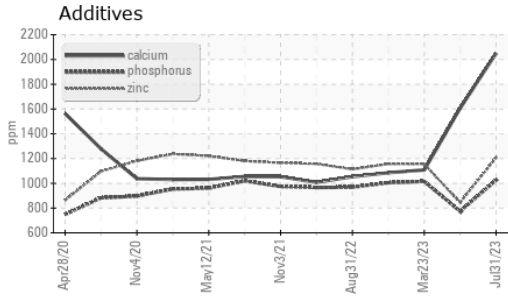
	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	<b>0.5</b>	0.2	0.3
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.8</b>	7.4	9.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>24.0</b>	22.6	23.0

## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>18.1</b>	19.6	16.3



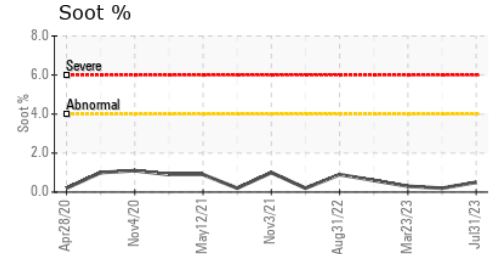
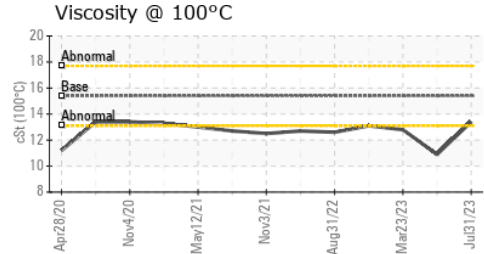
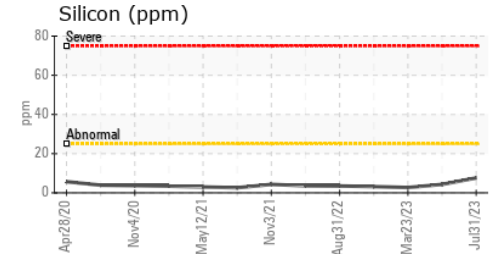
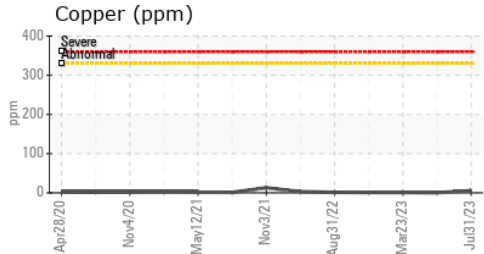
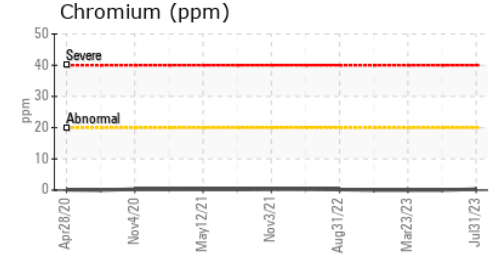
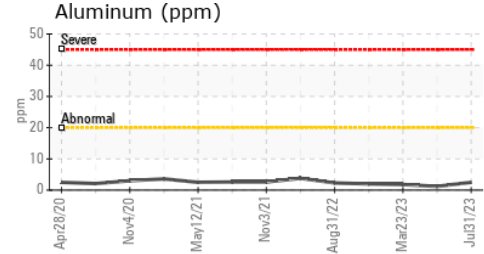
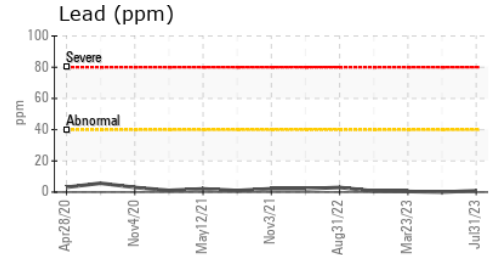
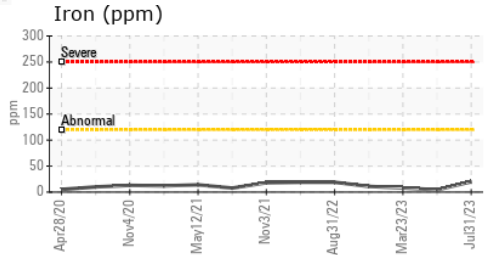
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Precipitate	scalar	Visual*	NONE	NONE	---	---
Silt	scalar	Visual*	NONE	VLITE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	13.4	▲ 10.9	12.8

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 246 - Windsor**  
**Sample No.** : GFL0090840 **Received** : 01 Aug 2023  
**Lab Number** : 02573342 **Diagnosed** : 01 Aug 2023  
**Unique Number** : 5618393 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: Visual )

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

2700 Deziel Dr  
 Windsor, ON  
 CA N8W 5H8  
 Contact: Dave Varga  
 dvarga@gflenv.com  
 T: (519)944-8009  
 F: