



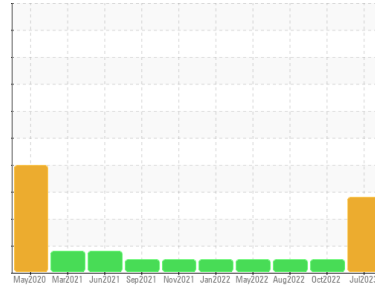
# OIL ANALYSIS REPORT

Sample Rating Trend

SOOT



Machine Id  
**4476**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**



## DIAGNOSIS

### Recommendation

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. We recommend that you drain the oil from the component if this has not already been done. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

There is a moderate amount of fuel present in the oil. There is an abnormal amount of solids and carbon present in the oil. Tests confirm the presence of fuel in the oil.

### Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0086804</b>	GFL0055400	GFL0055424
Sample Date	Client Info	<b>25 Jul 2023</b>	26 Oct 2022	18 Aug 2022
Machine Age	hrs	Client Info	<b>36487</b>	36487
Oil Age	hrs	Client Info	<b>36487</b>	36487
Oil Changed	Client Info	<b>N/A</b>	Changed	Changed
Sample Status		<b>SEVERE</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >120	<b>54</b>	24	32
Chromium	ppm	ASTM D5185(m) >20	<b>1</b>	<1	<1
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>0</b>	0	0
Aluminum	ppm	ASTM D5185(m) >20	<b>3</b>	1	2
Lead	ppm	ASTM D5185(m) >40	<b>5</b>	<1	<1
Copper	ppm	ASTM D5185(m) >330	<b>3</b>	1	5
Tin	ppm	ASTM D5185(m) >15	<b>&lt;1</b>	0	<1
Antimony	ppm	ASTM D5185(m)	<b>0</b>	0	0
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>4</b>	2	3
Barium	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 60	<b>17</b>	55	53
Manganese	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	<b>196</b>	890	887
Calcium	ppm	ASTM D5185(m) 1070	<b>1989</b>	1031	1092
Phosphorus	ppm	ASTM D5185(m) 1150	<b>862</b>	974	928
Zinc	ppm	ASTM D5185(m) 1270	<b>992</b>	1071	1137
Sulfur	ppm	ASTM D5185(m) 2060	<b>2568</b>	2377	2378
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>4</b>	2	3
Sodium	ppm	ASTM D5185(m)	<b>3</b>	1	2
Potassium	ppm	ASTM D5185(m) >20	<b>1</b>	0	0
Fuel	%	ASTM D7593* >3.0	<b>3.4</b>	<1.0	<1.0

## INFRA-RED

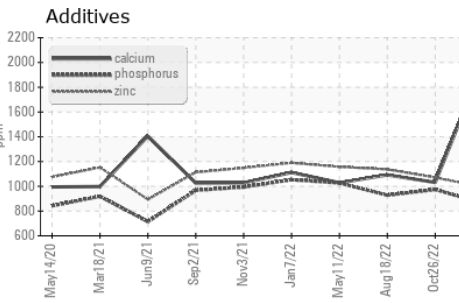
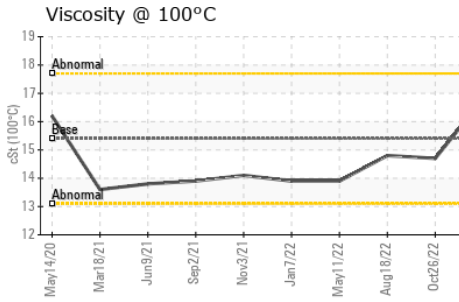
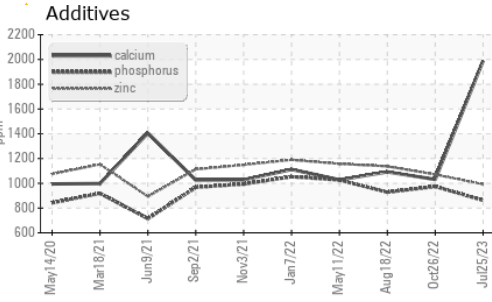
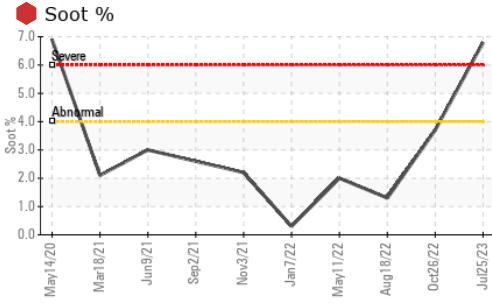
method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844* >4	<b>6.8</b>	3.7	1.3
Nitration	Abs/cm	ASTM D7624* >20	<b>17.6</b>	9.6	3.2
Sulfation	Abs/.1mm	ASTM D7415* >30	<b>53.7</b>	27.3	10.6

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414* >25	<b>25.0</b>	16.8	4.3



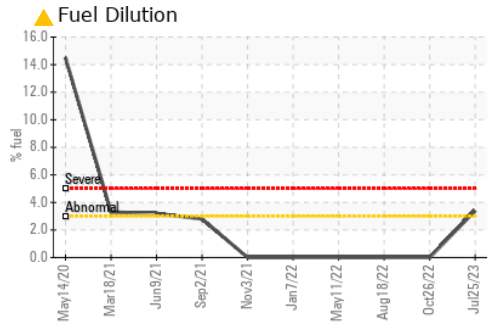
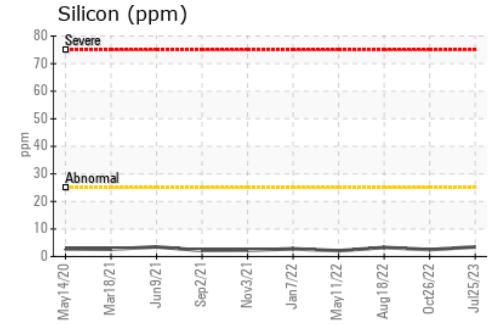
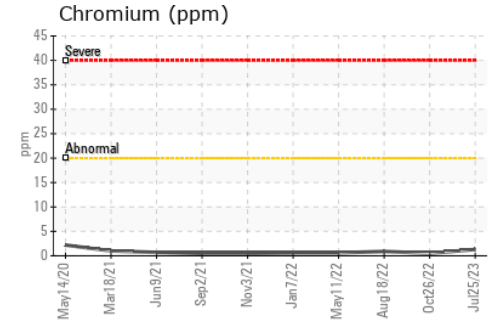
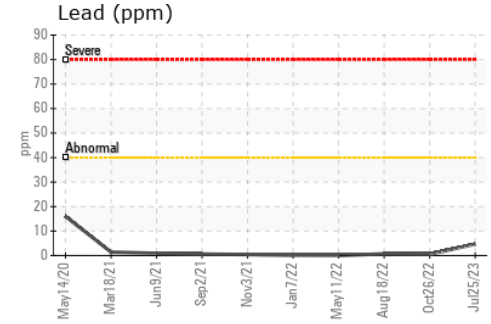
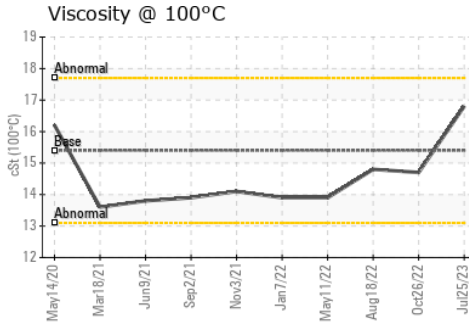
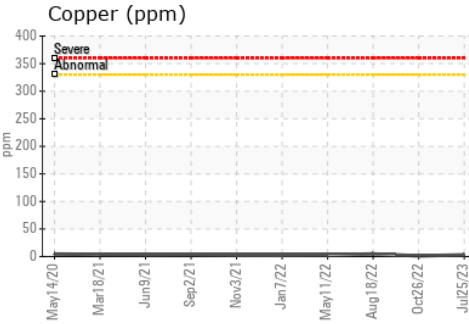
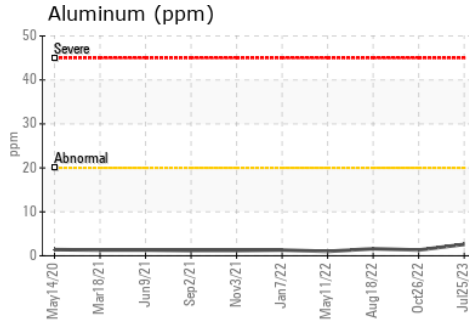
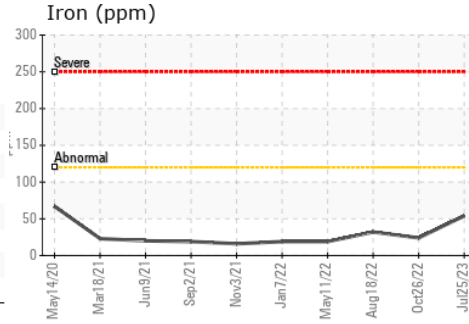
# OIL ANALYSIS REPORT



VISUAL		method	limit/base	current	history1	history2
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	16.8	14.7	14.8

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0086804  
**Lab Number** : 02572142  
**Unique Number** : 5617193  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel )

**Received** : 26 Jul 2023  
**Diagnosed** : 27 Jul 2023  
**Diagnostician** : Wes Davis

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.

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