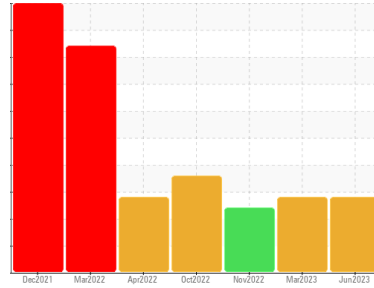




# OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id  
**450002**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

### Fluid Condition

Fuel is present in the oil and is lowering the viscosity. 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>GFL0073046</b>	GFL0073121	GFL0057467
Sample Date	Client Info	<b>06 Jun 2023</b>	01 Mar 2023	15 Nov 2022
Machine Age	hrs	<b>7711</b>	6733	5825
Oil Age	hrs	<b>0</b>	0	600
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>SEVERE</b>	SEVERE	SEVERE

## 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) >100	<b>91</b>	87	40
Chromium	ppm	ASTM D5185(m) >20	<b>2</b>	2	1
Nickel	ppm	ASTM D5185(m) >4	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185(m) >3	<b>2</b>	2	1
Aluminum	ppm	ASTM D5185(m) >20	<b>3</b>	4	2
Lead	ppm	ASTM D5185(m) >40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185(m) >330	<b>1</b>	1	1
Tin	ppm	ASTM D5185(m) >15	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	<1	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>2</b>	1	1
Barium	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 60	<b>51</b>	52	51
Manganese	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	<b>814</b>	853	839
Calcium	ppm	ASTM D5185(m) 1070	<b>860</b>	940	939
Phosphorus	ppm	ASTM D5185(m) 1150	<b>879</b>	937	945
Zinc	ppm	ASTM D5185(m) 1270	<b>984</b>	1034	1009
Sulfur	ppm	ASTM D5185(m) 2060	<b>1945</b>	2117	2263
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>11</b>	11	10
Sodium	ppm	ASTM D5185(m)	<b>6</b>	6	5
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	0
Fuel	%	ASTM D7593* >5	<b>13.2</b>	11.3	8.5

## INFRA-RED

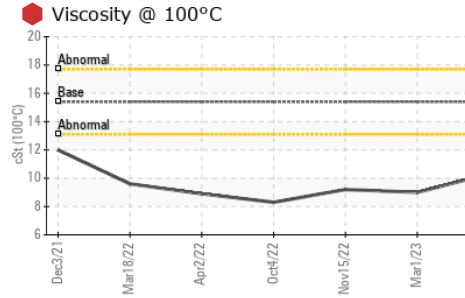
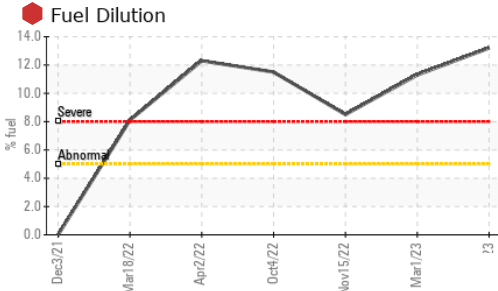
method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844* >3	<b>0.6</b>	0.5	0.1
Nitration	Abs/cm	ASTM D7624* >20	<b>13.8</b>	12.7	10.0
Sulfation	Abs/.1mm	ASTM D7415* >30	<b>29.3</b>	28.6	22.9

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414* >25	<b>35.5</b>	30.0	23.4



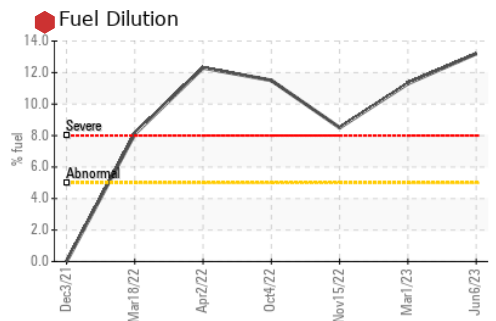
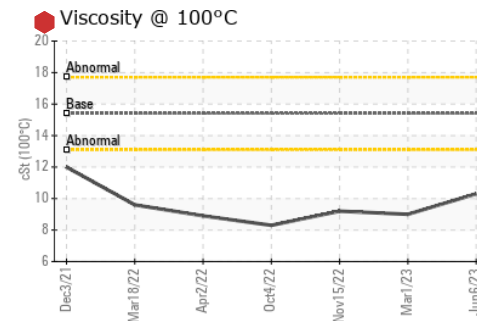
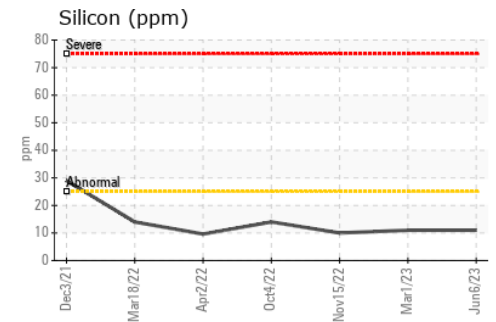
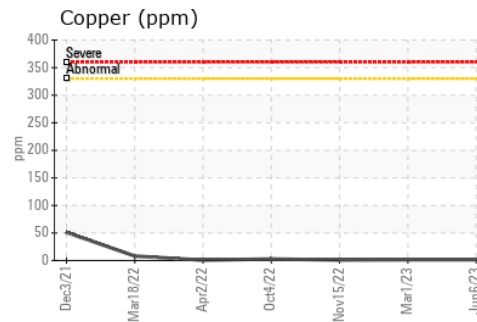
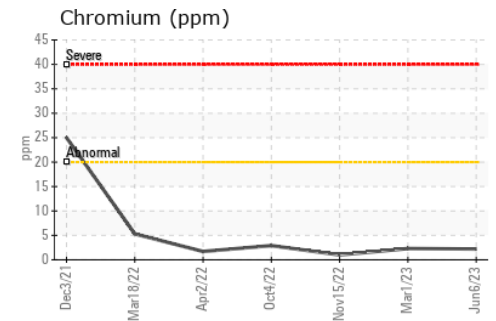
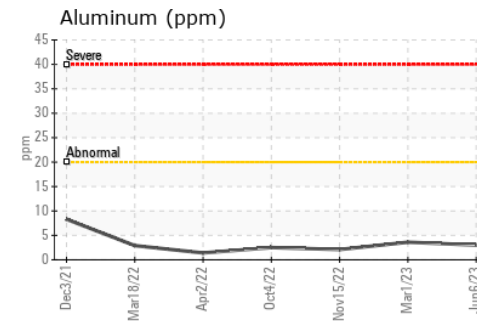
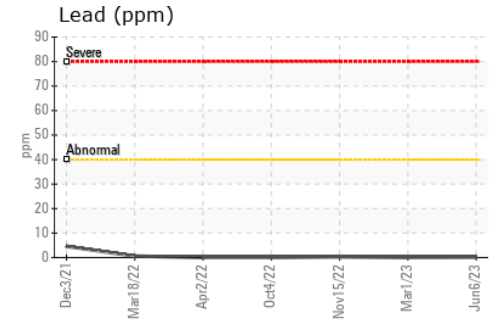
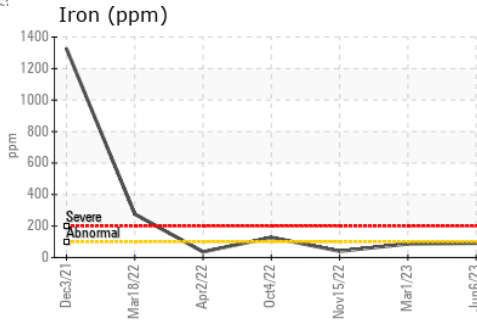
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
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 D7279(m)	15.4	10.3	9

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 574 - Vancouver Fleet  
**Sample No.** : GFL0073046 **Received** : 14 Jul 2023  
**Lab Number** : 02569969 **Diagnosed** : 18 Jul 2023  
**Unique Number** : 5607015 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: PercentFuel )

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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