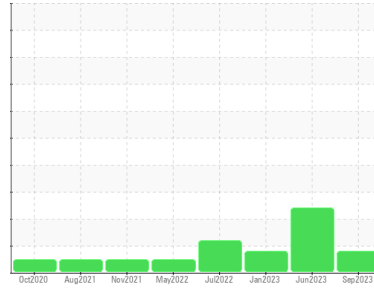




# OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id  
**424007**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

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.

### Wear

All component wear rates are normal.

### Contamination

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

### Fluid Condition

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>GFL0090850</b>	GFL0082563	GFL0071308
Sample Date	Client Info	<b>12 Sep 2023</b>	07 Jun 2023	16 Jan 2023
Machine Age	hrs	<b>0</b>	1101567	38024
Oil Age	hrs	<b>38137</b>	0	813
Oil Changed	Client Info	<b>N/A</b>	N/A	Changed
Sample Status		<b>ABNORMAL</b>	SEVERE	MARGINAL

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >120	<b>9</b>	27	15
Chromium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m) >5	<b>0</b>	<1	0
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>&lt;1</b>	2	2
Lead	ppm	ASTM D5185(m) >40	<b>1</b>	7	2
Copper	ppm	ASTM D5185(m) >330	<b>5</b>	8	1
Tin	ppm	ASTM D5185(m) >15	<b>&lt;1</b>	<1	0
Antimony	ppm	ASTM D5185(m)	<b>0</b>	<1	<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>124</b>	4	4
Barium	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 60	<b>4</b>	55	54
Manganese	ppm	ASTM D5185(m) 0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	<b>54</b>	910	877
Calcium	ppm	ASTM D5185(m) 1070	<b>2014</b>	1112	1089
Phosphorus	ppm	ASTM D5185(m) 1150	<b>1005</b>	1006	1001
Zinc	ppm	ASTM D5185(m) 1270	<b>1108</b>	1114	1118
Sulfur	ppm	ASTM D5185(m) 2060	<b>2860</b>	2469	2528
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>2</b>	3	4
Sodium	ppm	ASTM D5185(m)	<b>4</b>	2	2
Potassium	ppm	ASTM D5185(m) >20	<b>7</b>	<1	0
Fuel	%	ASTM D7593* >3.0	<b>▲ 4.5</b>	6.7	▲ 4.8
Glycol	%	ASTM D7922*	<b>0.0</b>	NEG	NEG

## INFRA-RED

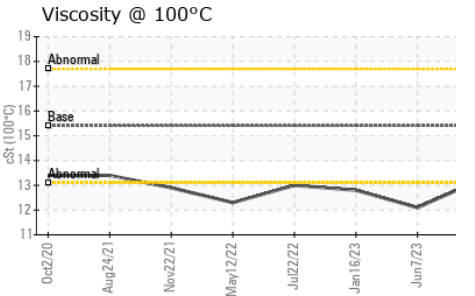
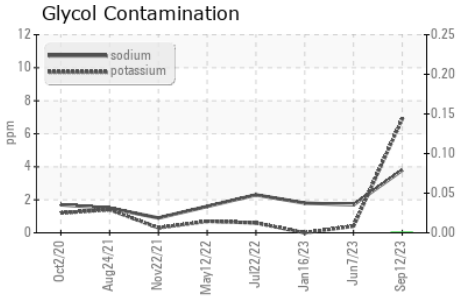
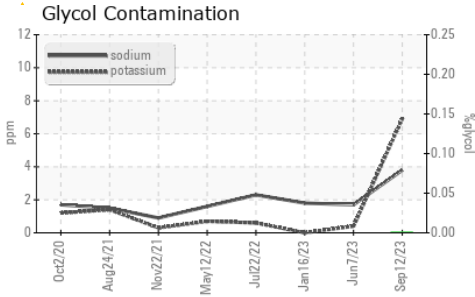
method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844* >4	<b>0.9</b>	1.8	0.9
Nitration	Abs/cm	ASTM D7624* >20	<b>7.1</b>	8.8	6.8
Sulfation	Abs/.1mm	ASTM D7415* >30	<b>21.1</b>	21.7	20.5

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414* >25	<b>14.8</b>	14.6	13.5



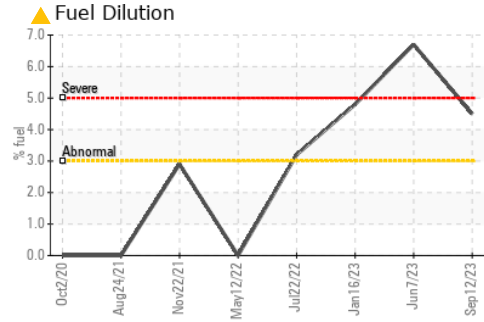
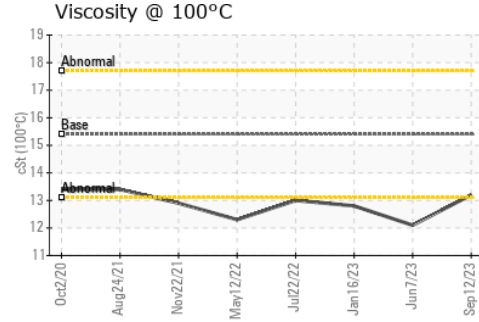
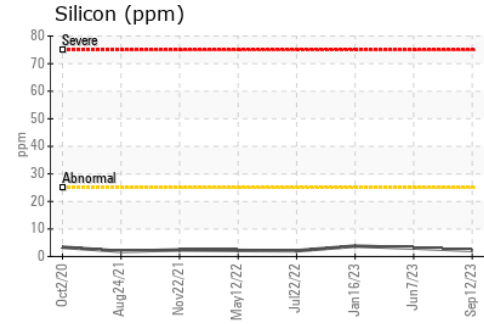
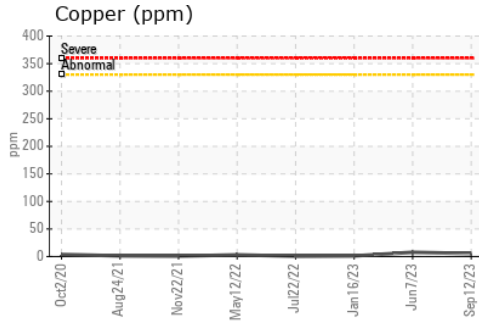
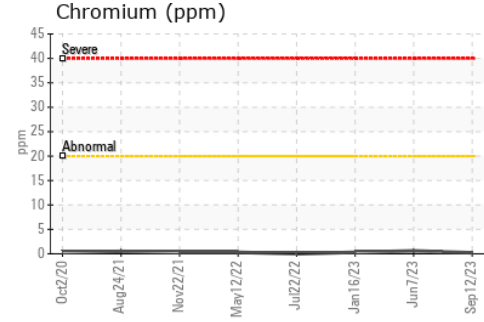
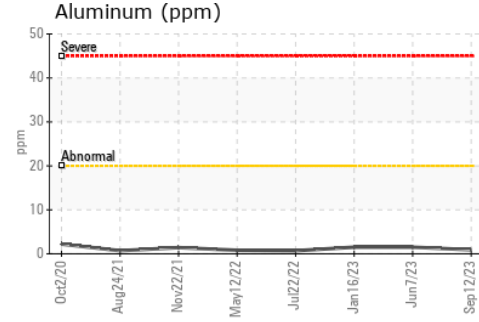
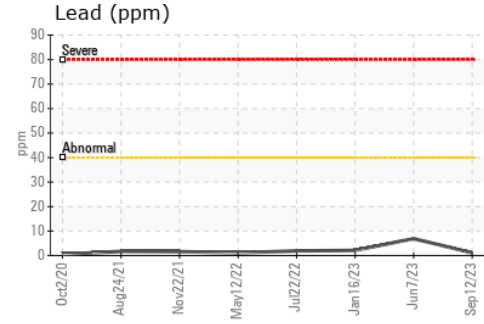
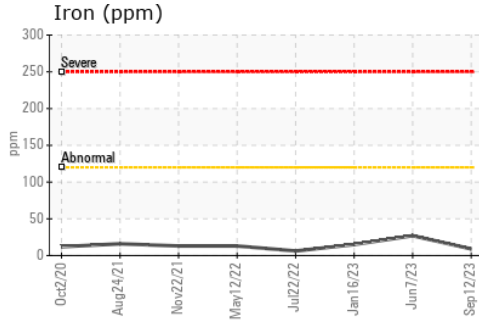
# OIL ANALYSIS REPORT



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	13.2	▲ 12.1

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 246 - Windsor**  
**Sample No.** : GFL0090850 **Received** : 13 Sep 2023  
**Lab Number** : 02581987 **Diagnosed** : 14 Sep 2023  
**Unique Number** : 5643052 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: Glycol, 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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