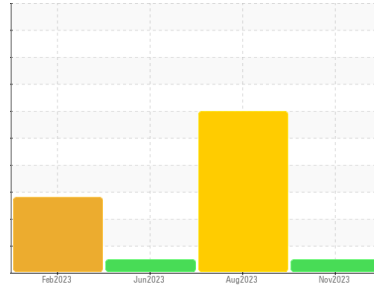




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**913097**  
 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 condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0099511</b>	GFL0068062	GFL0068053
Sample Date	Client Info		<b>10 Nov 2023</b>	29 Aug 2023	19 Jun 2023
Machine Age	hrs	Client Info	<b>2429</b>	1909	1540
Oil Age	hrs	Client Info	<b>520</b>	369	500
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	SEVERE	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>120	<b>13</b>	12	20
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<b>7</b>	10	6
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	2	5
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	2	5
Copper	ppm	ASTM D5185(m)	>330	<b>10</b>	60	212
Tin	ppm	ASTM D5185(m)	>15	<b>1</b>	<1	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>5</b>	8	72
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>59</b>	55	9
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>961</b>	915	214
Calcium	ppm	ASTM D5185(m)	1070	<b>1036</b>	1102	1853
Phosphorus	ppm	ASTM D5185(m)	1150	<b>963</b>	1035	909
Zinc	ppm	ASTM D5185(m)	1270	<b>1169</b>	1157	1088
Sulfur	ppm	ASTM D5185(m)	2060	<b>2359</b>	2371	2351
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

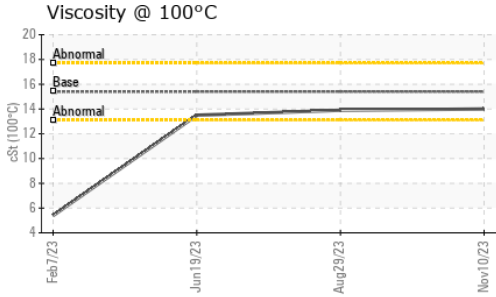
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	4	8
Sodium	ppm	ASTM D5185(m)		<b>4</b>	2	4
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	3	8

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	<b>0.4</b>	0.3	0.3
Nitration	Abs/cm	ASTM D7624*	>20	<b>7.9</b>	7.6	8.7
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>20.6</b>	21.6	22.3



# OIL ANALYSIS REPORT



## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs./1mm ASTM D7414*	>25	15.7	18.1

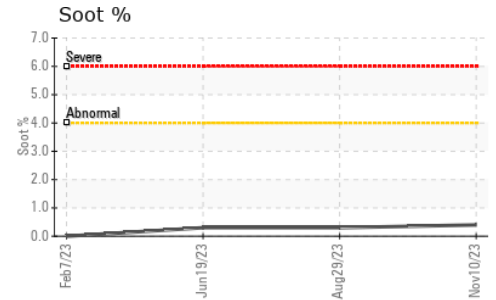
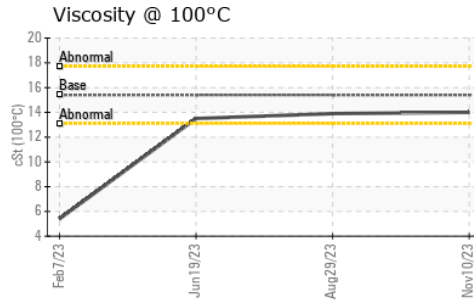
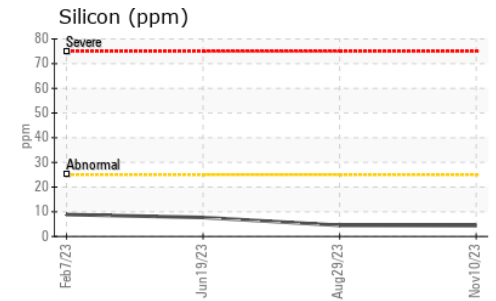
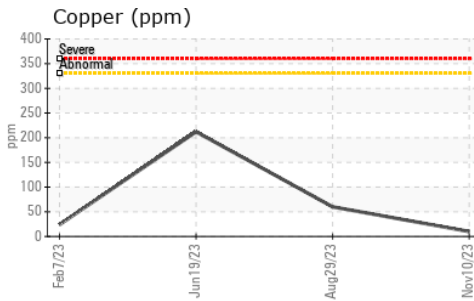
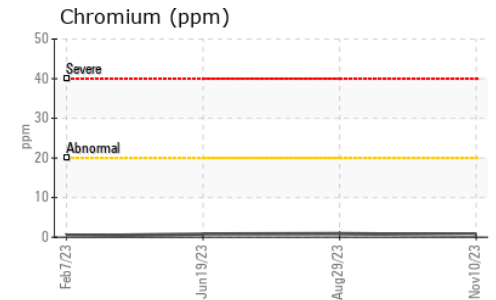
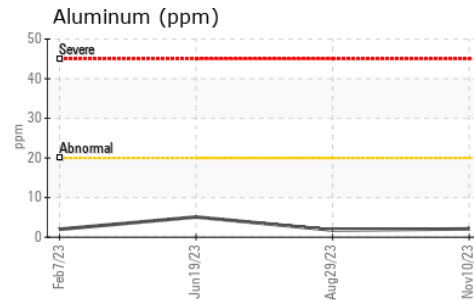
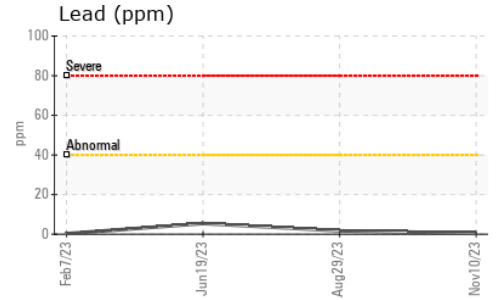
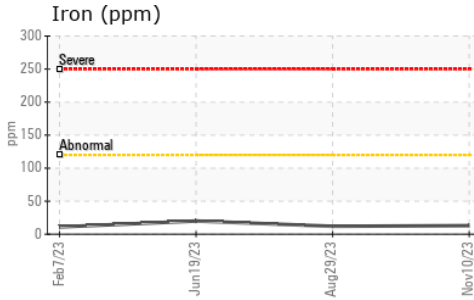
## VISUAL

method	limit/base	current	history1	history2
Emulsified Water	scalar Visual*	>0.2	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	14.0	13.9

## GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
 Sample No. : GFL0099511 Received : 23 Nov 2023  
 Lab Number : 02598287 Diagnosed : 23 Nov 2023  
 Unique Number : 5683367 Diagnostician : Kevin Marson  
 Test Package : MOB 1

**GFL Environmental - 522**  
 175 MacAlpine Crescent  
 Fort McMurray, AB  
 CA T9H 4A5  
 Contact: Brad Poole  
 bradley.poole@gflenv.com

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.

T:  
F: