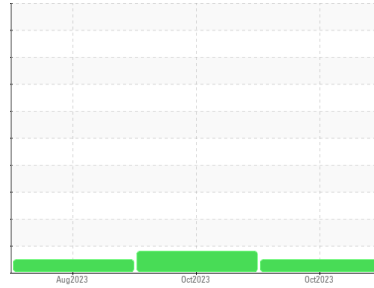




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**GFL216**  
Machine Id  
**413138**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: Resample as the last analysis showed abnormal wear )

### 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>GFL0099665</b>	GFL0099654	GFL0089251
Sample Date	Client Info		<b>27 Oct 2023</b>	11 Oct 2023	04 Aug 2023
Machine Age	hrs	Client Info	<b>1289</b>	1162	13119
Oil Age	hrs	Client Info	<b>126</b>	582	0
Oil Changed	Client Info		<b>Not Chngd</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	ABNORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	0.8	0.7
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >120	<b>6</b>	20	29
Chromium	ppm	ASTM D5185(m) >20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185(m) >5	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m) >2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m) >2	<b>2</b>	1	1
Aluminum	ppm	ASTM D5185(m) >20	<b>1</b>	3	6
Lead	ppm	ASTM D5185(m) >40	<b>3</b>	12	11
Copper	ppm	ASTM D5185(m) >330	<b>104</b>	▲ 481	442
Tin	ppm	ASTM D5185(m) >15	<b>&lt;1</b>	1	4
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>	16	247
Barium	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	<1	<1
Molybdenum	ppm	ASTM D5185(m) 60	<b>68</b>	69	122
Manganese	ppm	ASTM D5185(m) 0	<b>0</b>	<1	4
Magnesium	ppm	ASTM D5185(m) 1010	<b>1095</b>	926	669
Calcium	ppm	ASTM D5185(m) 1070	<b>1197</b>	1110	1466
Phosphorus	ppm	ASTM D5185(m) 1150	<b>1120</b>	923	693
Zinc	ppm	ASTM D5185(m) 1270	<b>1332</b>	1114	780
Sulfur	ppm	ASTM D5185(m) 2060	<b>2905</b>	2146	1922
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>3</b>	9	56
Sodium	ppm	ASTM D5185(m)	<b>2</b>	2	4
Potassium	ppm	ASTM D5185(m) >20	<b>1</b>	5	10

## INFRA-RED

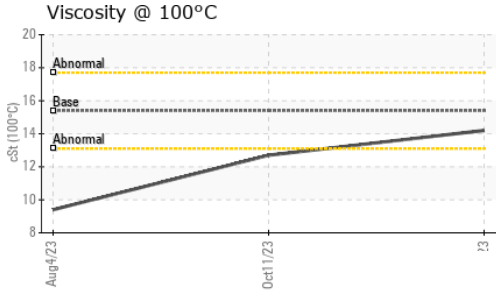
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >4	<b>0</b>	0.2	0.1
Nitration	Abs/cm	ASTM D7624* >20	<b>5.4</b>	8.7	10.1
Sulfation	Abs/.1mm	ASTM D7415* >30	<b>18.3</b>	19.9	24.8

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414* >25	<b>13.5</b>	16.4	23.4



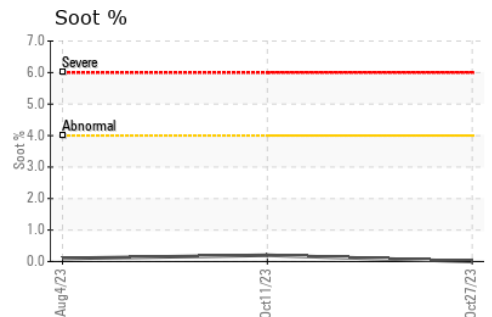
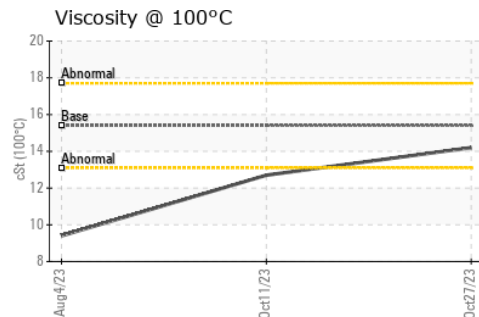
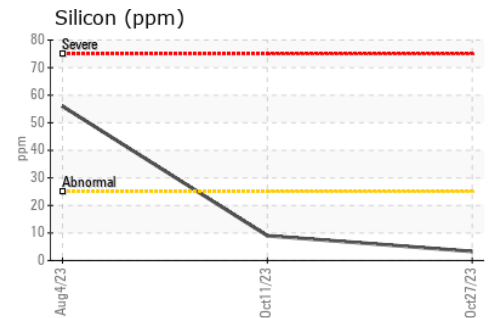
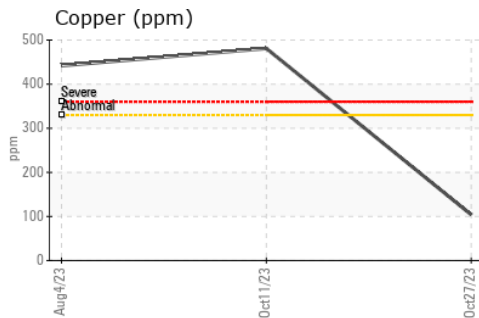
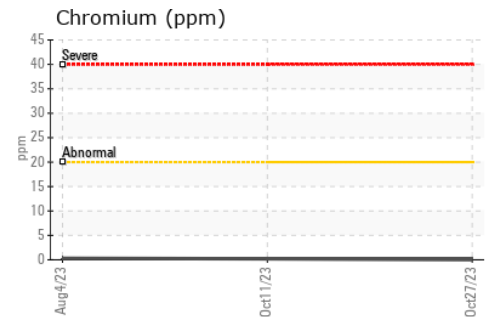
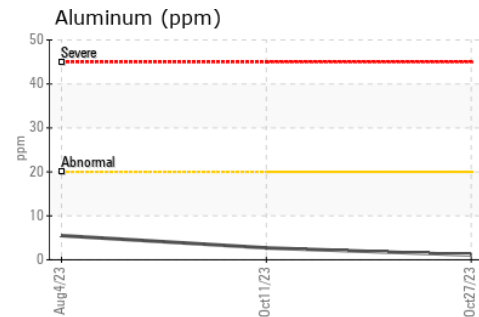
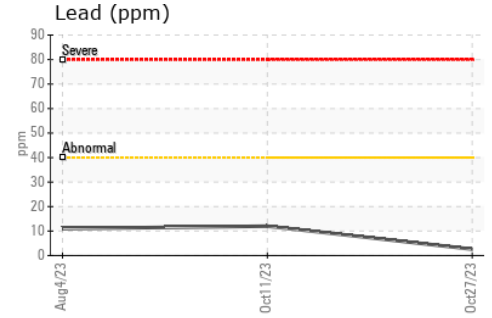
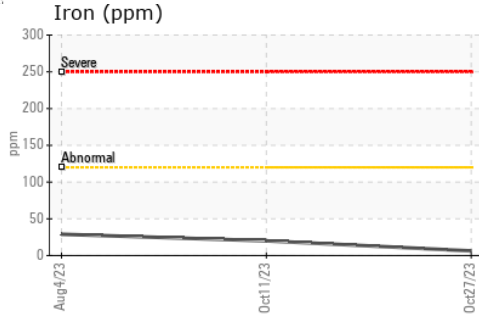
# OIL ANALYSIS REPORT



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	14.2	12.7

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 252 - GTA Hauling**  
**Sample No.** : GFL0099665 **Received** : 31 Oct 2023 3668 Weston Road  
**Lab Number** : 02592906 **Diagnosed** : 31 Oct 2023 North York, ON  
**Unique Number** : 5669985 **Diagnostician** : Kevin Marson CA M9L 1W2  
**Test Package** : MOB 1 Contact: Amanda Cipollone  
acipollone@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.