



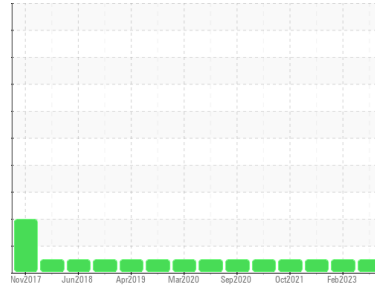
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**701023**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (22 LTR)**



## 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>GFL0086513</b>	GFL0068350	GFL0059491	
Sample Date	Client Info	<b>10 Jul 2023</b>	02 Feb 2023	16 Sep 2022	
Machine Age	hrs	Client Info	<b>9387</b>	9387	7027
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed	
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL	

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >80	<b>45</b>	41	11
Chromium	ppm ASTM D5185(m) >5	<b>1</b>	<1	<1
Nickel	ppm ASTM D5185(m) >2	<b>&lt;1</b>	<1	0
Titanium	ppm ASTM D5185(m)	<b>0</b>	<1	<1
Silver	ppm ASTM D5185(m) >3	<b>&lt;1</b>	0	0
Aluminum	ppm ASTM D5185(m) >30	<b>4</b>	4	3
Lead	ppm ASTM D5185(m) >30	<b>&lt;1</b>	<1	<1
Copper	ppm ASTM D5185(m) >150	<b>2</b>	2	<1
Tin	ppm ASTM D5185(m) >5	<b>0</b>	0	0
Antimony	ppm ASTM D5185(m)	<b>0</b>	0	<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>4</b>	6	25
Barium	ppm ASTM D5185(m) 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185(m) 60	<b>61</b>	62	70
Manganese	ppm ASTM D5185(m) 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185(m) 1010	<b>964</b>	942	908
Calcium	ppm ASTM D5185(m) 1070	<b>1033</b>	1126	1152
Phosphorus	ppm ASTM D5185(m) 1150	<b>1017</b>	1034	992
Zinc	ppm ASTM D5185(m) 1270	<b>1192</b>	1189	1105
Sulfur	ppm ASTM D5185(m) 2060	<b>2229</b>	2360	2470
Lithium	ppm ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >20	<b>6</b>	10	5
Sodium	ppm ASTM D5185(m)	<b>12</b>	10	6
Potassium	ppm ASTM D5185(m) >20	<b>3</b>	<1	1

## INFRA-RED

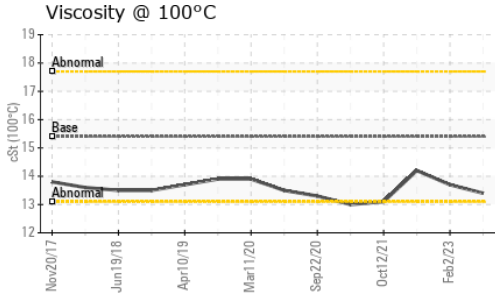
method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >3	<b>0.6</b>	0.4	0.1
Nitration	Abs/cm ASTM D7624* >20	<b>12.1</b>	11.2	7.9
Sulfation	Abs/.1mm ASTM D7415* >30	<b>24.5</b>	25.0	20.7

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm ASTM D7414* >25	<b>22.1</b>	22.3	16.1



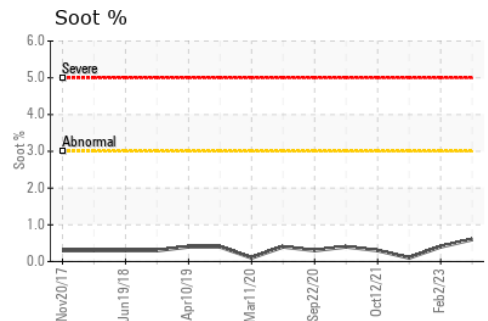
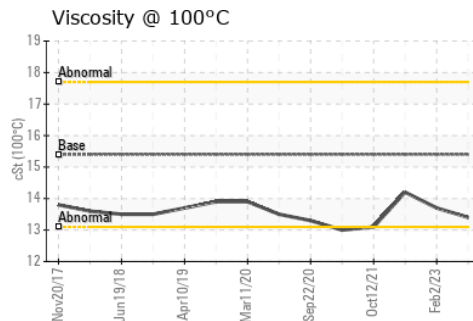
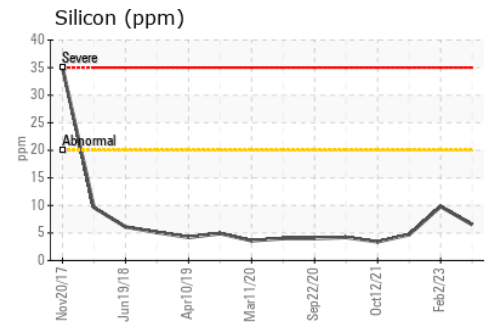
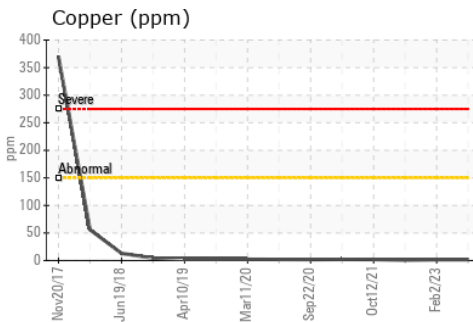
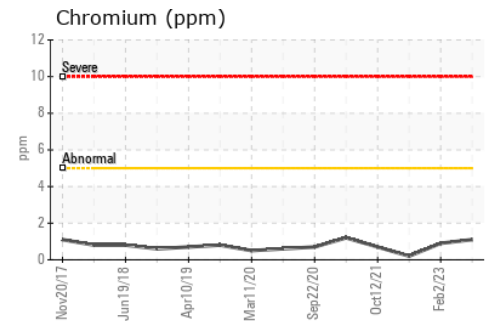
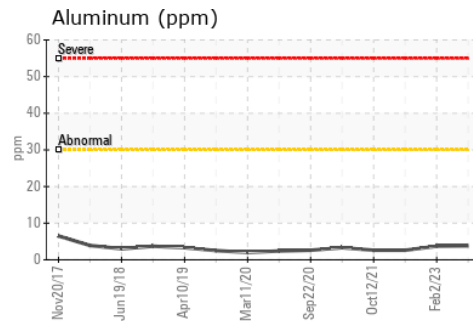
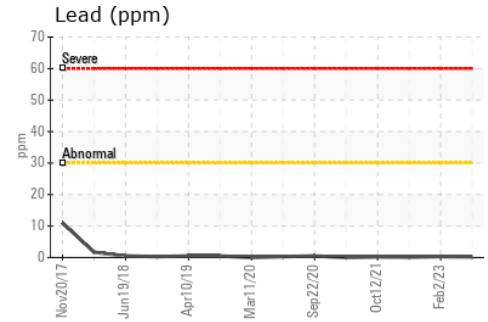
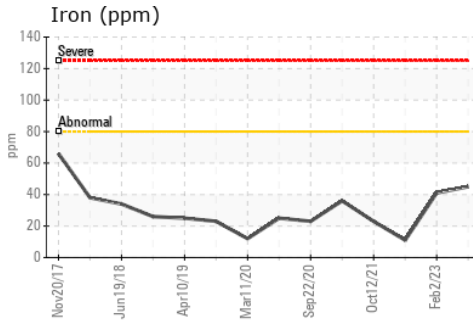
# OIL ANALYSIS REPORT



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	13.4	13.7

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0086513  
**Lab Number** : 02569671  
**Unique Number** : 5606717  
**Test Package** : MOB 1

**GFL Environmental - 217 - Aurora**  
 14131 BAYVIEW AVE, AURORA YARD  
 AURORA, ON  
 CA L4G 0K6  
 Contact: Mike Havens  
 MHavens@gflenv.com

Received : 13 Jul 2023  
 Diagnosed : 13 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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