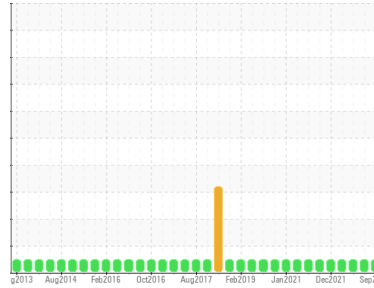




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**9941**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (40 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>GFL0071475</b>	GFL0054324	GFL0054343	
Sample Date	Client Info	<b>28 Sep 2023</b>	03 Mar 2023	03 Nov 2022	
Machine Age	hrs	Client Info	<b>411470</b>	411470	23760
Oil Age	hrs	Client Info	<b>23760</b>	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	Changed	
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL	

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<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) >120	<b>59</b>	25	32
Chromium	ppm ASTM D5185(m) >20	<b>2</b>	<1	1
Nickel	ppm ASTM D5185(m) >5	<b>&lt;1</b>	<1	<1
Titanium	ppm ASTM D5185(m) >2	<b>0</b>	<1	<1
Silver	ppm ASTM D5185(m) >2	<b>&lt;1</b>	0	0
Aluminum	ppm ASTM D5185(m) >20	<b>3</b>	4	3
Lead	ppm ASTM D5185(m) >40	<b>1</b>	<1	2
Copper	ppm ASTM D5185(m) >330	<b>4</b>	2	6
Tin	ppm ASTM D5185(m) >15	<b>&lt;1</b>	1	2
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>2</b>	4	12
Barium	ppm ASTM D5185(m) 0	<b>&lt;1</b>	0	0
Molybdenum	ppm ASTM D5185(m) 60	<b>64</b>	60	69
Manganese	ppm ASTM D5185(m) 0	<b>0</b>	<1	<1
Magnesium	ppm ASTM D5185(m) 1010	<b>1015</b>	935	701
Calcium	ppm ASTM D5185(m) 1070	<b>1115</b>	1138	1476
Phosphorus	ppm ASTM D5185(m) 1150	<b>1006</b>	1063	1063
Zinc	ppm ASTM D5185(m) 1270	<b>1260</b>	1173	1208
Sulfur	ppm ASTM D5185(m) 2060	<b>2157</b>	2395	2487
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>5</b>	4	11
Sodium	ppm ASTM D5185(m)	<b>9</b>	6	8
Potassium	ppm ASTM D5185(m) >20	<b>1</b>	2	2

## INFRA-RED

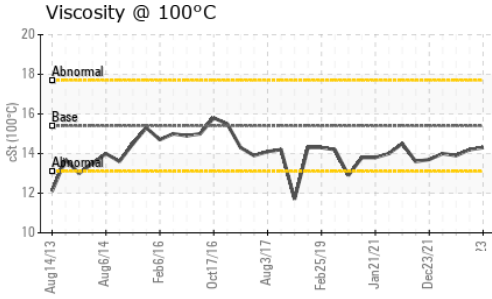
method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >4	<b>1.4</b>	0.7	0.9
Nitration	Abs/cm ASTM D7624* >20	<b>13.9</b>	11.0	10.6
Sulfation	Abs/.1mm ASTM D7415* >30	<b>28.1</b>	25.0	25.2

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm ASTM D7414* >25	<b>25.9</b>	20.2	20.8



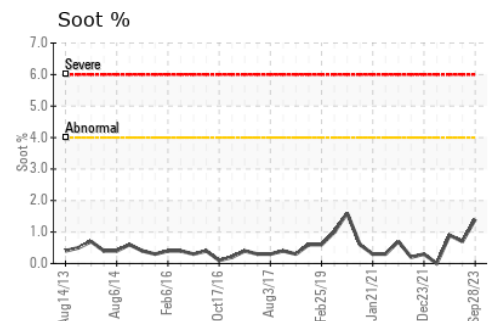
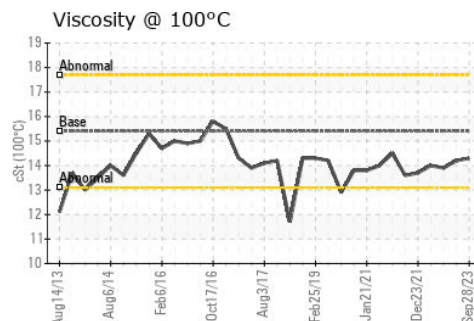
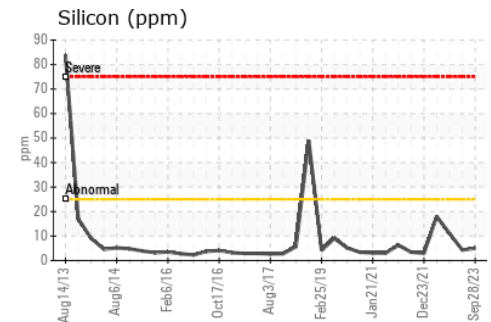
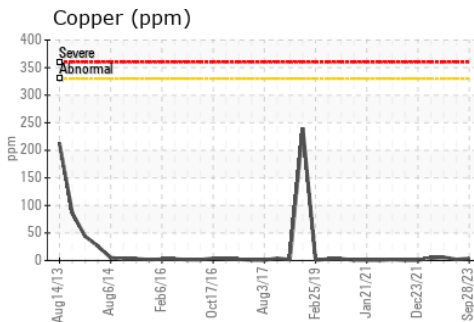
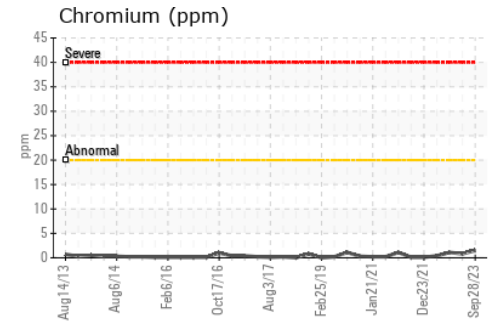
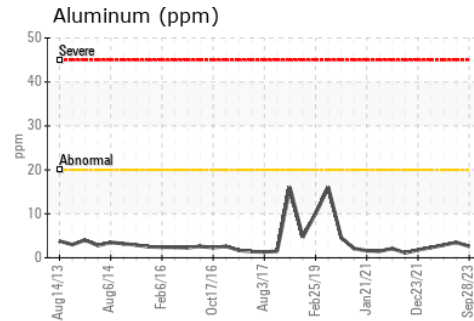
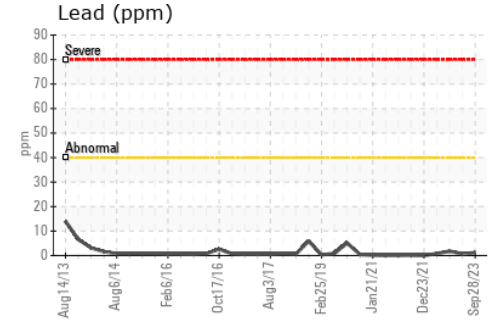
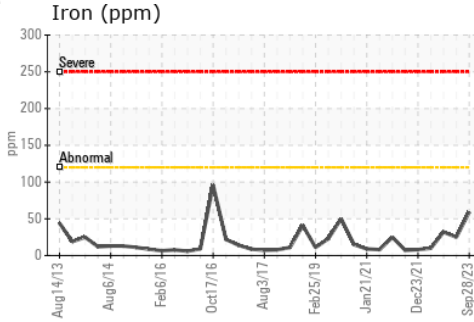
# OIL ANALYSIS REPORT



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	14.3	14.2

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0071475 **Received** : 04 Oct 2023  
**Lab Number** : 02586617 **Diagnosed** : 04 Oct 2023  
**Unique Number** : 5655683 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1

**GFL Environmental - 216**  
 15 Bermondsey Road, Building B  
 Toronto, ON  
 CA M4B 1Y9  
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 thatzioannidis@gflenv.com  
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 F:

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.