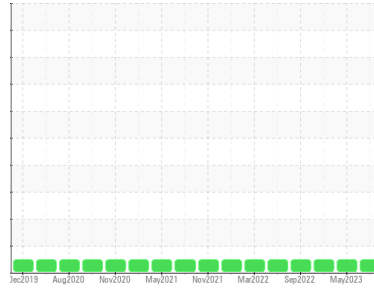




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**901089**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- 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>GFL0071478</b>	GFL0071488	GFL0054337
Sample Date	Client Info		<b>20 Jul 2023</b>	18 May 2023	18 Dec 2022
Machine Age	kms	Client Info	<b>190936</b>	166929	166929
Oil Age	kms	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>Changed</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>10</b>	12	6
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	2	1
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>330	<b>2</b>	1	1
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	<1
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>3</b>	2	5
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>60</b>	61	57
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>998</b>	943	936
Calcium	ppm	ASTM D5185(m)	1070	<b>1058</b>	1106	1114
Phosphorus	ppm	ASTM D5185(m)	1150	<b>1031</b>	1034	1006
Zinc	ppm	ASTM D5185(m)	1270	<b>1218</b>	1181	1157
Sulfur	ppm	ASTM D5185(m)	2060	<b>2282</b>	2293	2405
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	2
Sodium	ppm	ASTM D5185(m)		<b>4</b>	4	2
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	0

## INFRA-RED

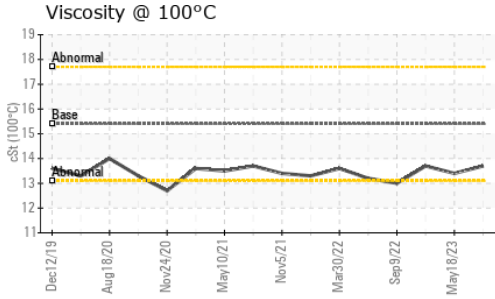
	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	<b>0.3</b>	0.4	0.1
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.2</b>	8.8	8.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.7</b>	21.9	21.0

## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>16.6</b>	17.9	16.3



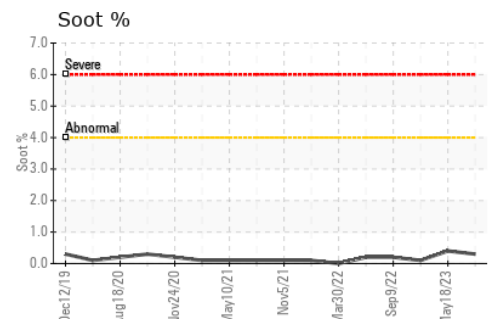
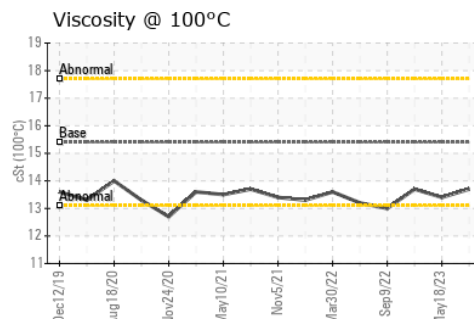
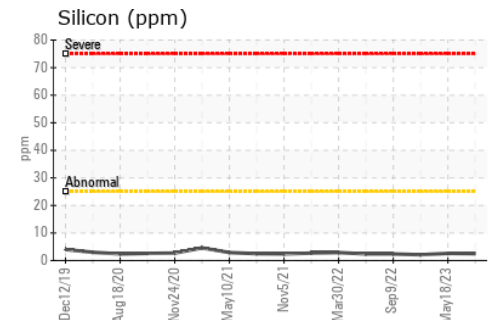
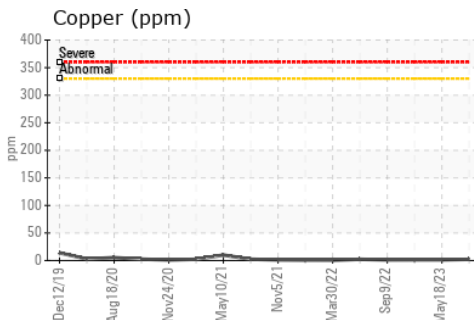
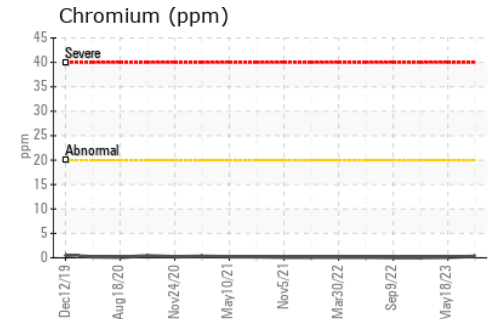
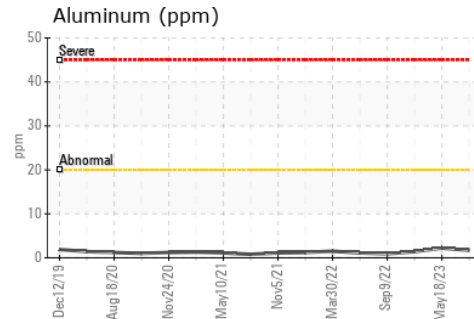
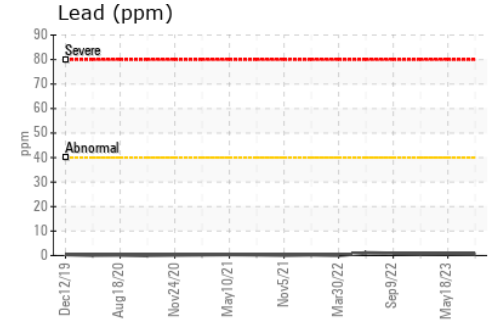
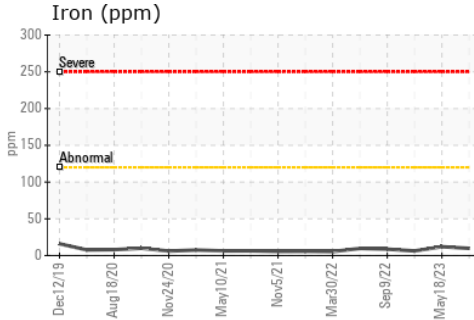
# OIL ANALYSIS REPORT



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	<b>13.7</b>	13.4

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0071478 **Received** : 24 Jul 2023  
**Lab Number** : **02571627** **Diagnosed** : 24 Jul 2023  
**Unique Number** : 5616678 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1

**GFL Environmental - 216M**  
 2475 Beryl Drive  
 Oakville, ON  
 CA L6J 7X4  
 Contact: Matthew Gunness  
 mgunness@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: