



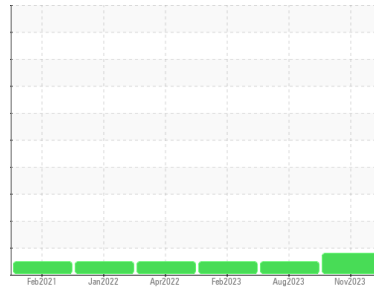
# OIL ANALYSIS REPORT

Sample Rating Trend

**WEAR**



Machine Id  
**719001**  
 Component  
**Natural Gas Engine**  
 Fluid  
**PETRO CANADA DURON GEO LD 15W40 (--- LTR)**



## DIAGNOSIS

### Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

### Wear

Aluminum ppm levels are abnormal. A sharp increase in the aluminum level is noted. Piston wear is indicated.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0093877</b>	GFL0090624	GFL0072819
Sample Date	Client Info		<b>02 Nov 2023</b>	07 Aug 2023	26 Feb 2023
Machine Age	hrs	Client Info	<b>0</b>	9078	8022
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>ABNORMAL</b>	NORMAL	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>50	<b>32</b>	17	11
Chromium	ppm	ASTM D5185(m)	>4	<b>1</b>	2	1
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>9	<b>▲ 10</b>	2	2
Lead	ppm	ASTM D5185(m)	>30	<b>3</b>	6	4
Copper	ppm	ASTM D5185(m)	>35	<b>5</b>	1	1
Tin	ppm	ASTM D5185(m)	>4	<b>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)	50	<b>18</b>	7	7
Barium	ppm	ASTM D5185(m)	5	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	50	<b>46</b>	54	55
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	560	<b>490</b>	591	575
Calcium	ppm	ASTM D5185(m)	1510	<b>1492</b>	1681	1721
Phosphorus	ppm	ASTM D5185(m)	780	<b>642</b>	764	775
Zinc	ppm	ASTM D5185(m)	870	<b>823</b>	924	934
Sulfur	ppm	ASTM D5185(m)	2040	<b>1915</b>	2021	2122
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>+100	<b>6</b>	4	4
Sodium	ppm	ASTM D5185(m)		<b>11</b>	10	10
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	4

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*		<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>11.3</b>	12.2	7.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>28.4</b>	26.9	18.9

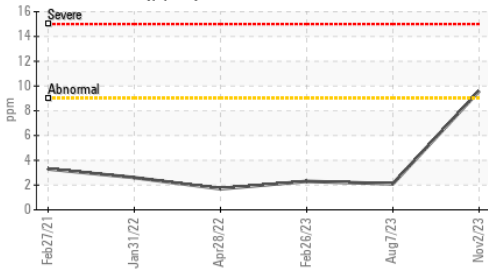
## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>28.7</b>	21.3	11.0

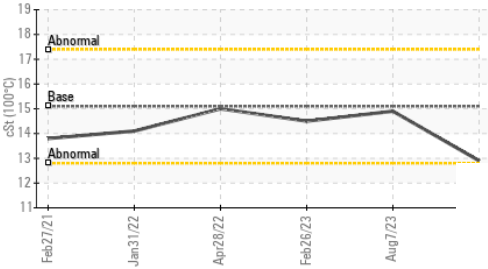


# OIL ANALYSIS REPORT

▲ Aluminum (ppm)



Viscosity @ 100°C

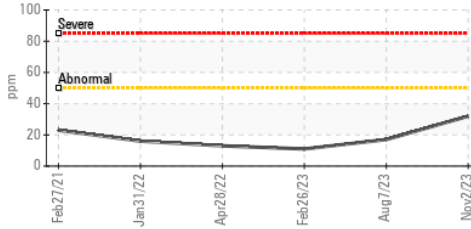


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	---
Silt	scalar	Visual*	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

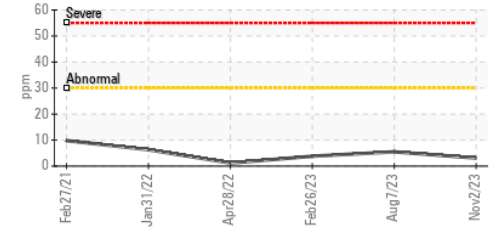
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.1	12.9	14.9

## GRAPHS

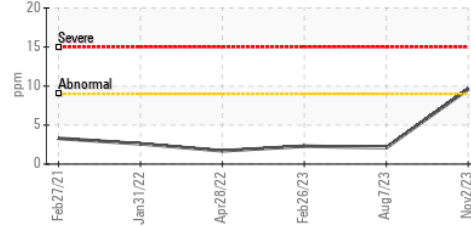
Iron (ppm)



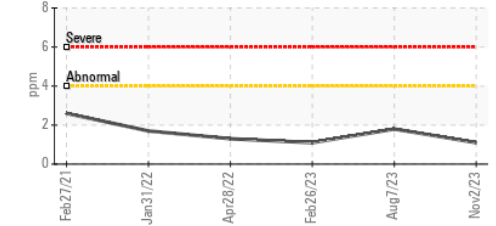
Lead (ppm)



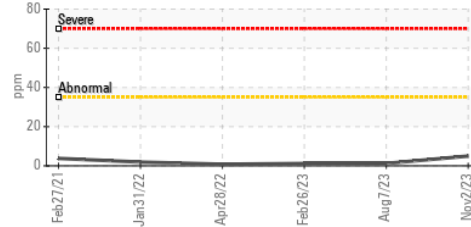
▲ Aluminum (ppm)



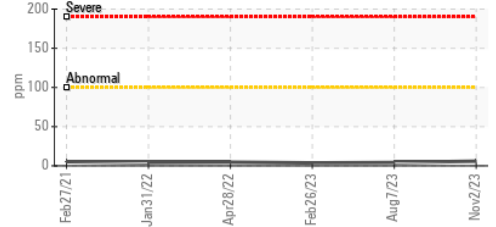
Chromium (ppm)



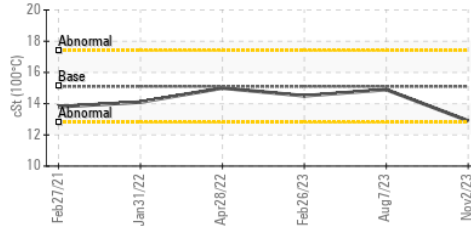
Copper (ppm)



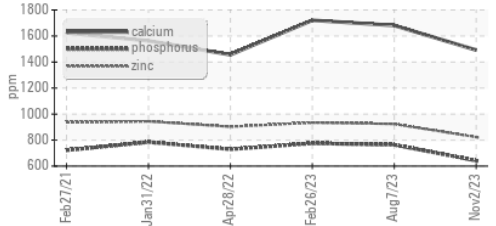
Silicon (ppm)



Viscosity @ 100°C



Additives



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 554 - Edmonton SW  
**Sample No.** : GFL0093877 **Received** : 03 Nov 2023  
**Lab Number** : 02593821 **Diagnosed** : 03 Nov 2023  
**Unique Number** : 5670900 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: Visual )

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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