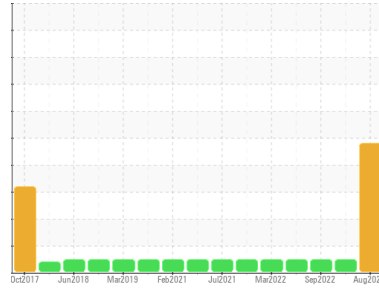




# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id  
**201042**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON XL SYN BLEND 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

Test for glycol is positive. There is a moderate concentration of glycol present in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0084320</b>	GFL0060221	GFL0057818
Sample Date	Client Info		<b>09 Aug 2023</b>	10 Nov 2022	07 Sep 2022
Machine Age	kms	Client Info	<b>391695</b>	9209	8416
Oil Age	kms	Client Info	<b>0</b>	443	0
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>ABNORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

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

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>100	<b>22</b>	20	8
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>5</b>	3	6
Lead	ppm	ASTM D5185(m)	>40	<b>2</b>	0	2
Copper	ppm	ASTM D5185(m)	>330	<b>9</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	0
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)	1	<b>3</b>	6	2
Barium	ppm	ASTM D5185(m)	1	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>58</b>	58	57
Manganese	ppm	ASTM D5185(m)	1	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>920</b>	934	945
Calcium	ppm	ASTM D5185(m)	1070	<b>1012</b>	1038	1063
Phosphorus	ppm	ASTM D5185(m)	1150	<b>1101</b>	1050	1060
Zinc	ppm	ASTM D5185(m)	1270	<b>1115</b>	1158	1190
Sulfur	ppm	ASTM D5185(m)	2060	<b>2567</b>	2507	2572
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>33</b>	15	4
Sodium	ppm	ASTM D5185(m)		<b>▲ 304</b>	5	3
Potassium	ppm	ASTM D5185(m)	>20	<b>▲ 17</b>	2	0
Glycol	%	ASTM D7922*		<b>▲ 0.09</b>	NEG	NEG

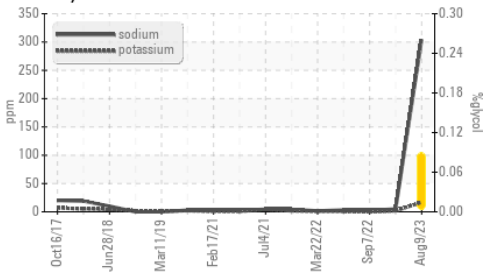
## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	<b>0.5</b>	0.9	0.6
Nitration	Abs/cm	ASTM D7624*	>20	<b>10.7</b>	9.8	9.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>21.5</b>	21.6	21.6



# OIL ANALYSIS REPORT

## ▲ Glycol Contamination



## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation Abs/.1mm ASTM D7414*	>25	<b>18.3</b>	17.1	18.7
Base Number (BN) mg KOH/g ASTM D2896*	9.6	<b>8.54</b>	8.67	8.95

## VISUAL

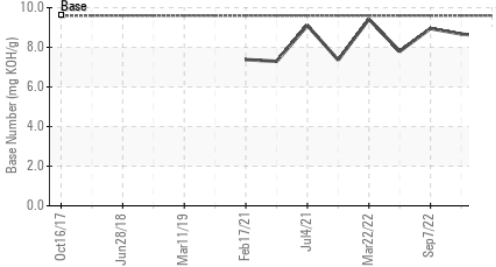
method	limit/base	current	history1	history2
Emulsified Water scalar Visual*	>0.2	<b>NEG</b>	NEG	NEG
Free Water scalar Visual*		<b>NEG</b>	NEG	NEG

## FLUID PROPERTIES

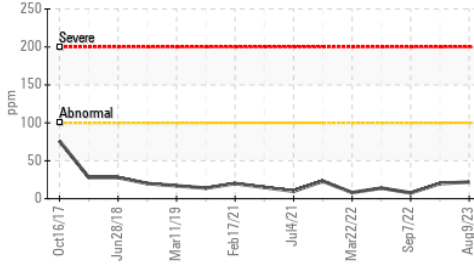
method	limit/base	current	history1	history2
Visc @ 100°C cSt ASTM D7279(m)	15.5	<b>13.2</b>	14.1	13.4

## GRAPHS

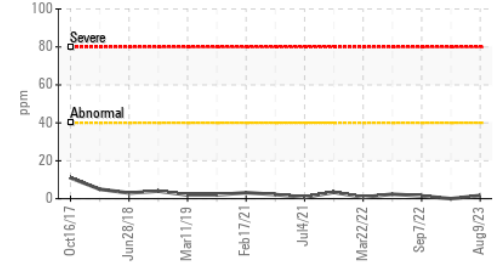
### Base Number



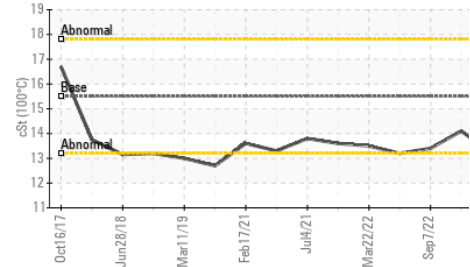
### Iron (ppm)



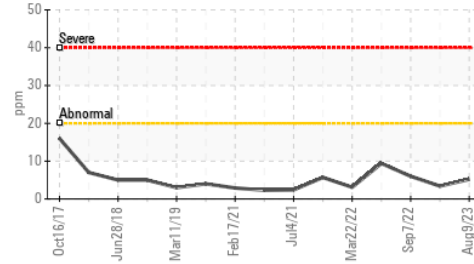
### Lead (ppm)



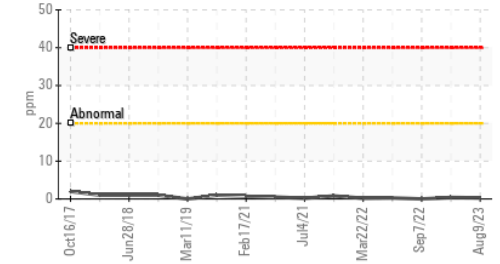
### Viscosity @ 100°C



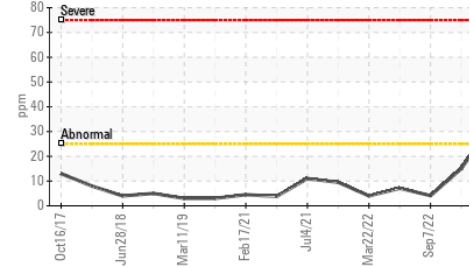
### Aluminum (ppm)



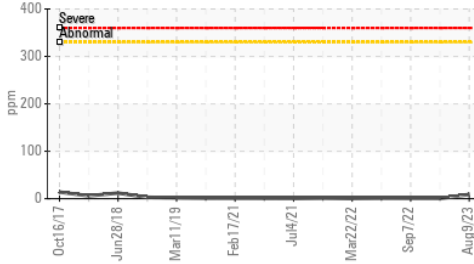
### Chromium (ppm)



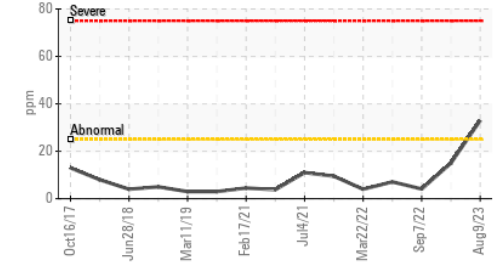
### Silicon (ppm)



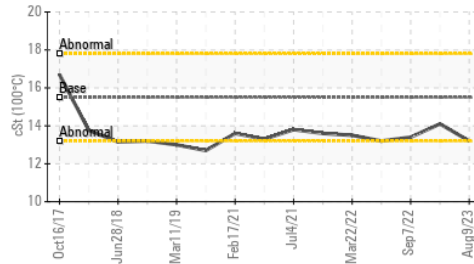
### Copper (ppm)



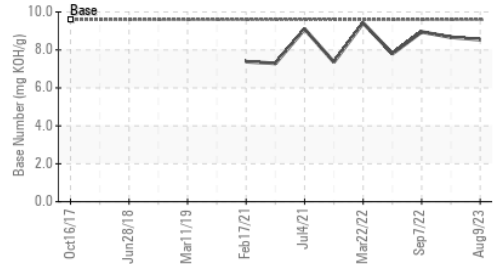
### Silicon (ppm)



### Viscosity @ 100°C



### Base Number



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County  
**Sample No.** : GFL0084320 **Received** : 15 Aug 2023  
**Lab Number** : 02575832 **Diagnosed** : 17 Aug 2023  
**Unique Number** : 5628892 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 2 ( Additional Tests: Glycol )

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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