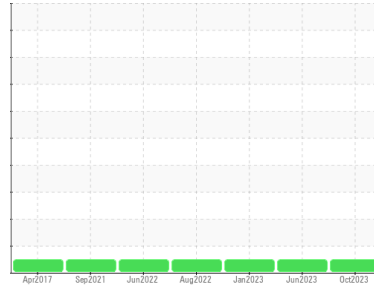




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**4533**

Component  
**Front Diesel Engine**

Fluid  
**PETRO CANADA DURON HP 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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0091642</b>	GFL0077635	GFL0063784
Sample Date	Client Info		<b>02 Oct 2023</b>	22 Jun 2023	10 Jan 2023
Machine Age	kms	Client Info	<b>230734</b>	215717	212851
Oil Age	kms	Client Info	<b>0</b>	0	1618
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	>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)	>100	<b>32</b>	8	5
Chromium	ppm	ASTM D5185(m)	>20	<b>1</b>	0	0
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>4</b>	1	1
Lead	ppm	ASTM D5185(m)	>40	<b>5</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>330	<b>3</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</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>2</b>	3	6
Barium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>60</b>	56	57
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>950</b>	912	891
Calcium	ppm	ASTM D5185(m)	1070	<b>1037</b>	1057	1046
Phosphorus	ppm	ASTM D5185(m)	1150	<b>989</b>	1015	1035
Zinc	ppm	ASTM D5185(m)	1270	<b>1189</b>	1140	1128
Sulfur	ppm	ASTM D5185(m)	2060	<b>2458</b>	2543	2585
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

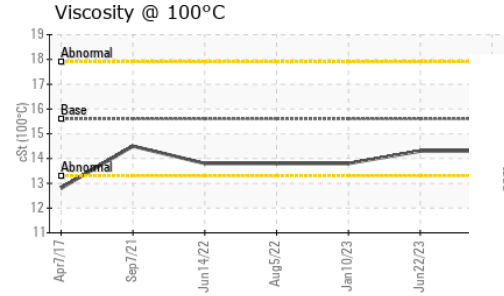
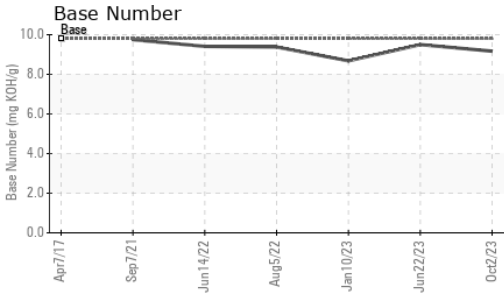
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>8</b>	8	5
Sodium	ppm	ASTM D5185(m)		<b>2</b>	1	1
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	0

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	<b>1.2</b>	0.1	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.0</b>	5.1	5.2
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>22.5</b>	18.8	19.2



# OIL ANALYSIS REPORT

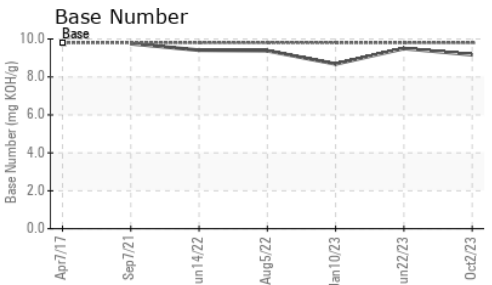
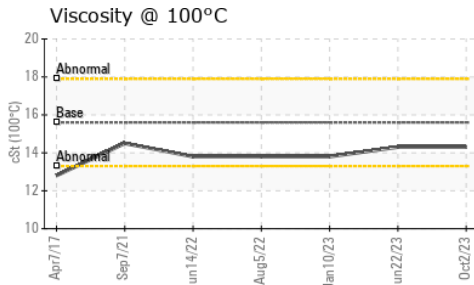
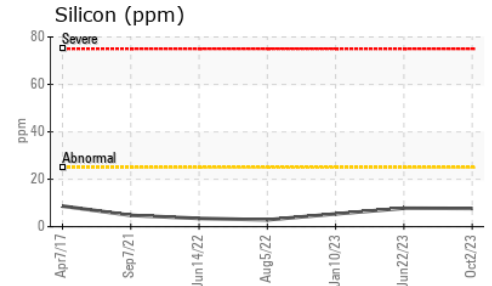
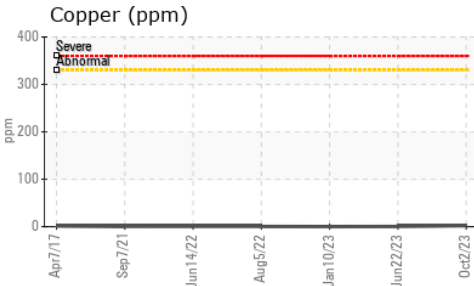
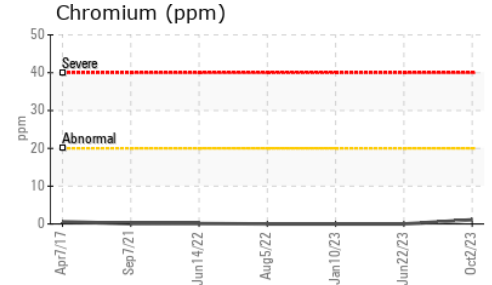
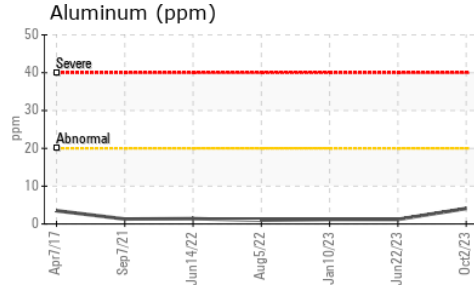
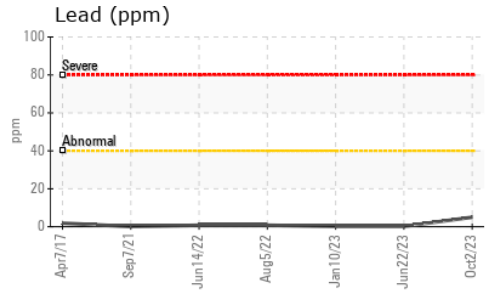
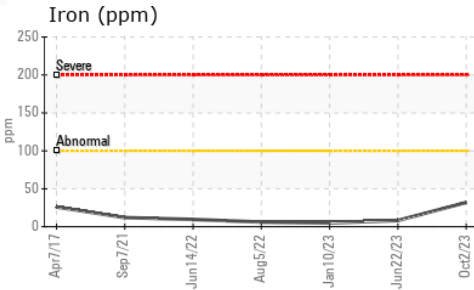


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>17.6</b>	14.1	14.2
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	<b>9.17</b>	9.50	8.68

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)	15.6	<b>14.3</b>	14.3	13.8

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County  
**Sample No.** : GFL0091642 **Received** : 11 Oct 2023  
**Lab Number** : **02588195** **Diagnosed** : 16 Oct 2023  
**Unique Number** : 5657261 **Diagnostician** : Wes Davis  
**Test Package** : MOB 2

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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