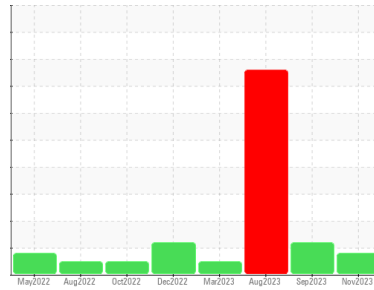




# OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id  
**811057**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

### Wear

Metal levels are typical for a new component breaking in.

### Contamination

Light fuel dilution occurring. No other contaminants were detected 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>GFL0099576</b>	GFL0084338	GFL0084359
Sample Date	Client Info	<b>30 Nov 2023</b>	11 Sep 2023	21 Aug 2023
Machine Age	kms	Client Info	65621	56251
Oil Age	kms	Client Info	0	53597
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed
Sample Status		<b>MARGINAL</b>	ABNORMAL	SEVERE

## CONTAMINATION

method	limit/base	current	history1	history2	
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185(m)	>100	<b>37</b>	22	81
Chromium	ppm	ASTM D5185(m)	>20	<b>2</b>	1	4
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	2	9
Aluminum	ppm	ASTM D5185(m)	>25	<b>2</b>	2	2
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	<1	2
Copper	ppm	ASTM D5185(m)	>330	<b>2</b>	7	35
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	<1
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)	0	<b>2</b>	2	4
Barium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	4
Molybdenum	ppm	ASTM D5185(m)	60	<b>55</b>	56	57
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	1	6
Magnesium	ppm	ASTM D5185(m)	1010	<b>870</b>	914	904
Calcium	ppm	ASTM D5185(m)	1070	<b>955</b>	959	995
Phosphorus	ppm	ASTM D5185(m)	1150	<b>897</b>	1003	960
Zinc	ppm	ASTM D5185(m)	1270	<b>1103</b>	1115	1117
Sulfur	ppm	ASTM D5185(m)	2060	<b>2259</b>	2396	2188
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

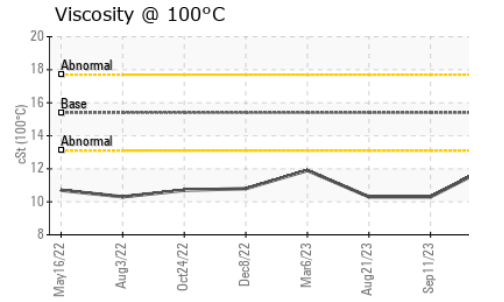
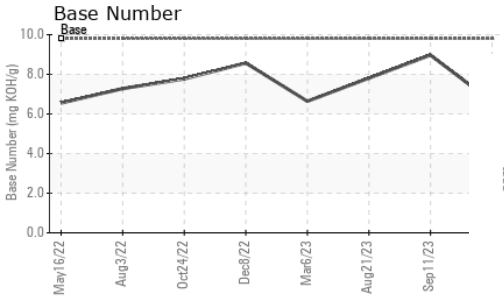
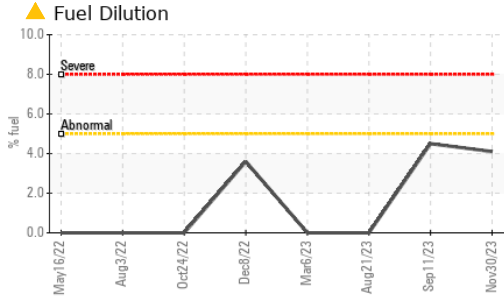
method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>25	<b>5</b>	8	▲ 30
Sodium	ppm	ASTM D5185(m)		<b>2</b>	3	11
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	4
Fuel	%	ASTM D7593*	>5	▲ <b>4.1</b>	▲ 4.5	<1.0

## INFRA-RED

method	limit/base	current	history1	history2		
Soot %	%	ASTM D7844*	>3	<b>0.4</b>	0.1	0.5
Nitration	Abs/cm	ASTM D7624*	>20	<b>10.1</b>	6.8	10.2
Sulfation	Abs/1mm	ASTM D7415*	>30	<b>21.8</b>	20.2	24.2



# OIL ANALYSIS REPORT

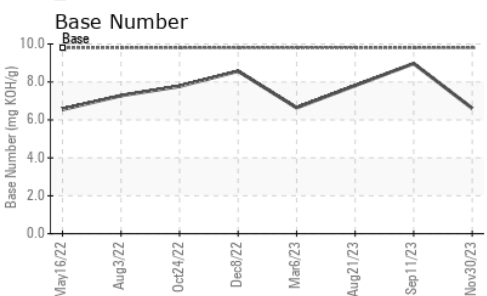
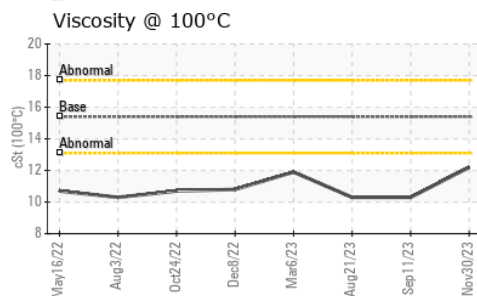
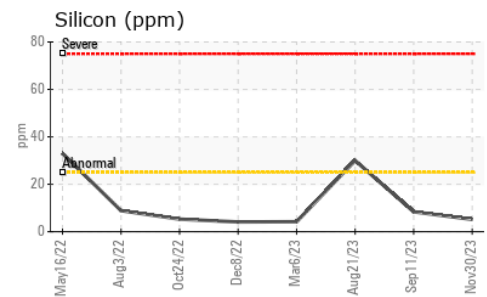
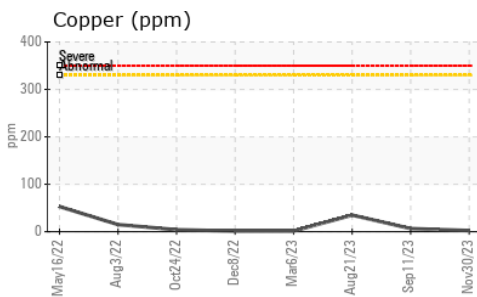
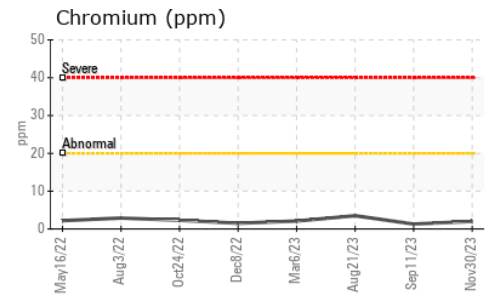
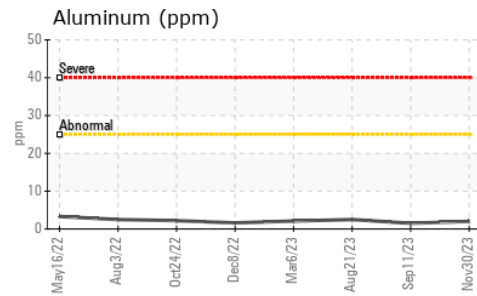
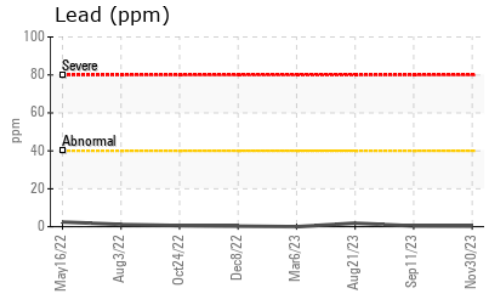
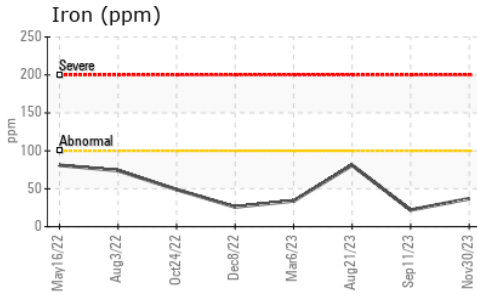


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.7	17.3	21.8
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	6.61	8.97	7.81

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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	12.2	▲ 10.3	10.3

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County  
**Sample No.** : GFL0099576 **Received** : 05 Dec 2023  
**Lab Number** : 02600876 **Diagnosed** : 06 Dec 2023  
**Unique Number** : 5693961 **Diagnostician** : Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel )  
 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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