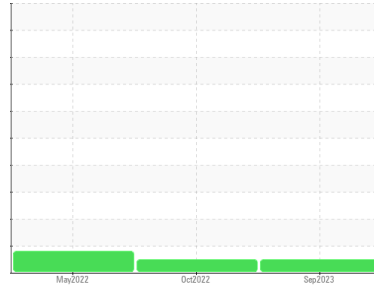




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**257007**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON UHP 5W30 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

Metal levels are typical for a new component breaking in.

### 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. Viscosity of sample indicates oil is within SAE 40 range, advise investigate. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0091607</b>	GFL0060238	GFL0052660
Sample Date	Client Info		<b>12 Sep 2023</b>	21 Oct 2022	12 May 2022
Machine Age	kms	Client Info	<b>7709</b>	189505	163819
Oil Age	kms	Client Info	<b>600</b>	25686	0
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	ABNORMAL

## 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>47</b>	96	▲ 167
Chromium	ppm	ASTM D5185(m) >20	<b>2</b>	2	4
Nickel	ppm	ASTM D5185(m) >4	<b>&lt;1</b>	<1	2
Titanium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	2
Silver	ppm	ASTM D5185(m) >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m) >20	<b>4</b>	7	11
Lead	ppm	ASTM D5185(m) >40	<b>&lt;1</b>	<1	1
Copper	ppm	ASTM D5185(m) >330	<b>28</b>	36	30
Tin	ppm	ASTM D5185(m) >15	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185(m)	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	0	<1
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>15</b>	24	19
Barium	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 64	<b>67</b>	100	248
Manganese	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	2	2
Magnesium	ppm	ASTM D5185(m) 1160	<b>1114</b>	1019	643
Calcium	ppm	ASTM D5185(m) 820	<b>813</b>	942	1363
Phosphorus	ppm	ASTM D5185(m) 1160	<b>982</b>	981	732
Zinc	ppm	ASTM D5185(m) 1260	<b>1179</b>	1165	920
Sulfur	ppm	ASTM D5185(m) 3000	<b>2419</b>	2464	1845
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

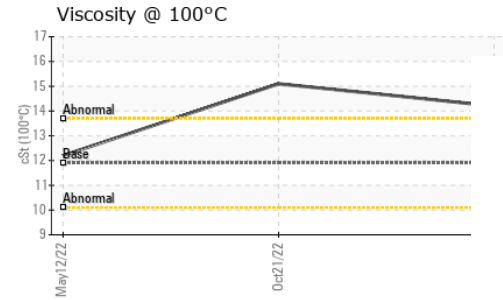
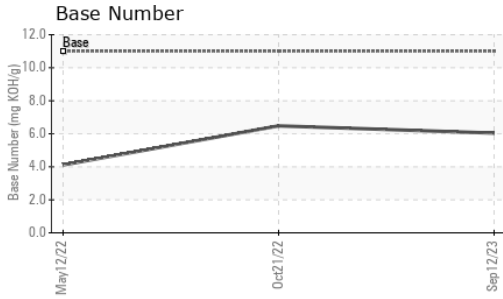
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	<b>11</b>	11	19
Sodium	ppm	ASTM D5185(m)	<b>7</b>	8	5
Potassium	ppm	ASTM D5185(m) >20	<b>1</b>	1	1

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624* >20	<b>15.9</b>	18.0	16.6
Sulfation	Abs./1mm	ASTM D7415* >30	<b>30.9</b>	34.8	33.3



# OIL ANALYSIS REPORT

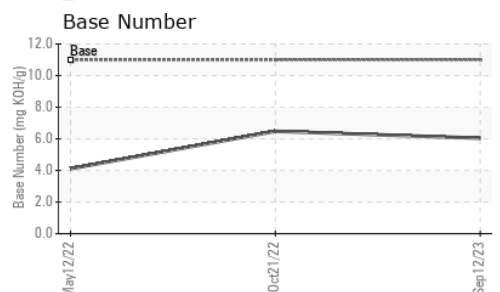
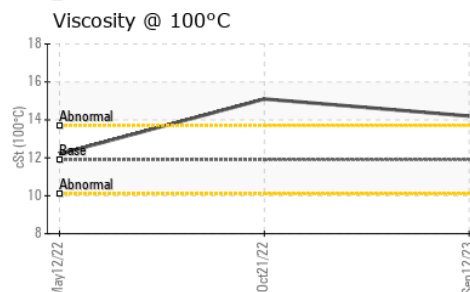
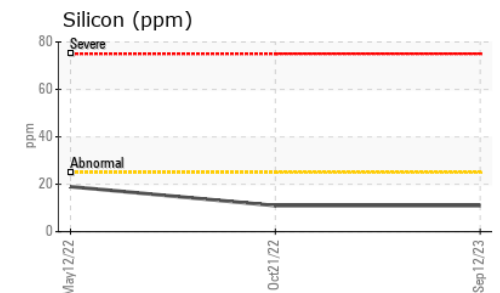
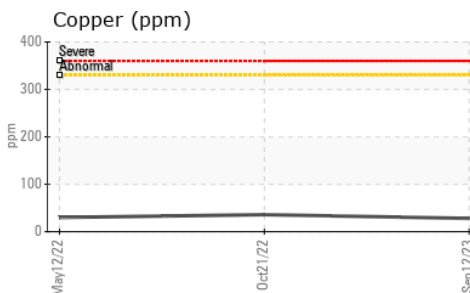
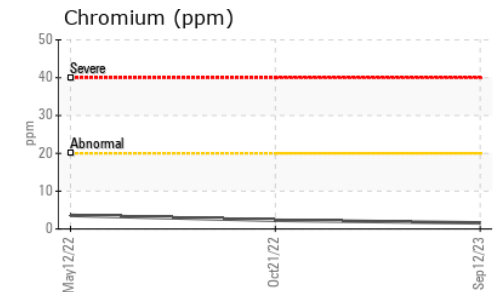
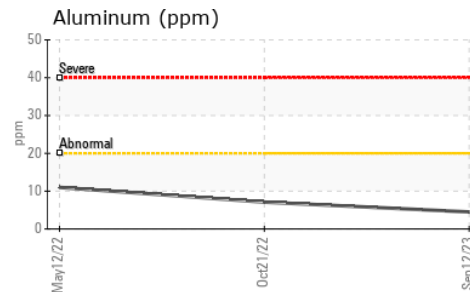
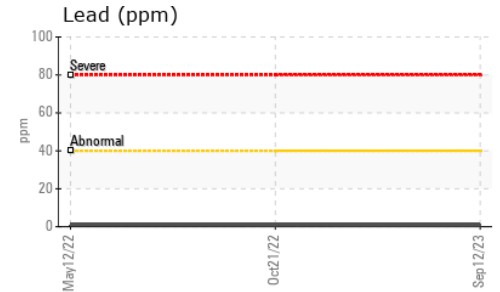
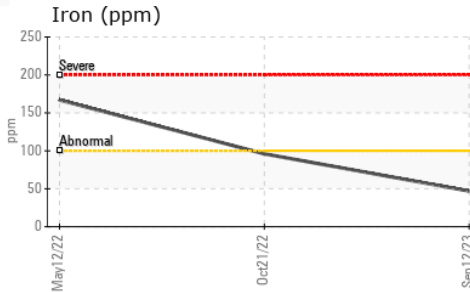


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>35.6</b>	40.9	34.3
Base Number (BN)	mg KOH/g	ASTM D2896*	11.0	<b>6.04</b>	6.48	4.11

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)	11.9	<b>14.2</b>	15.1	12.2

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County  
**Sample No.** : GFL0091607 **Received** : 19 Sep 2023 220 Carmek Blvd  
**Lab Number** : 02583459 **Diagnosed** : 21 Sep 2023 Rocky View County, AB  
**Unique Number** : 5644524 **Diagnostician** : Bill Quesnel CA T1X 1X1  
**Test Package** : MOB 2 **Contact:** GFL Calgary  
 calgarymaintenance@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.

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