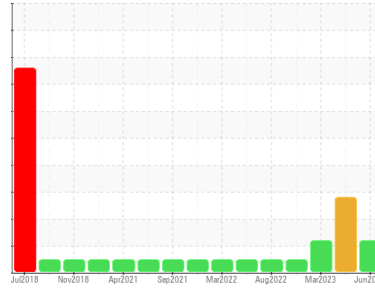




# OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id  
**801107**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### Recommendation

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

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

### Fluid Condition

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

## SAMPLE INFORMATION

	method	limit/base	current	history 1	history 2
Sample Number	Client Info		<b>GFL0077588</b>	GFL0077633	GFL0070699
Sample Date	Client Info		<b>29 Jun 2023</b>	05 Jun 2023	21 Mar 2023
Machine Age	hrs	Client Info	<b>12790</b>	12608	97535
Oil Age	hrs	Client Info	<b>187</b>	600	600
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>ABNORMAL</b>	SEVERE	ABNORMAL

## CONTAMINATION

	method	limit/base	current	history 1	history 2
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185(m) >80	<b>13</b>	25	18
Chromium	ppm	ASTM D5185(m) >5	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m) >2	<b>0</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) >30	<b>4</b>	5	4
Lead	ppm	ASTM D5185(m) >30	<b>0</b>	0	0
Copper	ppm	ASTM D5185(m) >150	<b>&lt;1</b>	1	1
Tin	ppm	ASTM D5185(m) >5	<b>0</b>	0	<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	history 1	history 2
Boron	ppm	ASTM D5185(m) 0	<b>2</b>	2	1
Barium	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 60	<b>54</b>	49	55
Manganese	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	<b>874</b>	784	885
Calcium	ppm	ASTM D5185(m) 1070	<b>963</b>	874	1075
Phosphorus	ppm	ASTM D5185(m) 1150	<b>985</b>	856	1024
Zinc	ppm	ASTM D5185(m) 1270	<b>1092</b>	978	1114
Sulfur	ppm	ASTM D5185(m) 2060	<b>2375</b>	1974	2432
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

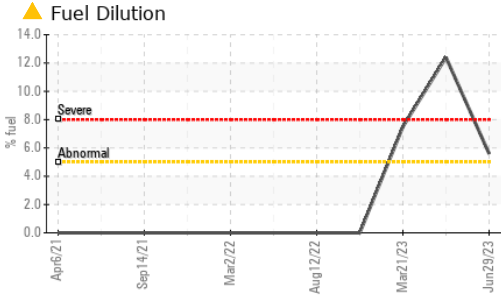
	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185(m) >20	<b>5</b>	4	6
Sodium	ppm	ASTM D5185(m)	<b>5</b>	7	7
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	1	1
Fuel	%	ASTM D7593* >5	<b>▲ 5.6</b>	◆ 12.4	▲ 7.5

## INFRA-RED

	method	limit/base	current	history 1	history 2
Soot %	%	ASTM D7844* >3	<b>0.4</b>	1	0.5
Nitration	Abs/cm	ASTM D7624* >20	<b>8.0</b>	11.5	10.6
Sulfation	Abs./1mm	ASTM D7415* >30	<b>21.1</b>	24.8	23.9



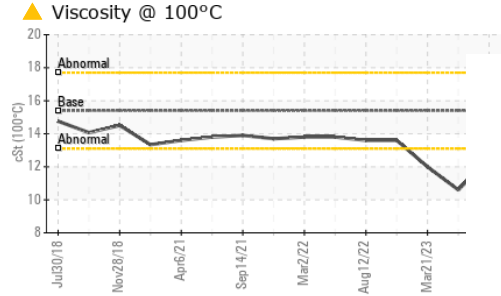
# OIL ANALYSIS REPORT



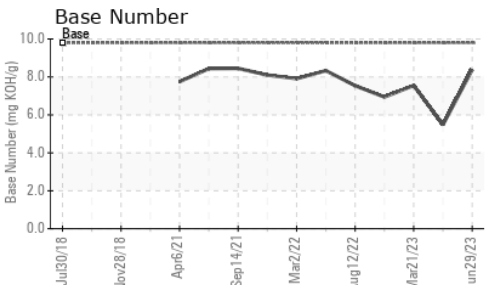
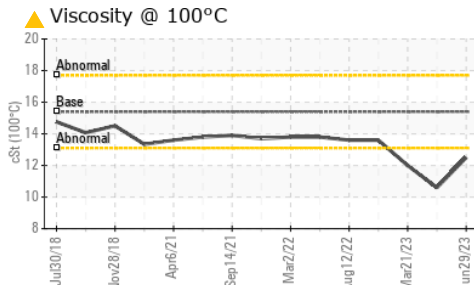
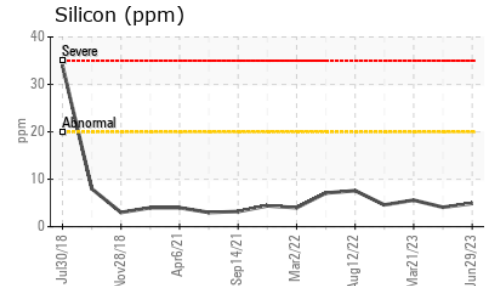
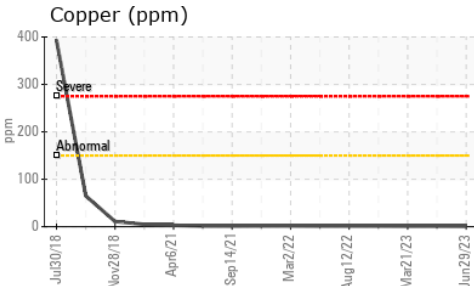
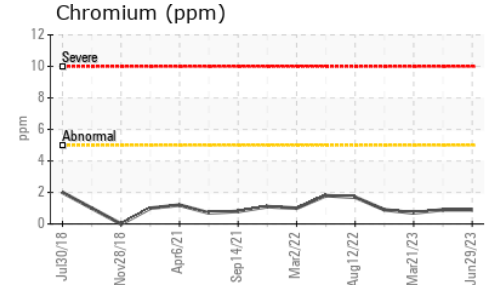
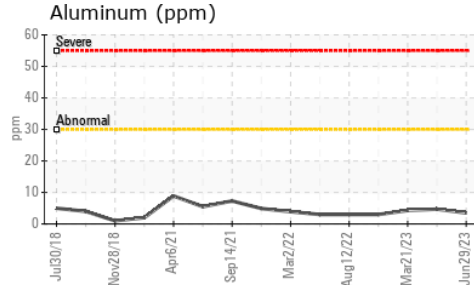
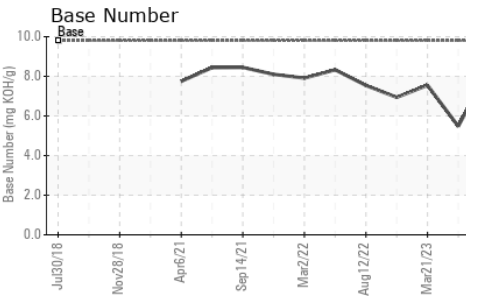
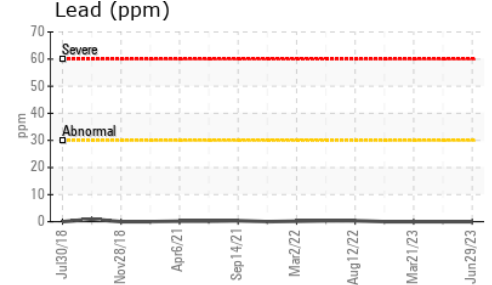
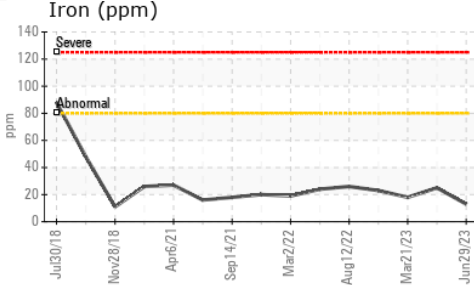
FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>18.7</b>	25.4	18.9
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	<b>8.38</b>	5.48	7.55

VISUAL		method	limit/base	current	history 1	history 2
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	history 1	history 2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>▲ 12.5</b>	● 10.6	▲ 12.0



## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County  
**Sample No.** : GFL0077588 **Received** : 06 Jul 2023  
**Lab Number** : 02568197 **Diagnosed** : 07 Jul 2023  
**Unique Number** : 5605243 **Diagnostician** : Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: 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.

220 Carmek Blvd  
 Rocky View County, AB  
 CA T1X 1X1  
 Contact: GFL Calgary  
 calgarymaintenance@gflenv.com  
 T:  
 F: (403)369-6163