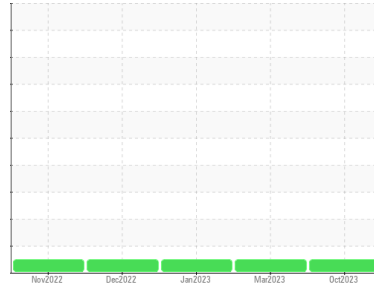




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**831046**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON GEO LD 15W40 (--- GAL)**

## 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>GFL0091588</b>	GFL0070729	GFL0063715
Sample Date	Client Info		<b>30 Oct 2023</b>	01 Mar 2023	11 Jan 2023
Machine Age	hrs	Client Info	<b>2700</b>	1658	1391
Oil Age	hrs	Client Info	<b>0</b>	585	316
Oil Changed	Client Info		<b>Changed</b>	Changed	Not Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<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)	>120	<b>18</b>	19	19
Chromium	ppm	ASTM D5185(m)	>20	<b>2</b>	1	<1
Nickel	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>3</b>	3	3
Lead	ppm	ASTM D5185(m)	>40	<b>3</b>	1	<1
Copper	ppm	ASTM D5185(m)	>330	<b>2</b>	4	4
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	1	<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)	50	<b>7</b>	9	15
Barium	ppm	ASTM D5185(m)	5	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	50	<b>59</b>	54	52
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	2	2
Magnesium	ppm	ASTM D5185(m)	560	<b>615</b>	562	557
Calcium	ppm	ASTM D5185(m)	1510	<b>1746</b>	1667	1572
Phosphorus	ppm	ASTM D5185(m)	780	<b>746</b>	719	739
Zinc	ppm	ASTM D5185(m)	870	<b>993</b>	912	874
Sulfur	ppm	ASTM D5185(m)	2040	<b>2015</b>	2034	1993
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

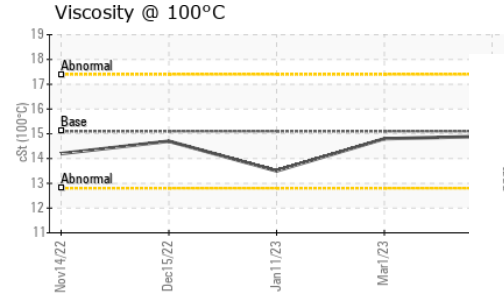
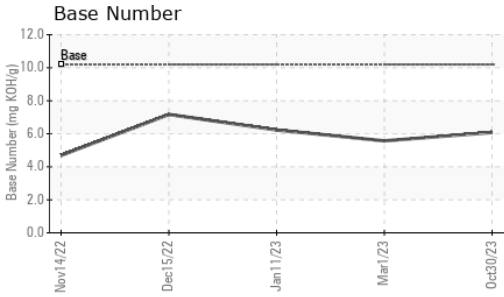
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>7</b>	7	9
Sodium	ppm	ASTM D5185(m)		<b>9</b>	8	7
Potassium	ppm	ASTM D5185(m)	>20	<b>3</b>	1	2

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>12.4</b>	7.7	10.8
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>27.0</b>	19.6	21.7



# OIL ANALYSIS REPORT

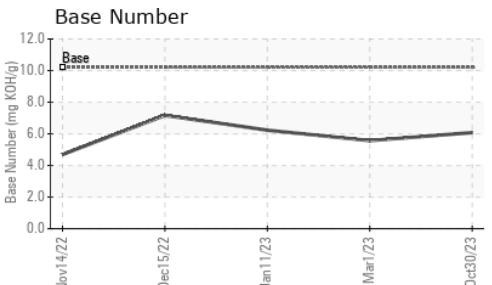
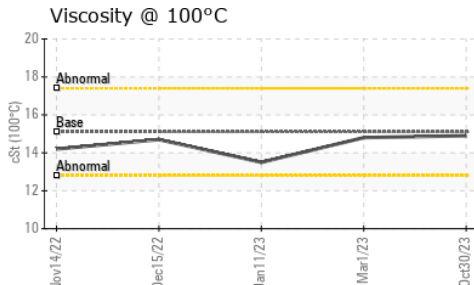
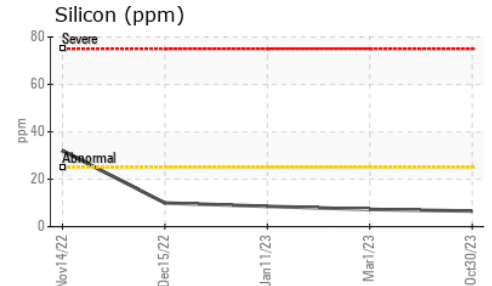
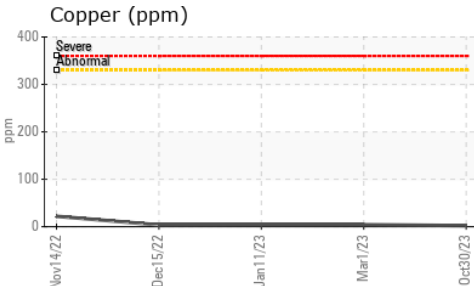
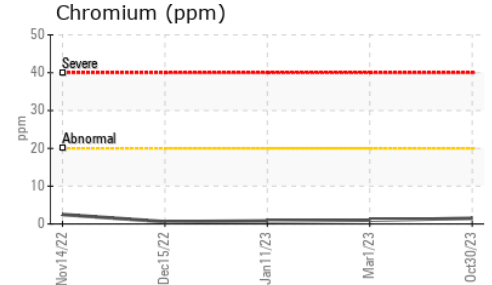
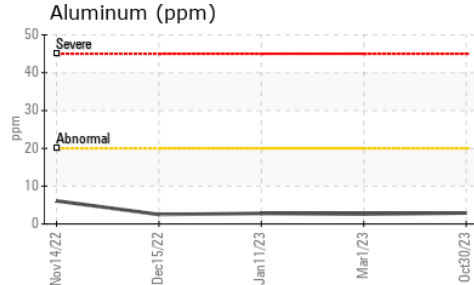
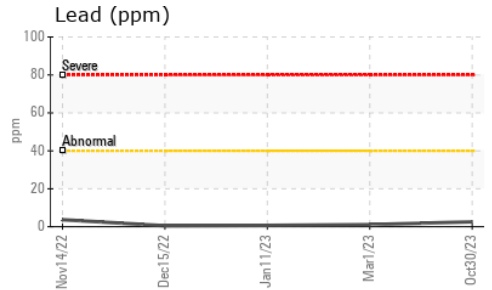
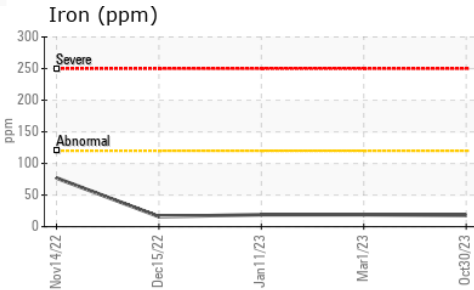


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>22.2</b>	12.7	18.3
Base Number (BN)	mg KOH/g	ASTM D2896*	10.2	<b>6.08</b>	5.57	6.23

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)	15.1	<b>14.9</b>	14.8	13.5

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County  
**Sample No.** : GFL0091588 **Received** : 07 Nov 2023  
**Lab Number** : 02594593 **Diagnosed** : 08 Nov 2023  
**Unique Number** : 5671672 **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.

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