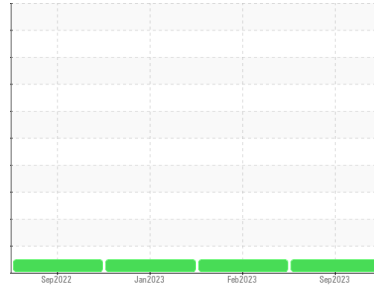




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**831048**  
 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>GFL0091627</b>	GFL0070720	GFL0063712
Sample Date	Client Info		<b>21 Sep 2023</b>	22 Feb 2023	11 Jan 2023
Machine Age	hrs	Client Info	<b>3003</b>	1901	1666
Oil Age	hrs	Client Info	<b>0</b>	852	614
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>31</b>	28	18
Chromium	ppm	ASTM D5185(m)	>20	<b>4</b>	2	1
Nickel	ppm	ASTM D5185(m)	>5	<b>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>4</b>	3	2
Lead	ppm	ASTM D5185(m)	>40	<b>3</b>	2	<1
Copper	ppm	ASTM D5185(m)	>330	<b>3</b>	4	3
Tin	ppm	ASTM D5185(m)	>15	<b>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>6</b>	7	9
Barium	ppm	ASTM D5185(m)	5	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	50	<b>66</b>	59	54
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	2	1
Magnesium	ppm	ASTM D5185(m)	560	<b>701</b>	647	568
Calcium	ppm	ASTM D5185(m)	1510	<b>1913</b>	1810	1646
Phosphorus	ppm	ASTM D5185(m)	780	<b>853</b>	844	719
Zinc	ppm	ASTM D5185(m)	870	<b>1084</b>	996	910
Sulfur	ppm	ASTM D5185(m)	2040	<b>2111</b>	2108	1993
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

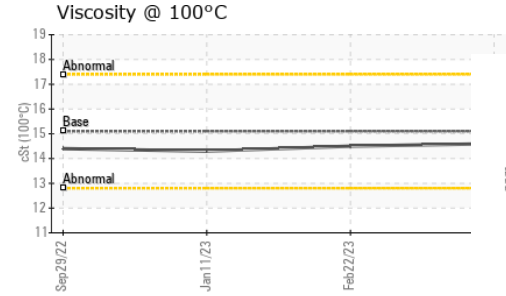
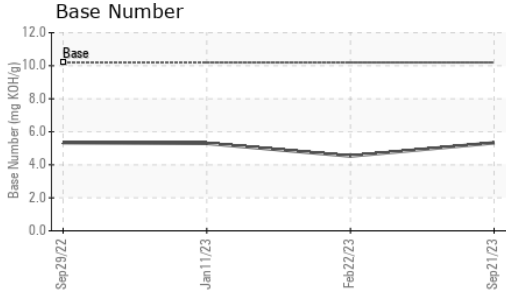
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>9</b>	9	7
Sodium	ppm	ASTM D5185(m)		<b>13</b>	11	8
Potassium	ppm	ASTM D5185(m)	>20	<b>4</b>	<1	<1

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>12.9</b>	5.8	10.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>30.3</b>	17.3	22.1



# OIL ANALYSIS REPORT

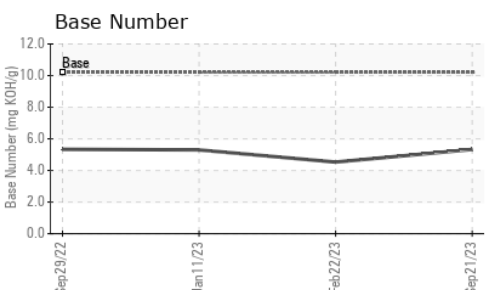
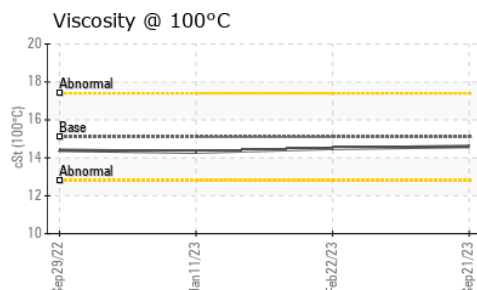
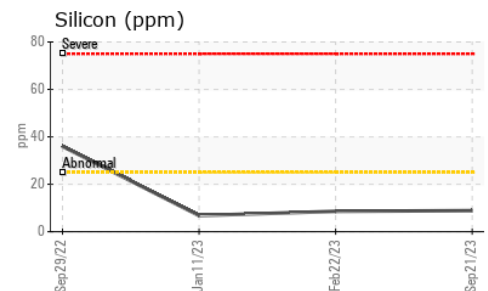
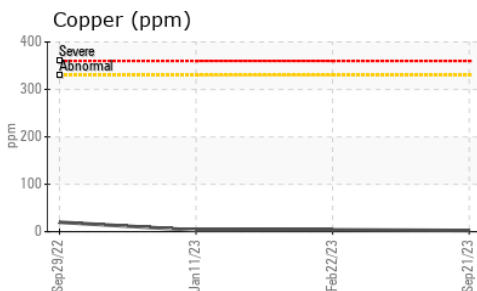
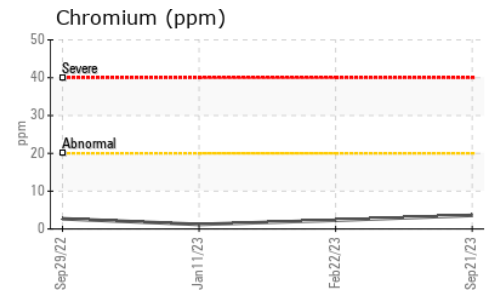
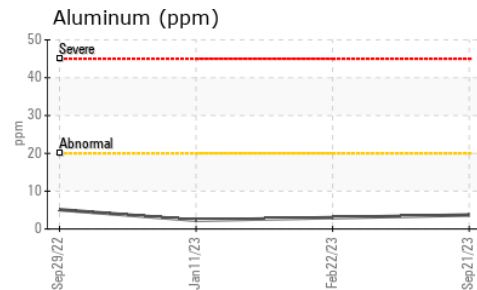
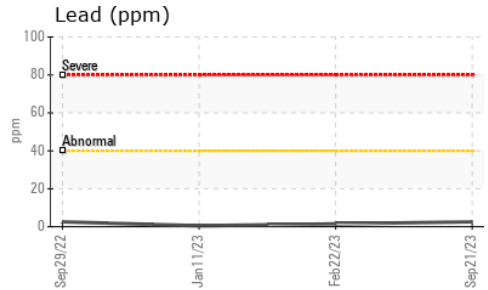
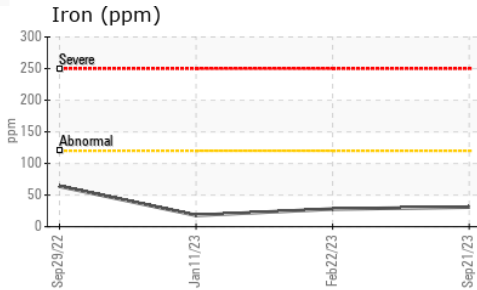


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>26.9</b>	9.3	17.3
Base Number (BN)	mg KOH/g	ASTM D2896*	10.2	<b>5.33</b>	4.53	5.30

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>14.6</b>	14.5	14.3

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County  
**Sample No.** : GFL0091627 **Received** : 27 Sep 2023 220 Carmek Blvd  
**Lab Number** : 02585427 **Diagnosed** : 28 Sep 2023 Rocky View County, AB  
**Unique Number** : 5646492 **Diagnostician** : Kevin Marson 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.

T:  
 F: (403)369-6163