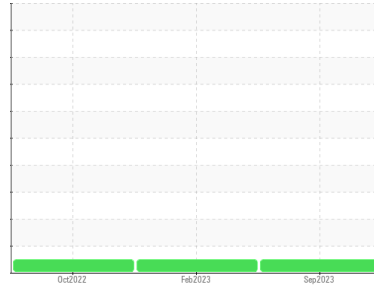




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**831052**  
 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>GFL0091623</b>	GFL0070721	GFL0060231
Sample Date	Client Info		<b>18 Sep 2023</b>	27 Feb 2023	03 Oct 2022
Machine Age	hrs	Client Info	<b>46820</b>	1750	1017
Oil Age	hrs	Client Info	<b>18318</b>	733	1017
Oil Changed	Client Info		<b>Changed</b>	N/A	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>19</b>	24	55
Chromium	ppm	ASTM D5185(m)	>20	<b>2</b>	2	2
Nickel	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	5
Silver	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	5	11
Lead	ppm	ASTM D5185(m)	>40	<b>2</b>	<1	2
Copper	ppm	ASTM D5185(m)	>330	<b>2</b>	3	18
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	1	2
Antimony	ppm	ASTM D5185(m)		<b>0</b>	<1	<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)	50	<b>10</b>	8	7
Barium	ppm	ASTM D5185(m)	5	<b>&lt;1</b>	0	3
Molybdenum	ppm	ASTM D5185(m)	50	<b>58</b>	55	57
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	2	11
Magnesium	ppm	ASTM D5185(m)	560	<b>627</b>	574	750
Calcium	ppm	ASTM D5185(m)	1510	<b>1740</b>	1657	1288
Phosphorus	ppm	ASTM D5185(m)	780	<b>786</b>	735	790
Zinc	ppm	ASTM D5185(m)	870	<b>988</b>	907	923
Sulfur	ppm	ASTM D5185(m)	2040	<b>2039</b>	2044	2018
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

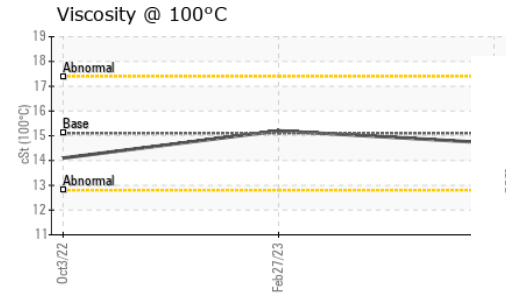
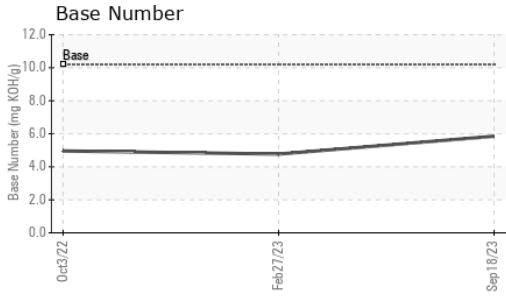
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>8</b>	20	40
Sodium	ppm	ASTM D5185(m)		<b>10</b>	8	7
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	5	14

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>11.3</b>	11.1	12.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>26.0</b>	24.7	27.2



# OIL ANALYSIS REPORT

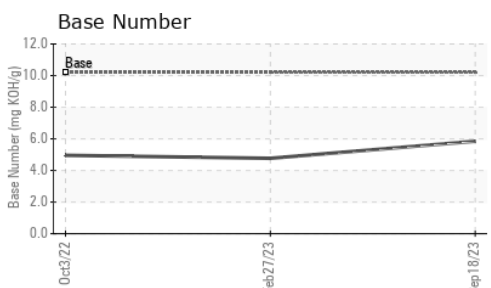
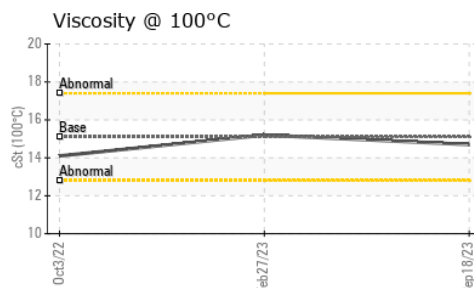
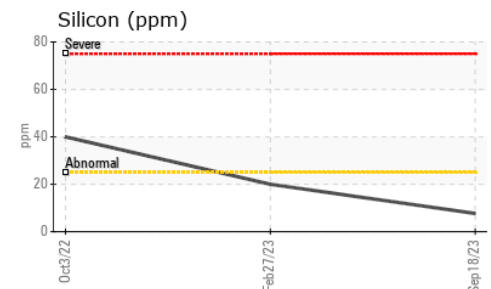
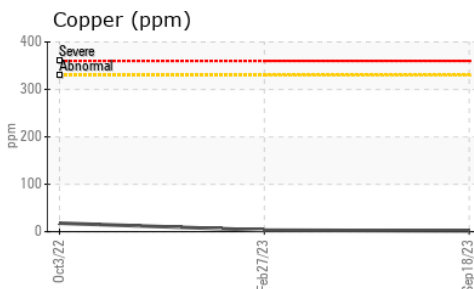
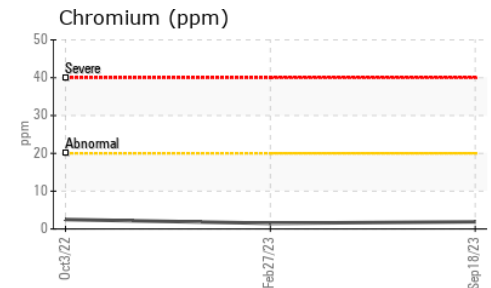
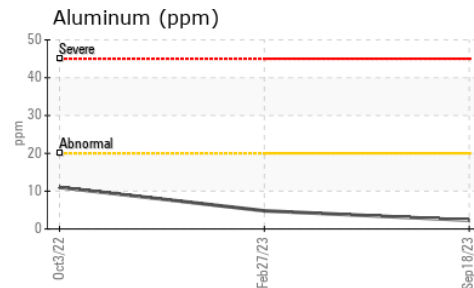
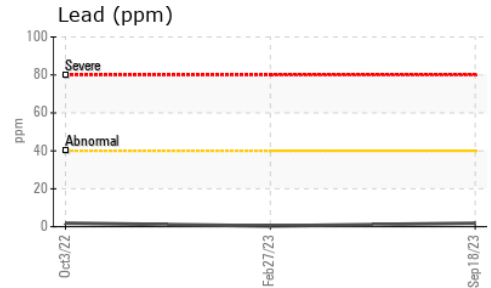
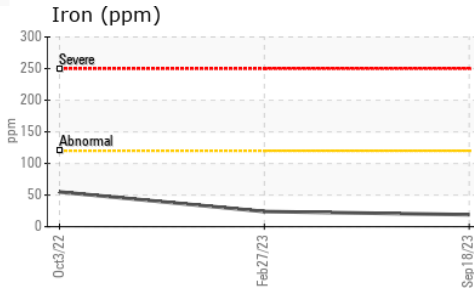


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>21.2</b>	18.0	23.9
Base Number (BN)	mg KOH/g	ASTM D2896*	10.2	<b>5.85</b>	4.77	4.96

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>14.7</b>	15.2	14.1

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County  
**Sample No.** : GFL0091623 **Received** : 27 Sep 2023 220 Carmek Blvd  
**Lab Number** : 02585428 **Diagnosed** : 28 Sep 2023 Rocky View County, AB  
**Unique Number** : 5646493 **Diagnostician** : Wes Davis 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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