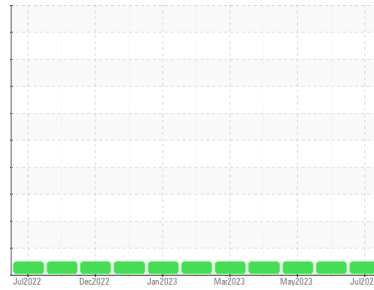




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**731125**

Component  
**Natural Gas 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	history 1	history 2	
Sample Number	Client Info	<b>GFL0083749</b>	GFL0083774	GFL0070359	
Sample Date	Client Info	<b>07 Jul 2023</b>	06 Jun 2023	09 May 2023	
Machine Age	hrs	Client Info	<b>5633</b>	5439	5273
Oil Age	hrs	Client Info	<b>1200</b>	0	600
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Not Changed	
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL	

## WEAR METALS

method	limit/base	current	history 1	history 2		
Iron	ppm	ASTM D5185m	>50	<b>11</b>	10	9
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>9	<b>2</b>	1	2
Lead	ppm	ASTM D5185m	>30	<b>9</b>	5	5
Copper	ppm	ASTM D5185m	>35	<b>2</b>	2	1
Tin	ppm	ASTM D5185m	>4	<b>1</b>	1	1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history 1	history 2		
Boron	ppm	ASTM D5185m	50	<b>8</b>	6	7
Barium	ppm	ASTM D5185m	5	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m	50	<b>54</b>	58	54
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	560	<b>574</b>	524	587
Calcium	ppm	ASTM D5185m	1510	<b>1683</b>	1623	1670
Phosphorus	ppm	ASTM D5185m	780	<b>701</b>	668	686
Zinc	ppm	ASTM D5185m	870	<b>949</b>	962	1010
Sulfur	ppm	ASTM D5185m	2040	<b>2802</b>	2689	2869

## CONTAMINANTS

method	limit/base	current	history 1	history 2		
Silicon	ppm	ASTM D5185m	>+100	<b>4</b>	4	4
Sodium	ppm	ASTM D5185m		<b>9</b>	8	9
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	1	5

## INFRA-RED

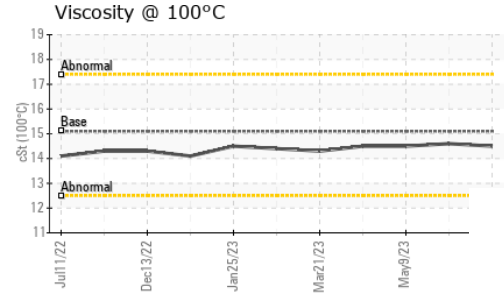
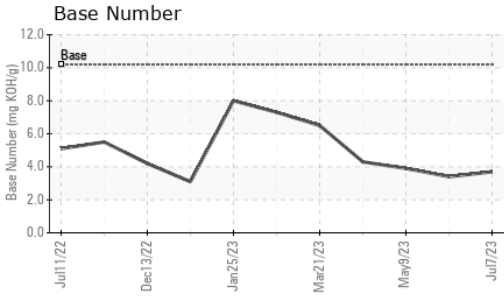
method	limit/base	current	history 1	history 2		
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.8</b>	11.1	11.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.4</b>	24.1	22.9

## FLUID DEGRADATION

method	limit/base	current	history 1	history 2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>21.2</b>	20.9	19.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	<b>3.7</b>	3.4	3.9



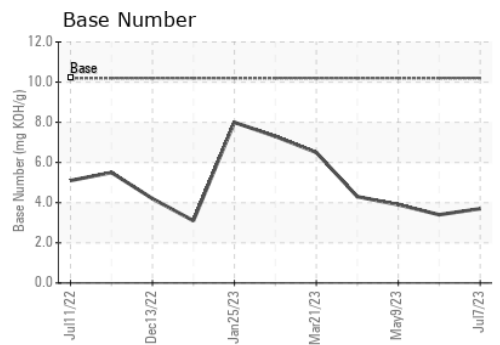
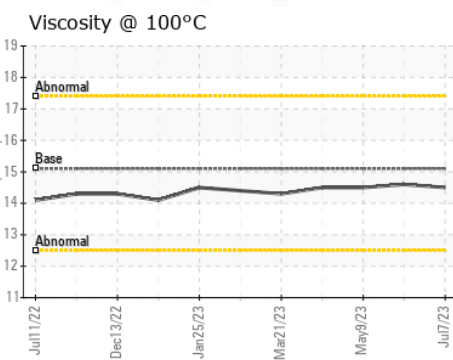
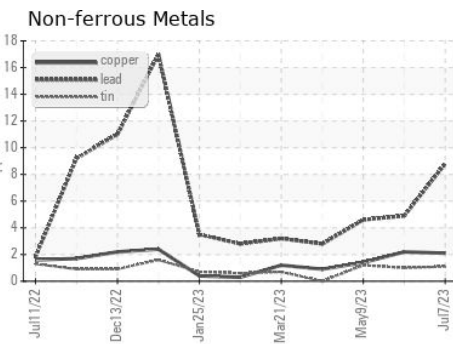
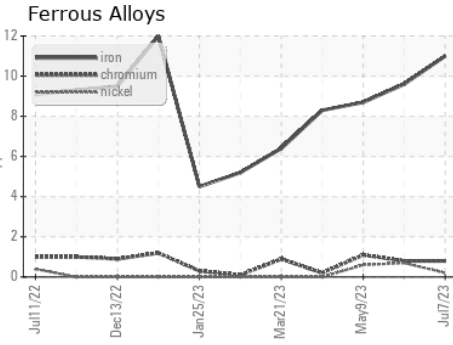
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history 1	history 2	
Visc @ 100°C	cSt	ASTM D445	15.1	<b>14.5</b>	14.6	14.5

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0083749 **Received** : 12 Jul 2023  
**Lab Number** : **05895903** **Diagnosed** : 12 Jul 2023  
**Unique Number** : 10551713 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 836 - Kansas City Hauling**  
 7801 East Truman Road  
 Kansas City, MO  
 US 64126  
 Contact: Robert Hart  
 rhart@gflenv.com  
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To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)