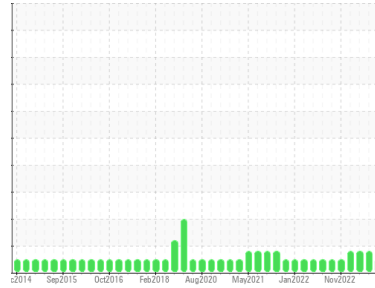




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**3439C**

Component  
**Natural Gas Engine**

Fluid  
**PETRO CANADA DURON GEO LD 15W40 (29 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>GFL0098108</b>	GFL0088538	GFL0088574
Sample Date	Client Info	<b>01 Nov 2023</b>	13 Sep 2023	17 Jul 2023
Machine Age	hrs	<b>15105</b>	15105	15105
Oil Age	hrs	<b>297</b>	508	395
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>NORMAL</b>	ABNORMAL	ABNORMAL

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >50	<b>15</b>	21	18
Chromium	ppm	ASTM D5185m >4	<b>&lt;1</b>	1	2
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >9	<b>2</b>	<1	6
Lead	ppm	ASTM D5185m >30	<b>&lt;1</b>	1	3
Copper	ppm	ASTM D5185m >35	<b>21</b>	▲ 101	▲ 258
Tin	ppm	ASTM D5185m >4	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 50	<b>15</b>	11	11
Barium	ppm	ASTM D5185m 5	<b>0</b>	0	1
Molybdenum	ppm	ASTM D5185m 50	<b>55</b>	55	54
Manganese	ppm	ASTM D5185m 0	<b>0</b>	<1	1
Magnesium	ppm	ASTM D5185m 560	<b>592</b>	634	623
Calcium	ppm	ASTM D5185m 1510	<b>1598</b>	1743	1735
Phosphorus	ppm	ASTM D5185m 780	<b>738</b>	775	770
Zinc	ppm	ASTM D5185m 870	<b>989</b>	1004	1000
Sulfur	ppm	ASTM D5185m 2040	<b>2928</b>	2728	2793

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >+100	<b>8</b>	9	8
Sodium	ppm	ASTM D5185m	<b>2</b>	7	7
Potassium	ppm	ASTM D5185m >20	<b>6</b>	2	3

## INFRA-RED

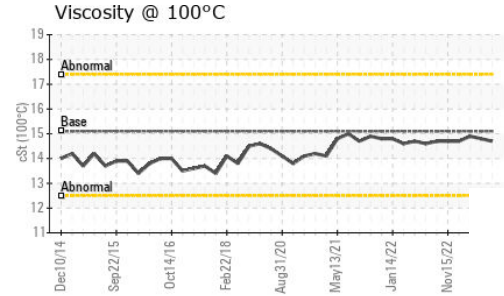
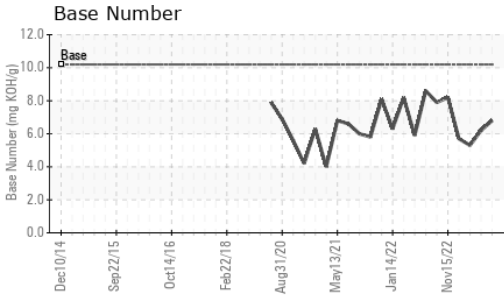
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	<b>0</b>	0	0
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.3</b>	10.0	10.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.5</b>	20.0	19.6

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>17.1</b>	17.8	17.6
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	<b>6.8</b>	6.2	5.3



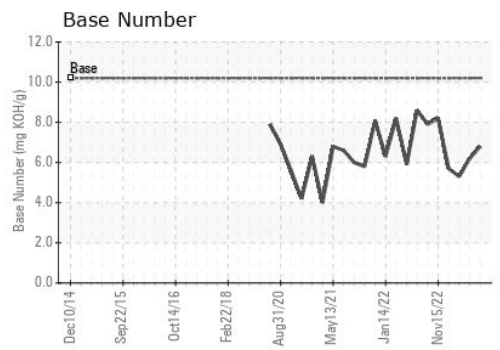
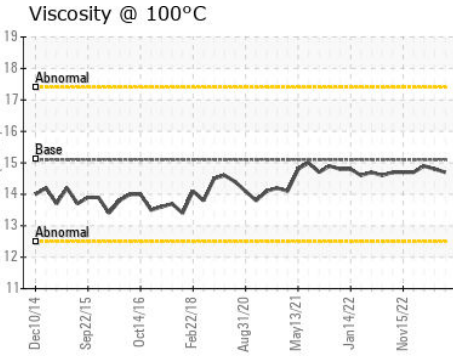
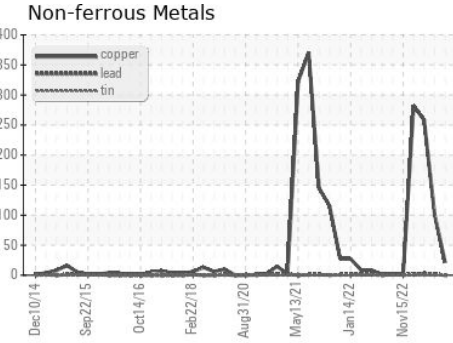
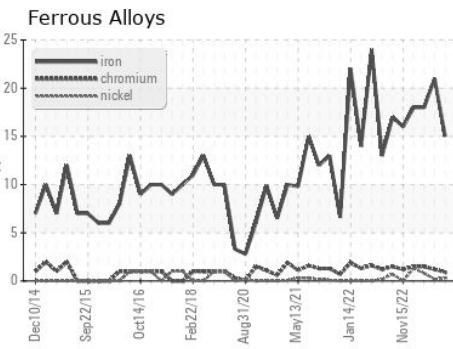
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
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	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.1	<b>14.7</b>	14.8	14.9

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0098108 **Received** : 02 Nov 2023  
**Lab Number** : **05997293** **Diagnosed** : 03 Nov 2023  
**Unique Number** : 10725653 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 017 - Durham**  
 148 Stone Park Court  
 Durham, NC  
 US 27703  
 Contact: Shane Parks  
 shane.parks@gflenv.com  
 T: (919)596-1363  
 F: (919)598-1852

Certificate L2367  
 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)