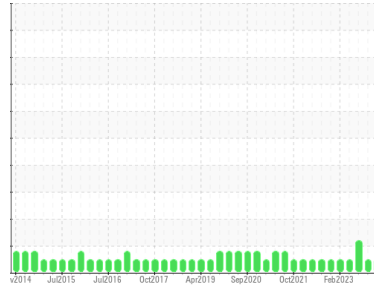




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**FREIGHTLINER 11198C**

Component  
**Natural Gas Engine**

Fluid  
**PETRO CANADA DURON GEO LD 15W40 (9 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>GFL0087476</b>	GFL0071812	GFL0071835
Sample Date	Client Info		<b>05 Sep 2023</b>	21 Jun 2023	25 Apr 2023
Machine Age	hrs	Client Info	<b>2517</b>	2186	1984
Oil Age	hrs	Client Info	<b>533</b>	202	669
Oil Changed		Client Info	<b>Not Changed</b>	Not Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	ABNORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	<b>12</b>	8	28
Chromium	ppm	ASTM D5185m >4	<b>3</b>	2	7
Nickel	ppm	ASTM D5185m >2	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >9	<b>2</b>	<1	3
Lead	ppm	ASTM D5185m >30	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m >35	<b>25</b>	18	67
Tin	ppm	ASTM D5185m >4	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	<b>5</b>	21	7
Barium	ppm	ASTM D5185m 5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 50	<b>54</b>	54	54
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	2
Magnesium	ppm	ASTM D5185m 560	<b>572</b>	532	570
Calcium	ppm	ASTM D5185m 1510	<b>1698</b>	1556	1579
Phosphorus	ppm	ASTM D5185m 780	<b>692</b>	754	691
Zinc	ppm	ASTM D5185m 870	<b>972</b>	953	902
Sulfur	ppm	ASTM D5185m 2040	<b>2770</b>	2824	2723

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	<b>5</b>	5	17
Sodium	ppm	ASTM D5185m	<b>8</b>	5	12
Potassium	ppm	ASTM D5185m >20	<b>1</b>	3	2

## INFRA-RED

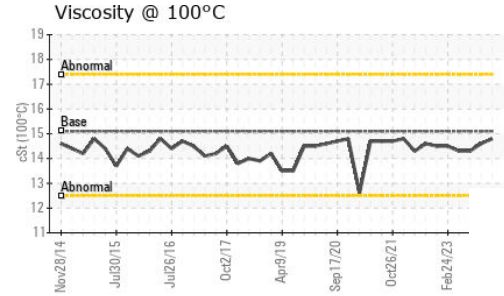
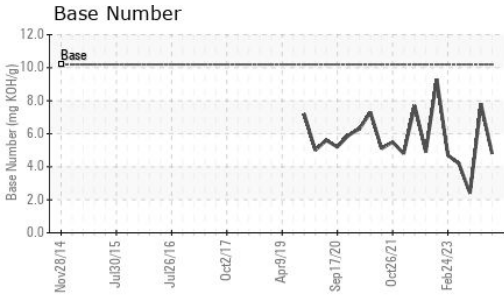
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	<b>0</b>	0.1	0
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.2</b>	8.4	11.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.1</b>	19.6	21.8

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>17.4</b>	16.6	19.1
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	<b>4.8</b>	7.8	▲ 2.4



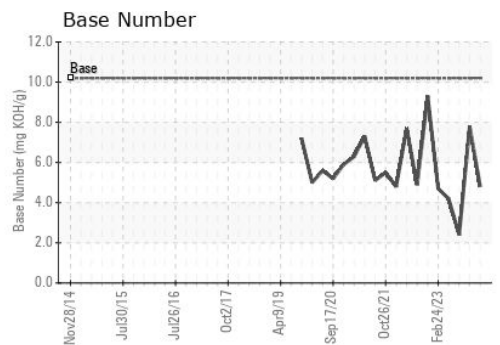
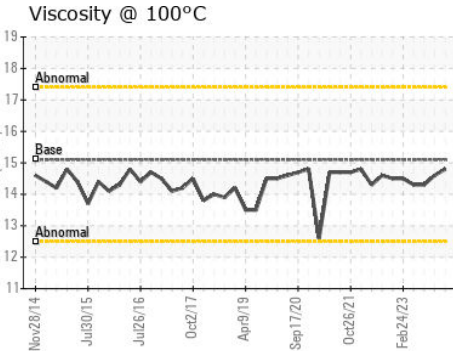
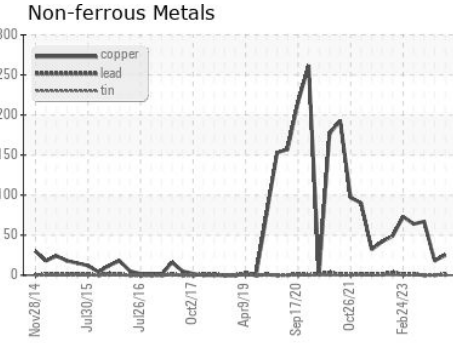
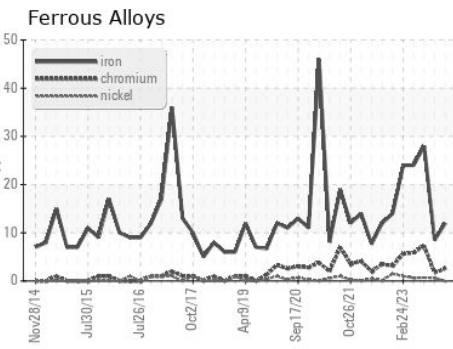
# OIL ANALYSIS REPORT



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>14.8</b>	14.6	14.3

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0087476 **Received** : 06 Sep 2023  
**Lab Number** : **05943312** **Diagnosed** : 07 Sep 2023  
**Unique Number** : 10633924 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 331 - Columbus**  
 180 Ada Moore Rd  
 Columbus, NC  
 US 28722  
 Contact: Matt Segars  
 matt.segars@gflenv.com  
 T: (800)207-6618  
 F: (252)617-2494

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)