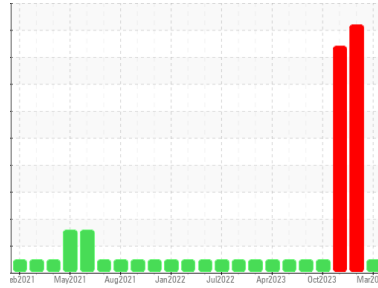




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**(YA156369)**

Machine Id  
**910029**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON GEO LD 15W40 (8 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>GFL0090035</b>	GFL0090007	GFL0099825
Sample Date	Client Info		<b>21 Mar 2024</b>	08 Mar 2024	19 Dec 2023
Machine Age	hrs	Client Info	<b>9862</b>	41069	9547
Oil Age	hrs	Client Info	<b>100</b>	0	0
Oil Changed	Client Info		<b>Not Changed</b>	Not Changed	Not Changed
Sample Status			<b>NORMAL</b>	SEVERE	SEVERE

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>165	<b>6</b>	43	17
Chromium	ppm	ASTM D5185m	>5	<b>1</b>	▲ 10	6
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	2	1
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	4	3
Lead	ppm	ASTM D5185m	>150	<b>1</b>	14	11
Copper	ppm	ASTM D5185m	>90	<b>1</b>	8	4
Tin	ppm	ASTM D5185m	>5	<b>1</b>	<1	2
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	50	<b>28</b>	15	13
Barium	ppm	ASTM D5185m	5	<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m	50	<b>51</b>	94	51
Manganese	ppm	ASTM D5185m	0	<b>1</b>	1	<1
Magnesium	ppm	ASTM D5185m	560	<b>582</b>	571	550
Calcium	ppm	ASTM D5185m	1510	<b>1518</b>	1567	1504
Phosphorus	ppm	ASTM D5185m	780	<b>789</b>	833	805
Zinc	ppm	ASTM D5185m	870	<b>972</b>	1013	1059
Sulfur	ppm	ASTM D5185m	2040	<b>2632</b>	2940	2790

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>35	<b>7</b>	17	10
Sodium	ppm	ASTM D5185m		<b>3</b>	▲ 414	● 206
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	▲ 6687	▲ 3537
Glycol	%	*ASTM D2982		<b>NEG</b>	▲ 0.20	▲ 0.12

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>7.5	<b>0</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.0</b>	17.4	13.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.0</b>	31.8	27.2

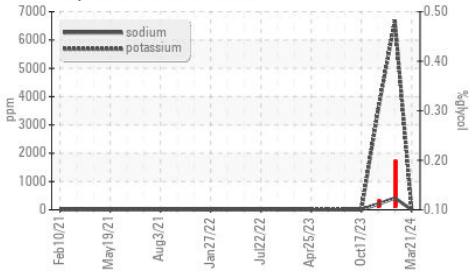
## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.5</b>	18.0	18.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	<b>7.4</b>	15.5	10.9

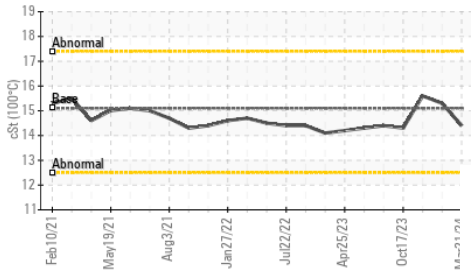


# OIL ANALYSIS REPORT

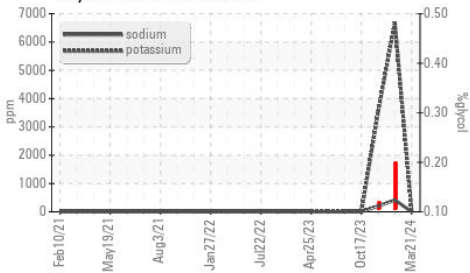
**Glycol Contamination**



**Viscosity @ 100°C**



**Glycol Contamination**

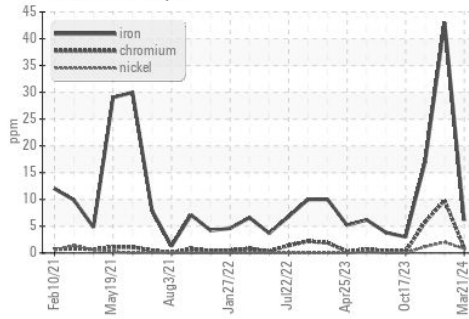


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

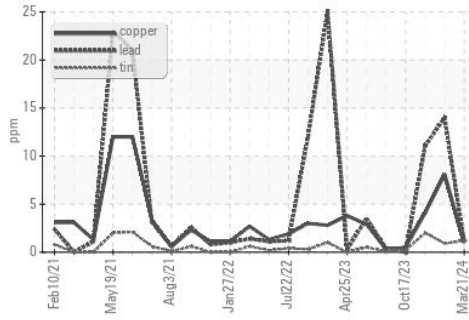
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.1	<b>14.4</b>	15.3	15.6

## GRAPHS

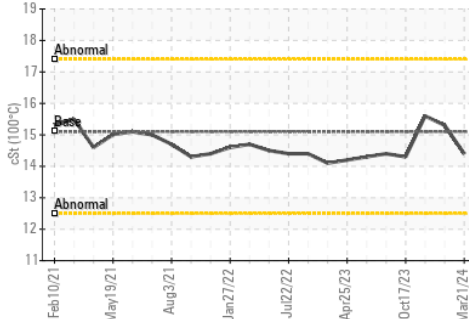
**Ferrous Alloys**



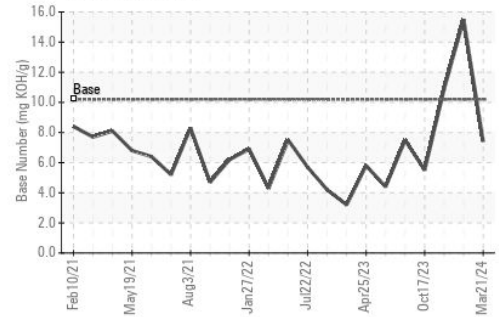
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0090035  
**Lab Number** : **06127499**  
**Unique Number** : 10941650  
**Test Package** : FLEET

**Received** : 25 Mar 2024  
**Tested** : 27 Mar 2024  
**Diagnosed** : 27 Mar 2024 - Jonathan Hester

**GFL Environmental - 018 - Fayetteville**  
 4621 Marracco Drive  
 Hope Mills, NC  
 US 28348  
 Contact: Robert Carter  
 robert.carter@gflenv.com  
 T: (910)596-1170  
 F:

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)