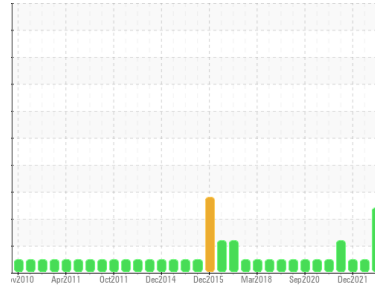




# OIL ANALYSIS REPORT

Sample Rating Trend



**DIRT**



Area  
**(PG711F)**  
Machine Id  
**11041**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (9 GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

### Wear

Cylinder, crank, or cam shaft wear is indicated.

### Contamination

Elemental level of silicon (Si) above normal indicating ingress of seal material. Test for glycol is negative.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0074613</b>	GFL0072044	GFL0037179
Sample Date	Client Info		<b>17 Jan 2024</b>	17 Oct 2023	07 Dec 2021
Machine Age	hrs	Client Info	<b>2020</b>	229387	1027
Oil Age	hrs	Client Info	<b>304</b>	0	0
Oil Changed	Client Info		<b>Not Chngd</b>	N/A	Changed
Sample Status			<b>ABNORMAL</b>	NORMAL	NORMAL

## 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 >130	<b>▲ 105</b>	<1	49
Chromium	ppm	ASTM D5185m >10	<b>2</b>	0	2
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m >2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>10</b>	1	13
Lead	ppm	ASTM D5185m >20	<b>3</b>	0	<1
Copper	ppm	ASTM D5185m >125	<b>42</b>	<1	1
Tin	ppm	ASTM D5185m >4	<b>3</b>	0	0
Antimony	ppm	ASTM D5185m	<b>---</b>	---	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>20</b>	2	13
Barium	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	1
Molybdenum	ppm	ASTM D5185m 60	<b>69</b>	60	58
Manganese	ppm	ASTM D5185m 0	<b>2</b>	0	<1
Magnesium	ppm	ASTM D5185m 1010	<b>987</b>	1000	839
Calcium	ppm	ASTM D5185m 1070	<b>1127</b>	1101	1000
Phosphorus	ppm	ASTM D5185m 1150	<b>1025</b>	1047	910
Zinc	ppm	ASTM D5185m 1270	<b>1272</b>	1306	1123
Sulfur	ppm	ASTM D5185m 2060	<b>3092</b>	3271	2688

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>▲ 74</b>	5	4
Sodium	ppm	ASTM D5185m	<b>17</b>	2	2
Potassium	ppm	ASTM D5185m >20	<b>59</b>	3	20
Glycol	%	*ASTM D2982	<b>0.0</b>	NEG	NEG

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>1.3</b>	0.1	0.7
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.0</b>	4.1	9
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.8</b>	16.6	19.9

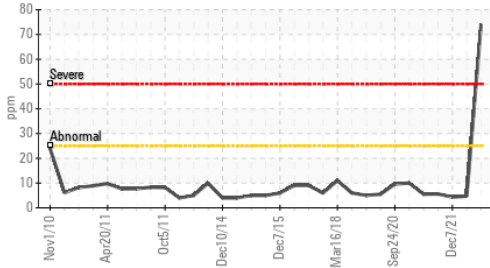
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.7</b>	12.1	15.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.1</b>	9.2	9.4



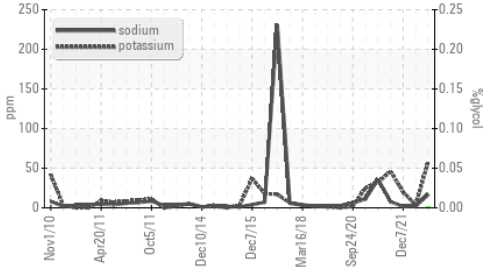
# OIL ANALYSIS REPORT

## ▲ Silicon (ppm)



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	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

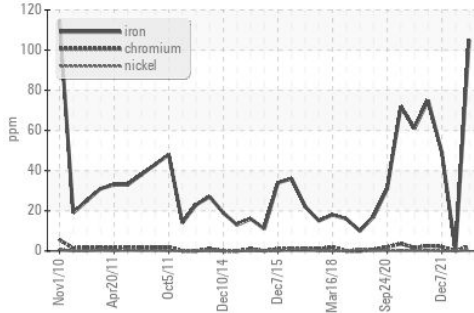
## ● Glycol Contamination



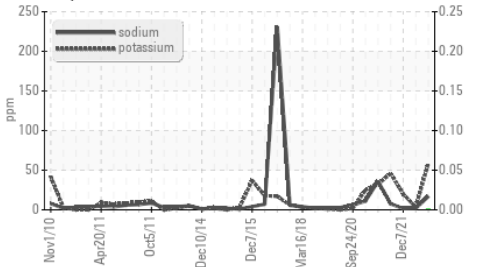
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	14.2

## GRAPHS

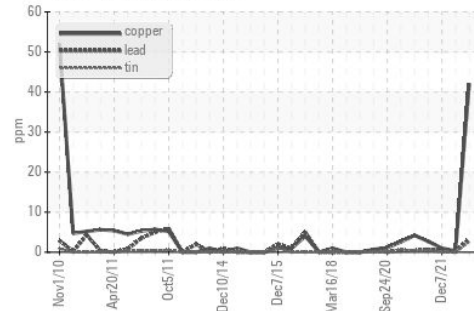
### ▲ Ferrous Alloys



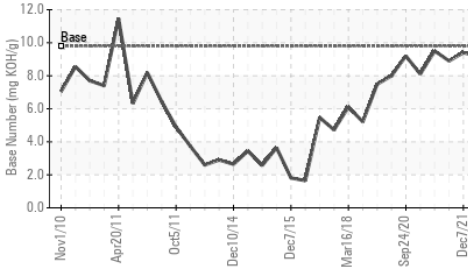
## ● Glycol Contamination



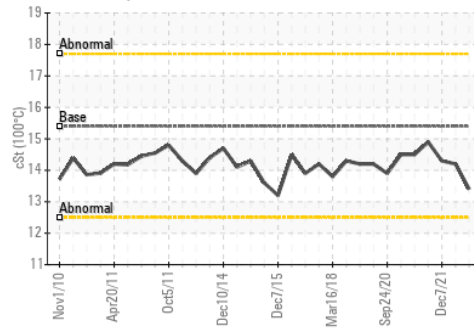
### Non-ferrous Metals



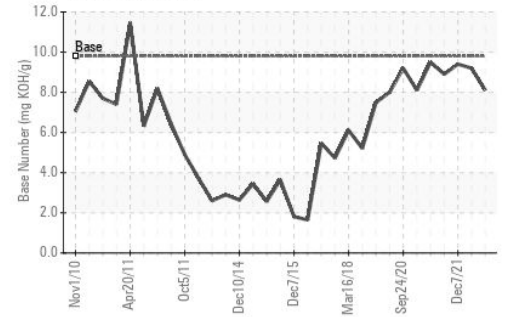
## Base Number



### Viscosity @ 100°C



## Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0074613 **Received** : 19 Jan 2024  
**Lab Number** : 06065455 **Diagnosed** : 02 Feb 2024  
**Unique Number** : 10836837 **Diagnostician** : Doug Bogart  
**Test Package** : FLEET ( Additional Tests: Glycol )

**GFL Environmental - 094 - Cedartown**  
 2097 Buchanan Highway  
 Cedartown, GA  
 US 30125  
 Contact: WILLIAM FOSTER  
 william.foster@gflenv.com  
 T: (800)207-6618  
 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)