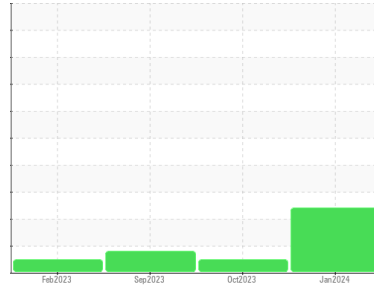




# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Area  
**(P872950)**  
Machine Id  
**9158**  
Component  
**Natural Gas Engine**  
Fluid  
**PETRO CANADA DURON GEO LD 15W40 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### ▲ Wear

Piston, ring and cylinder wear is indicated.

### 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 acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0101781</b>	GFL0090112	GFL0074972
Sample Date	Client Info		<b>29 Jan 2024</b>	03 Oct 2023	21 Sep 2023
Machine Age	hrs	Client Info	<b>17003</b>	16492	16463
Oil Age	hrs	Client Info	<b>600</b>	600	600
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>ABNORMAL</b>	NORMAL	ABNORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	<b>▲ 54</b>	9	33
Chromium	ppm	ASTM D5185m >4	<b>▲ 4</b>	<1	<b>▲ 7</b>
Nickel	ppm	ASTM D5185m >2	<b>2</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>▲ 38</b>	5	9
Lead	ppm	ASTM D5185m >30	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m >35	<b>4</b>	<1	30
Tin	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	<b>12</b>	40	15
Barium	ppm	ASTM D5185m 5	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m 50	<b>54</b>	45	51
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m 560	<b>531</b>	577	536
Calcium	ppm	ASTM D5185m 1510	<b>1455</b>	1503	1592
Phosphorus	ppm	ASTM D5185m 780	<b>751</b>	744	761
Zinc	ppm	ASTM D5185m 870	<b>909</b>	934	933
Sulfur	ppm	ASTM D5185m 2040	<b>2285</b>	2437	2393

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	<b>12</b>	7	16
Sodium	ppm	ASTM D5185m	<b>6</b>	2	8
Potassium	ppm	ASTM D5185m >20	<b>2</b>	0	4

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	<b>0.1</b>	0	0
Nitration	Abs/cm	*ASTM D7624 >20	<b>12.0</b>	6.4	8.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.7</b>	19.1	19.3

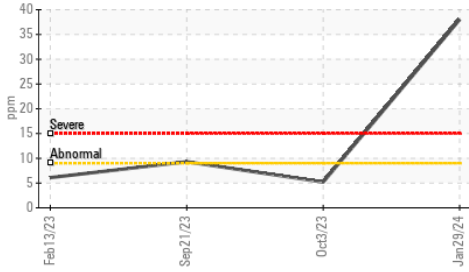
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>18.2</b>	16.0	17.0
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	<b>6.0</b>	8.7	6.2

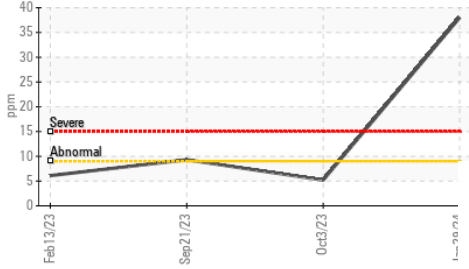


# OIL ANALYSIS REPORT

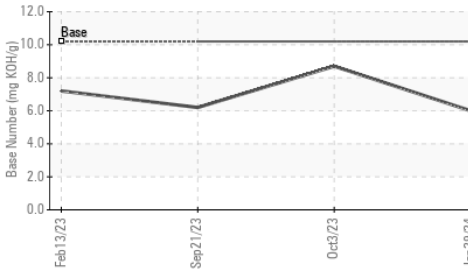
▲ Aluminum (ppm)



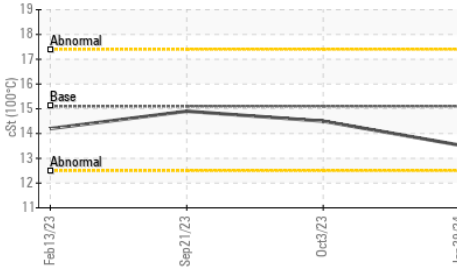
▲ Aluminum (ppm)



Base Number



Viscosity @ 100°C

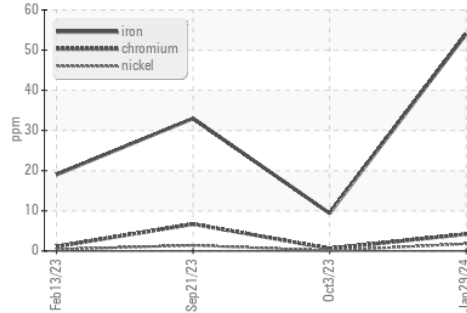


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

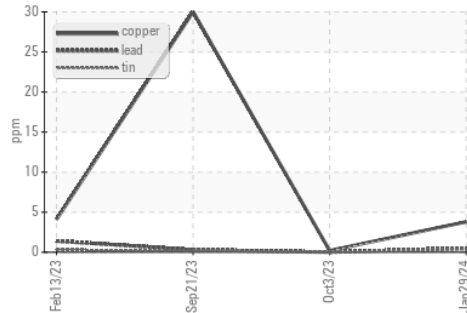
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	13.53	14.5

## GRAPHS

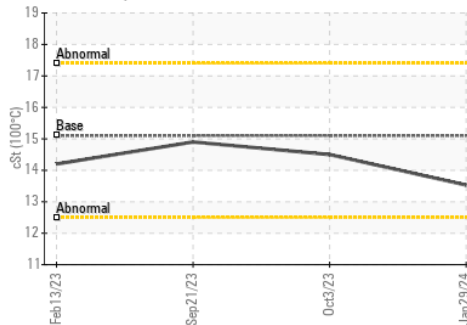
▲ Ferrous Alloys



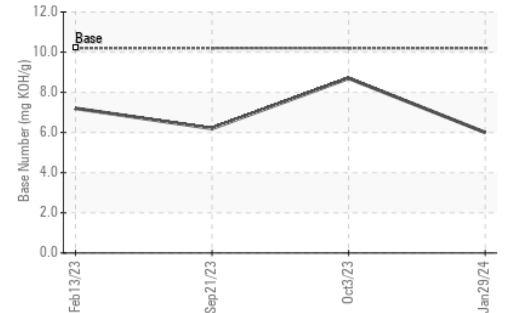
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0101781  
 Lab Number : 06076662  
 Unique Number : 10858753  
 Test Package : FLEET

Received : 01 Feb 2024  
 Tested : 06 Feb 2024  
 Diagnosed : 07 Feb 2024 - Jonathan Hester

GFL Environmental - 030 - Conway Myrtle Beach  
 3010 HWY 378  
 Conway, SC  
 US 29527  
 Contact: ARCILIO RUEZ  
 aruiz@gflenv.com

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)

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F: