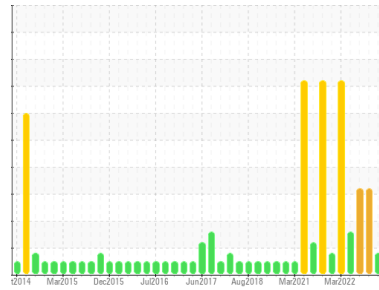




# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Area  
**(YA115718)**

Machine Id  
**10419C**

Component  
**Natural Gas Engine**

Fluid  
**PETRO CANADA DURON GEO LD 15W40 (30 QTS)**

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other 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>GFL0123404</b>	GFL0082466	GFL0050740
Sample Date	Client Info		<b>18 Jun 2024</b>	09 Aug 2023	22 Feb 2023
Machine Age	hrs	Client Info	<b>95409</b>	11075	9852
Oil Age	hrs	Client Info	<b>95409</b>	1243	1160
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>ABNORMAL</b>	ABNORMAL	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>4</b>	10	9
Chromium	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >9	<b>1</b>	<1	<1
Lead	ppm	ASTM D5185m >30	<b>2</b>	41	3
Copper	ppm	ASTM D5185m >35	<b>▲ 117</b>	1	0
Tin	ppm	ASTM D5185m >4	<b>0</b>	<1	<1
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 50	<b>14</b>	11	15
Barium	ppm	ASTM D5185m 5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 50	<b>50</b>	8	19
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 560	<b>633</b>	● 82	● 188
Calcium	ppm	ASTM D5185m 1510	<b>1761</b>	● 324	● 668
Phosphorus	ppm	ASTM D5185m 780	<b>859</b>	● 280	● 377
Zinc	ppm	ASTM D5185m 870	<b>1117</b>	● 145	● 323
Sulfur	ppm	ASTM D5185m 2040	<b>3123</b>	1869	1689

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	<b>4</b>	1	3
Sodium	ppm	ASTM D5185m	<b>6</b>	16	20
Potassium	ppm	ASTM D5185m >20	<b>12</b>	31	1

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	<b>0</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.1</b>	6.1	7.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.6</b>	27.4	27.1

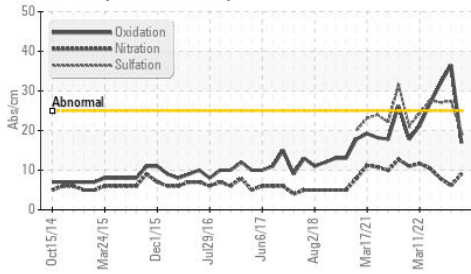
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.9</b>	36.5	32.0
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	<b>6.4</b>	▲ 0.0	▲ 0.0

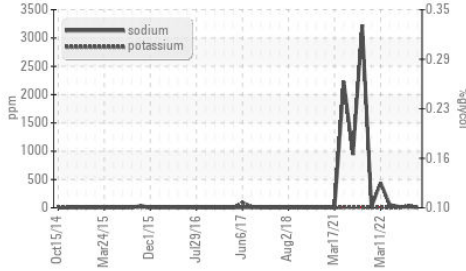


# OIL ANALYSIS REPORT

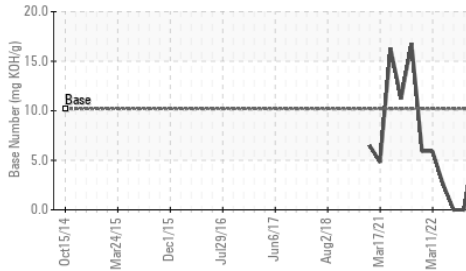
FT-IR (Direct Trend)



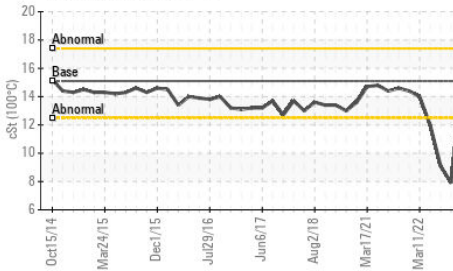
Glycol Contamination



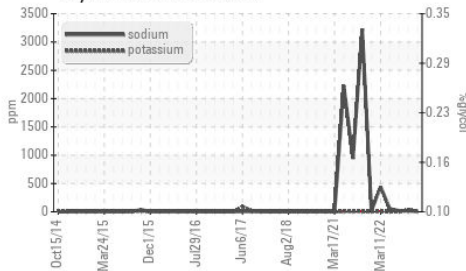
Base Number



Viscosity @ 100°C



Glycol Contamination

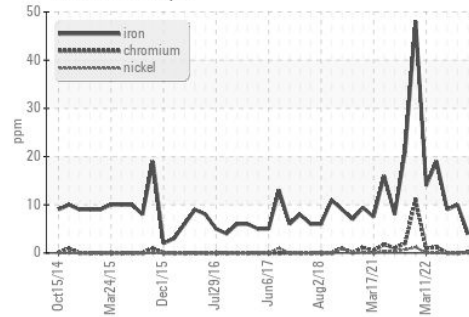


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

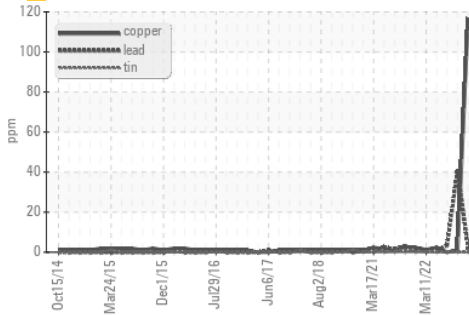
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.4	7.9, 9.1

## GRAPHS

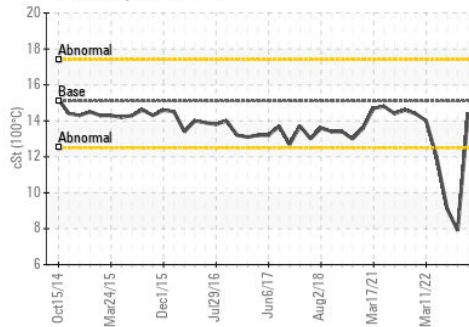
Ferrous Alloys



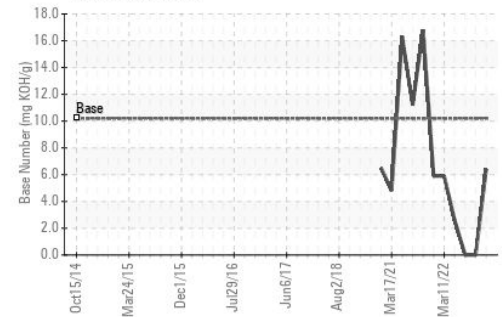
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0123404

Lab Number : 06215684

Unique Number : 11088548

Test Package : FLEET ( Additional Tests: Glycol )

Received : 20 Jun 2024

Tested : 22 Jun 2024

Diagnosed : 22 Jun 2024 - Don Baldrige

GFL Environmental - 007 - Brunswick

2809 Galloway Road

Bolivia, NC

US 28422

Contact: DONALD CRAVEN

dcraven@gflenv.com

T:

F: (910)253-4179

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)