



WEAR

**NORMAL**

CONTAMINATION

**ABNORMAL**

FLUID CONDITION

**ABNORMAL**

Area

**(UA22464)**

Machine Id

**2594C**

Component

**Natural Gas Engine**

Fluid

**PETRO CANADA DURON GEO LD 15W40 (7 GAL)**

**RECOMMENDATION**

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0119078</b>	GFL0119063	GFL0060109
Sample Date		Client Info		<b>31 May 2024</b>	14 May 2024	08 Nov 2023
Machine Age	hrs	Client Info		<b>15744</b>	15744	15744
Oil Age	hrs	Client Info		<b>15744</b>	15744	15744
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	SEVERE	SEVERE

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>26</b>	▲ 111	31
Chromium	ppm	ASTM D5185m	>4	<b>2</b>	▲ 8	3
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<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>	▲ 8	4
Lead	ppm	ASTM D5185m	>30	<b>8</b>	▲ 44	17
Copper	ppm	ASTM D5185m	>35	<b>1</b>	4	4
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

Sodium and/or potassium levels remain high.

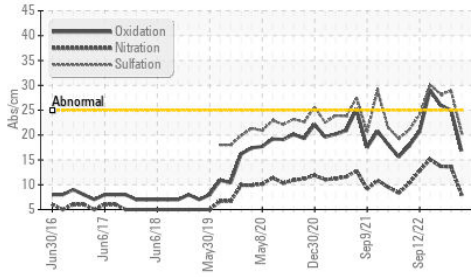
Silicon	ppm	ASTM D5185m	>+100	<b>10</b>	42	16
Potassium	ppm	ASTM D5185m	>20	▲ <b>40</b>	▲ 256	▲ 116
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>---</b>	▲ 0.10	▲ 0.10
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.0</b>	13.6	13.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.6</b>	28.9	28.2
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

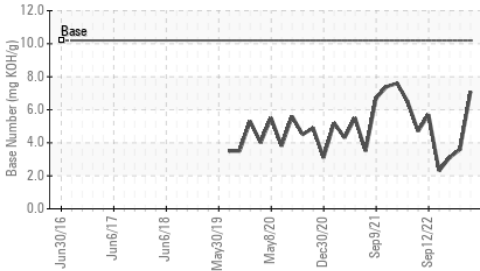
The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		▲ <b>152</b>	▲ 955	▲ 462
Boron	ppm	ASTM D5185m	50	<b>28</b>	13	6
Barium	ppm	ASTM D5185m	5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	50	<b>56</b>	90	74
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	2	<1
Magnesium	ppm	ASTM D5185m	560	<b>582</b>	586	578
Calcium	ppm	ASTM D5185m	1510	<b>1420</b>	1762	1888
Phosphorus	ppm	ASTM D5185m	780	<b>825</b>	774	846
Zinc	ppm	ASTM D5185m	870	<b>1014</b>	1009	1057
Sulfur	ppm	ASTM D5185m	2040	<b>2772</b>	3021	2342
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.8</b>	25.0	26.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	<b>7.1</b>	▲ 3.6	▲ 3.1
Visc @ 100°C	cSt	ASTM D445	15.1	<b>14.5</b>	14.0	14.4

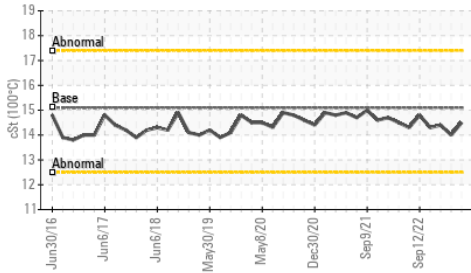
**FT-IR (Direct Trend)**



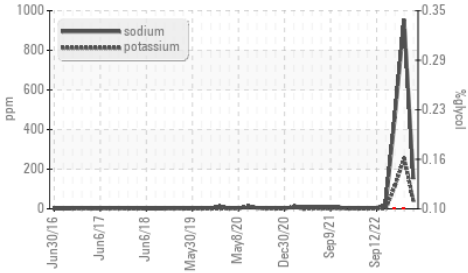
**Base Number**



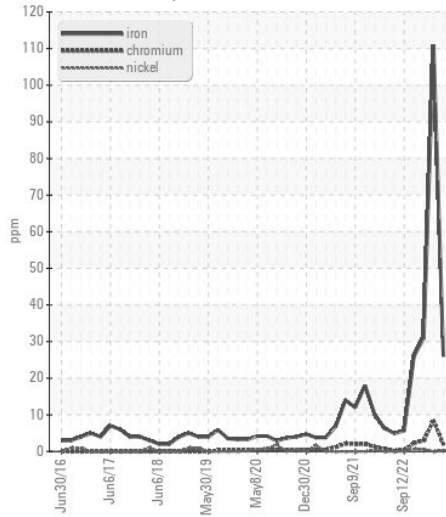
**Viscosity @ 100°C**



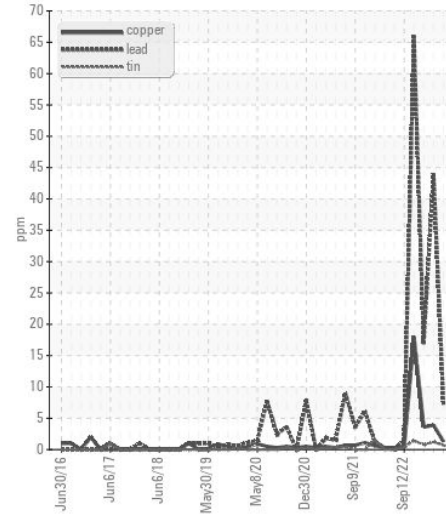
**Glycol Contamination**



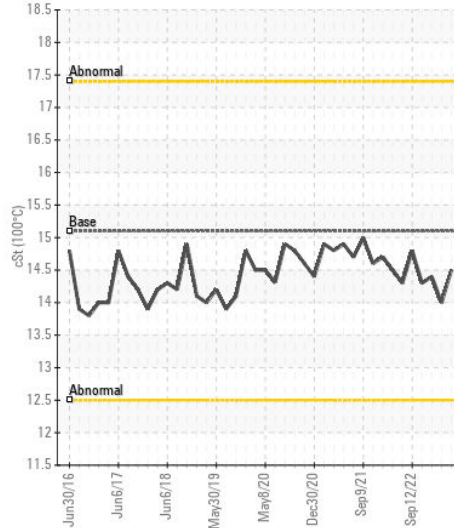
**Ferrous Alloys**



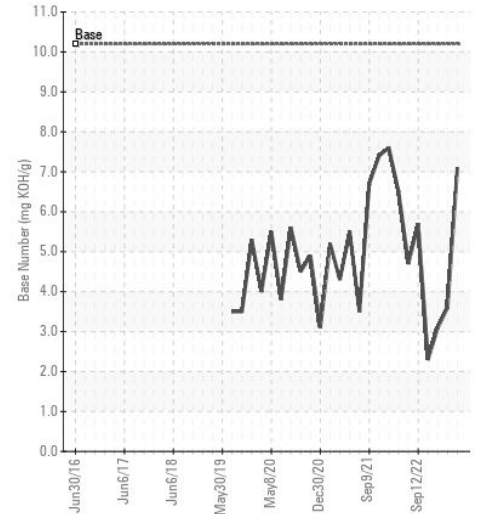
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

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

**Sample No.** : GFL0119078

**Lab Number** : 06197510

**Unique Number** : 11059633

**Test Package** : FLEET

**Received** : 03 Jun 2024

**Tested** : 05 Jun 2024

**Diagnosed** : 05 Jun 2024 - Jonathan Hester

**GFL Environmental - 045 - Tidewater**

3821 Cook Blvd.

Chesapeake, VA

US 23323

Contact: ELVIN RODRIGUEZ

elvinrodriguez@gflenv.com

T:

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)