



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area

**(YA156354)**

Machine Id

**930011**

Component

**Natural Gas Engine**

Fluid

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

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0123410</b>	GFL0082463	GFL0050795
Sample Date		Client Info		<b>18 Jun 2024</b>	09 Aug 2023	25 Jan 2023
Machine Age	hrs	Client Info		<b>7185</b>	7185	6098
Oil Age	hrs	Client Info		<b>7185</b>	1087	1248
Filter Age	hrs	Client Info		<b>7185</b>	1087	1248
Oil Changed		Client Info		<b>N/A</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>7</b>	13	7
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>9	<b>1</b>	3	2
Lead	ppm	ASTM D5185m	>30	<b>6</b>	1	12
Copper	ppm	ASTM D5185m	>35	<b>1</b>	2	2
Tin	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

There is no indication of any contamination in the oil.

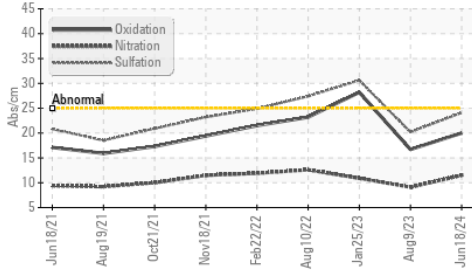
Silicon	ppm	ASTM D5185m	>+100	<b>6</b>	6	5
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	2	<1
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.5</b>	9.1	10.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.1</b>	20.2	30.6
Silt	scalar	*Visual	NONE	<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**

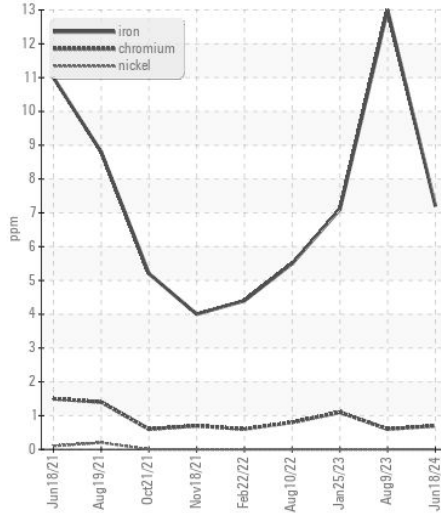
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>21</b>	8	8
Boron	ppm	ASTM D5185m	50	<b>10</b>	26	9
Barium	ppm	ASTM D5185m	5	<b>0</b>	0	2
Molybdenum	ppm	ASTM D5185m	50	<b>54</b>	53	51
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	560	<b>620</b>	617	587
Calcium	ppm	ASTM D5185m	1510	<b>1877</b>	1768	1480
Phosphorus	ppm	ASTM D5185m	780	<b>848</b>	826	760
Zinc	ppm	ASTM D5185m	870	<b>1111</b>	1024	900
Sulfur	ppm	ASTM D5185m	2040	<b>3046</b>	2907	2858
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.0</b>	16.7	28.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	<b>4.2</b>	6.7	▲ 1.7
Visc @ 100°C	cSt	ASTM D445	15.1	<b>14.3</b>	14.5	14.5

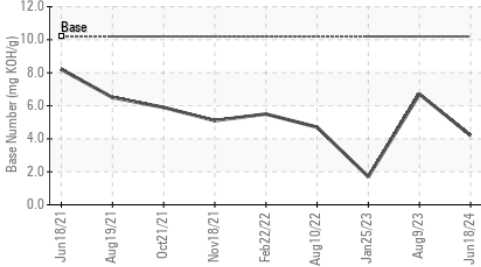
**FT-IR (Direct Trend)**



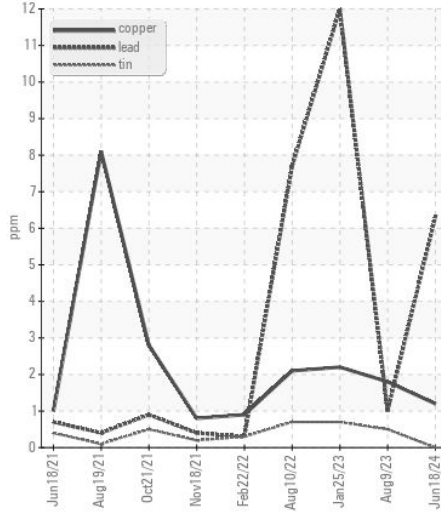
**Ferrous Alloys**



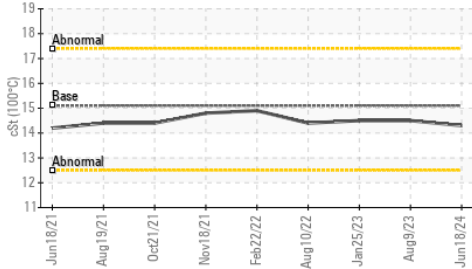
**Base Number**



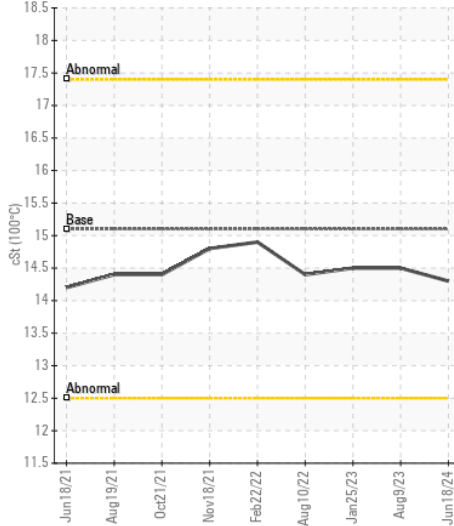
**Non-ferrous Metals**



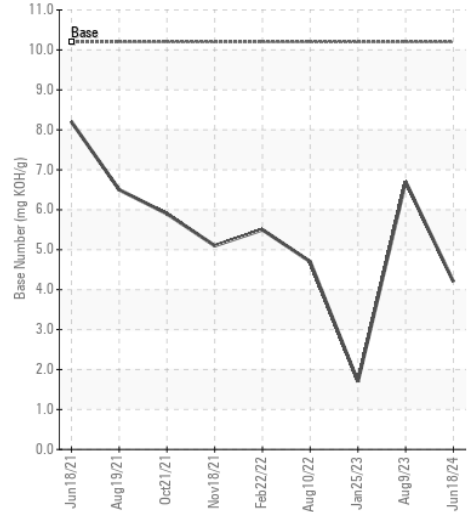
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0123410  
**Lab Number** : 06215687  
**Unique Number** : 11088551  
**Test Package** : FLEET

**Received** : 20 Jun 2024  
**Tested** : 21 Jun 2024  
**Diagnosed** : 21 Jun 2024 - Wes Davis

**GFL Environmental - 007 - Brunswick**  
 2809 Galloway Road  
 Bolivia, NC  
 US 28422  
 Contact: DONALD CRAVEN  
 dcraven@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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