



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

Area

**(YA133467)**

Machine Id

**2640C**

Component

**Natural Gas Engine**

Fluid

**PETRO CANADA DURON GEO LD 15W40 (38 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. ( Customer Sample Comment: oil service )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0124464</b>	GFL0111066	GFL0073833
Sample Date		Client Info		<b>18 Jun 2024</b>	05 Feb 2024	26 Apr 2023
Machine Age	hrs	Client Info		<b>14408</b>	13588	12514
Oil Age	hrs	Client Info		<b>875</b>	1074	1132
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Oil Added	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>10</b>	4	13
Chromium	ppm	ASTM D5185m	>4	<b>2</b>	<1	3
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
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>2</b>	2	2
Lead	ppm	ASTM D5185m	>30	<b>11</b>	2	7
Copper	ppm	ASTM D5185m	>35	<b>2</b>	0	1
Tin	ppm	ASTM D5185m	>4	<b>0</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**

There is no indication of any contamination in the oil.

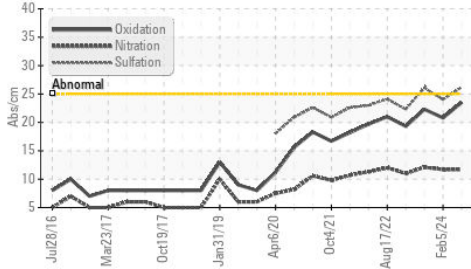
Silicon	ppm	ASTM D5185m	>+100	<b>5</b>	5	2
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	<1
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.1</b>	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.7</b>	11.7	12.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.2</b>	24.0	26.1
Silt	scalar	*Visual	NONE	<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**

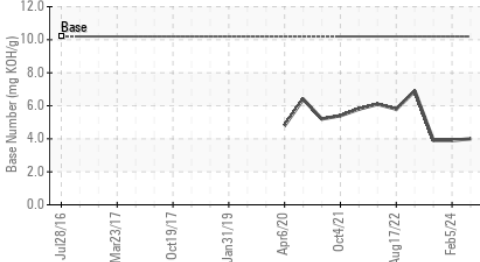
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>7</b>	6	8
Boron	ppm	ASTM D5185m	50	<b>14</b>	12	0
Barium	ppm	ASTM D5185m	5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	50	<b>56</b>	53	54
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m	560	<b>650</b>	558	638
Calcium	ppm	ASTM D5185m	1510	<b>1970</b>	1511	1869
Phosphorus	ppm	ASTM D5185m	780	<b>888</b>	675	812
Zinc	ppm	ASTM D5185m	870	<b>1146</b>	945	1088
Sulfur	ppm	ASTM D5185m	2040	<b>3133</b>	2275	3271
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>23.5</b>	20.8	22.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	<b>4.0</b>	3.9	3.9
Visc @ 100°C	cSt	ASTM D445	15.1	<b>14.6</b>	14.5	14.5

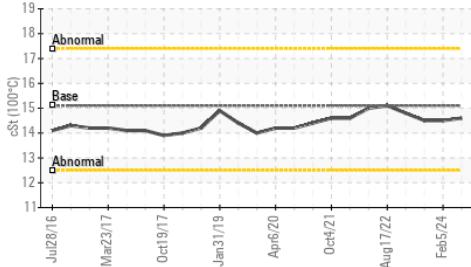
**FT-IR (Direct Trend)**



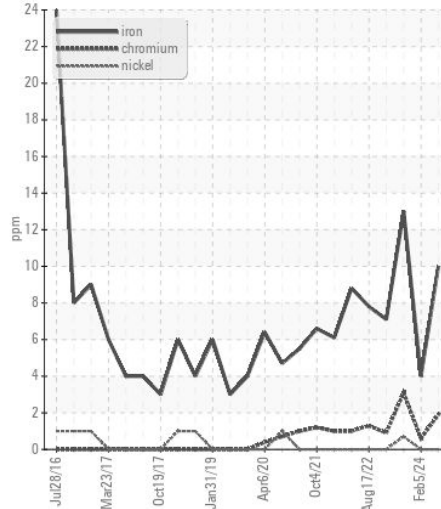
**Base Number**



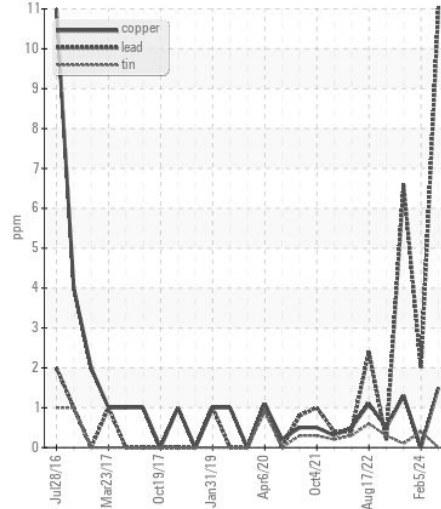
**Viscosity @ 100°C**



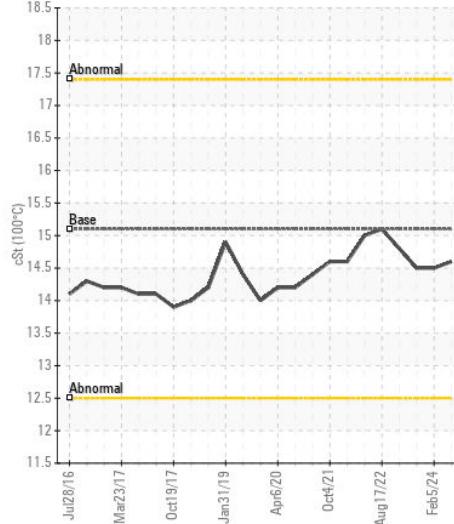
**Ferrous Alloys**



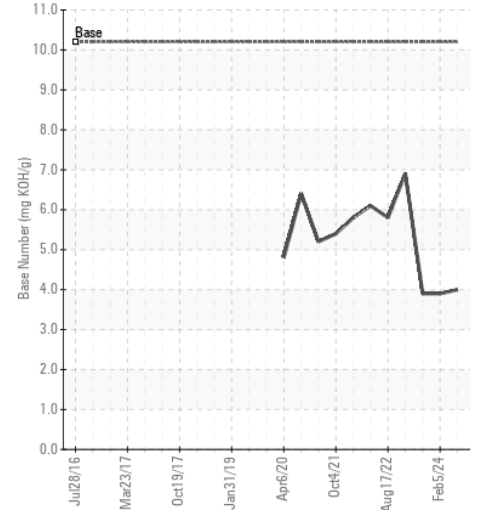
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

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

**Sample No.** : GFL0124464

**Lab Number** : 06215662

**Unique Number** : 11088526

**Test Package** : FLEET

**Received** : 20 Jun 2024

**Tested** : 21 Jun 2024

**Diagnosed** : 22 Jun 2024 - Don Baldrige

**GFL Environmental - 006 - Wilmington**

3618 US Highway 421 N

Wilmington, NC

US 28401

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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)