



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

Area

(GEE481)

Machine Id

945006-260238

Component

Natural Gas Engine

Fluid

PETRO CANADA DURON GEO LD 15W40 (--- LTR)

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0111578</b>	GFL0111509	GFL0083085
Sample Date		Client Info		<b>06 Jul 2024</b>	12 Apr 2024	27 Dec 2023
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>30</b>	5	18
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m	>2	<b>1</b>	0	<1
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>6</b>	1	5
Lead	ppm	ASTM D5185m	>30	<b>3</b>	0	0
Copper	ppm	ASTM D5185m	>35	<b>8</b>	0	15
Tin	ppm	ASTM D5185m	>4	<b>2</b>	<1	0
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.

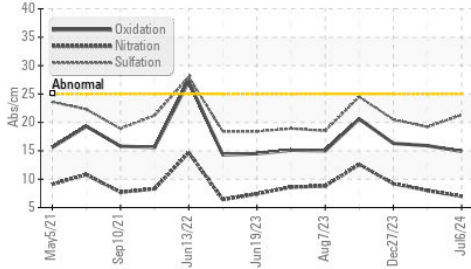
Silicon	ppm	ASTM D5185m	>+100	<b>38</b>	5	5
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	0	3
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0</b>	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.0</b>	8.0	9.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.3</b>	19.2	20.5
Silt	scalar	*Visual	NONE	<b>NONE</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**

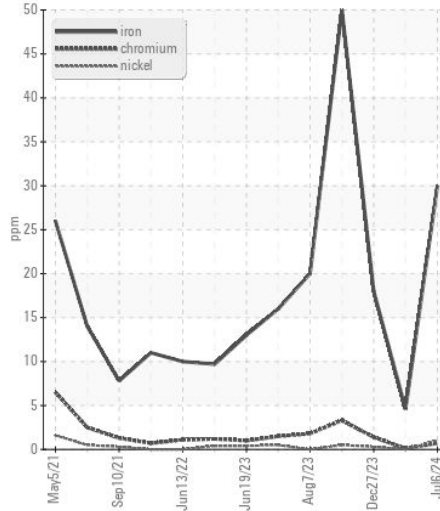
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>3</b>	3	11
Boron	ppm	ASTM D5185m	50	<b>27</b>	32	20
Barium	ppm	ASTM D5185m	5	<b>16</b>	0	0
Molybdenum	ppm	ASTM D5185m	50	<b>128</b>	51	53
Manganese	ppm	ASTM D5185m	0	<b>7</b>	<1	<1
Magnesium	ppm	ASTM D5185m	560	<b>674</b>	560	561
Calcium	ppm	ASTM D5185m	1510	<b>1420</b>	1437	1419
Phosphorus	ppm	ASTM D5185m	780	<b>655</b>	714	711
Zinc	ppm	ASTM D5185m	870	<b>832</b>	867	910
Sulfur	ppm	ASTM D5185m	2040	<b>2978</b>	2608	2452
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.9</b>	15.9	16.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	<b>6.6</b>	7.0	5.4
Visc @ 100°C	cSt	ASTM D445	15.1	<b>13.3</b>	14.2	14.3

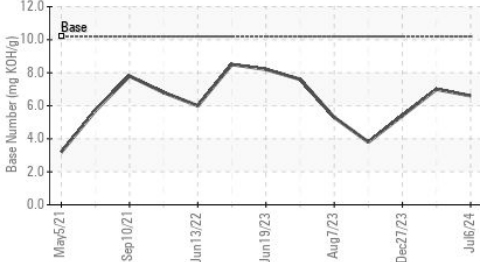
**FT-IR (Direct Trend)**



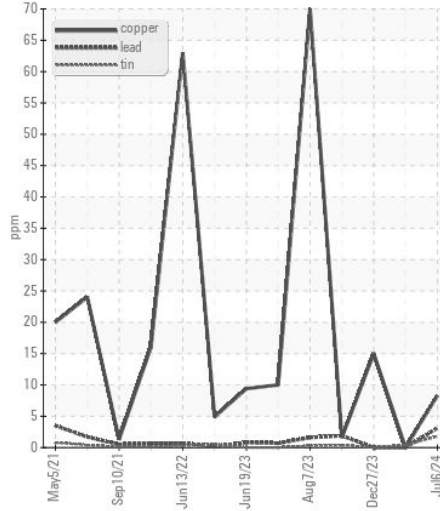
**Ferrous Alloys**



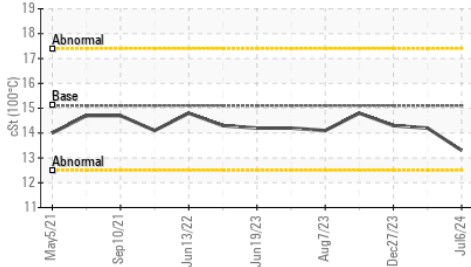
**Base Number**



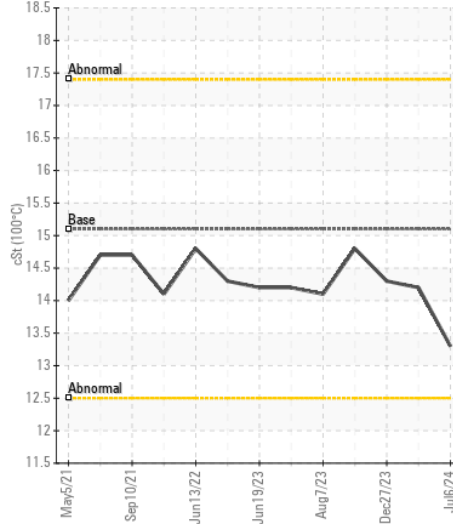
**Non-ferrous Metals**



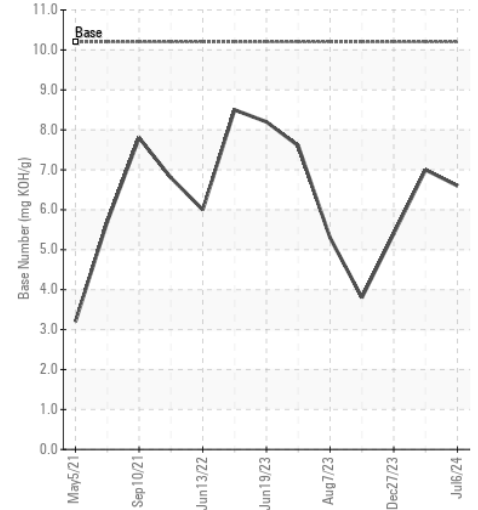
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

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

**Sample No.** : GFL0111578

**Lab Number** : 06232145

**Unique Number** : 11115638

**Test Package** : FLEET

**Received** : 10 Jul 2024

**Tested** : 11 Jul 2024

**Diagnosed** : 11 Jul 2024 - Don Baldrige

**GFL Environmental - 074 - Douglas - Transwaste**

1219 Landfill Road

Douglas, GA

US 31533

Contact: CURTIS JACOBS

CURTIS.JACOBS@GFLENV.COM

T: (912)384-6001

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)