



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

Machine Id  
**933024**  
 Component  
**Natural Gas Engine**  
 Fluid  
**PETRO CANADA DURON GEO LD 15W40 (--- LTR)**

**RECOMMENDATION**

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0120148</b>	GFL0117227	GFL0114063
Sample Date		Client Info		<b>28 May 2024</b>	13 May 2024	17 Apr 2024
Machine Age	hrs	Client Info		<b>3307</b>	3190	2993
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>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Sample Status				<b>ABNORMAL</b>	NORMAL	ABNORMAL

**WEAR**

Cylinder, crank, or cam shaft wear is indicated.

Iron	ppm	ASTM D5185m	>50	<b>▲ 51</b>	4	<b>▲ 60</b>
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>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>9	<b>3</b>	1	5
Lead	ppm	ASTM D5185m	>30	<b>0</b>	0	2
Copper	ppm	ASTM D5185m	>35	<b>0</b>	<1	1
Tin	ppm	ASTM D5185m	>4	<b>0</b>	0	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
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.

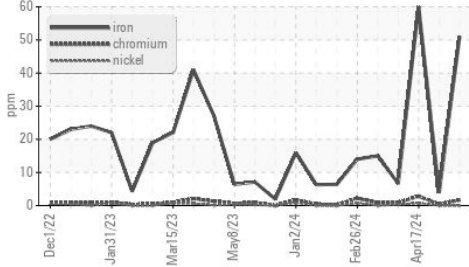
Silicon	ppm	ASTM D5185m	>+100	<b>14</b>	15	16
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	2
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.1</b>	0	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.2</b>	10.3	11.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.6</b>	20.3	22.5
Silt	scalar	*Visual	NONE	<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**

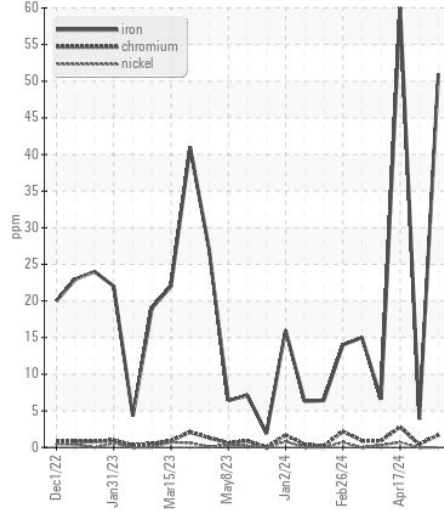
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>5</b>	4	10
Boron	ppm	ASTM D5185m	50	<b>35</b>	11	4
Barium	ppm	ASTM D5185m	5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	50	<b>48</b>	47	59
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m	560	<b>567</b>	548	541
Calcium	ppm	ASTM D5185m	1510	<b>1506</b>	1466	1741
Phosphorus	ppm	ASTM D5185m	780	<b>803</b>	710	730
Zinc	ppm	ASTM D5185m	870	<b>929</b>	914	952
Sulfur	ppm	ASTM D5185m	2040	<b>2654</b>	2778	2865
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.2</b>	16.9	18.5
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	<b>7.8</b>	5.3	3.8
Visc @ 100°C	cSt	ASTM D445	15.1	<b>14.2</b>	13.9	14.3

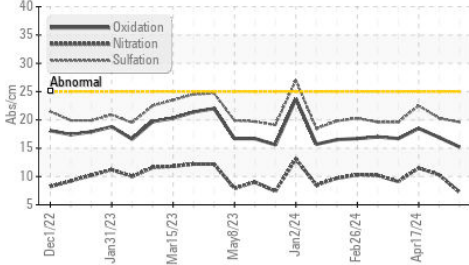
▲ Ferrous Alloys



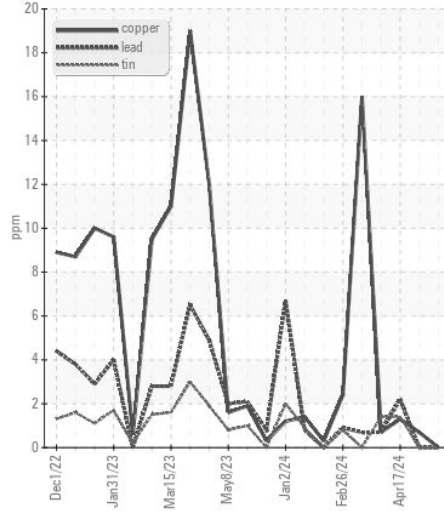
▲ Ferrous Alloys



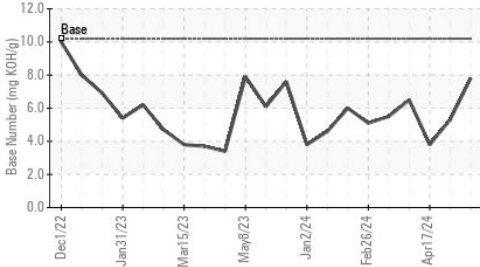
FT-IR (Direct Trend)



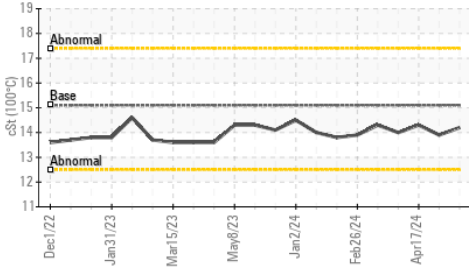
Non-ferrous Metals



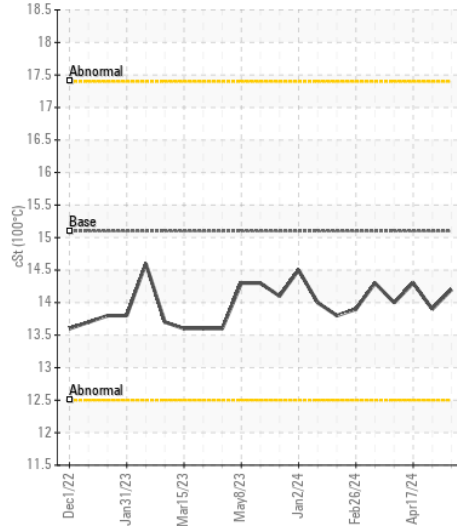
Base Number



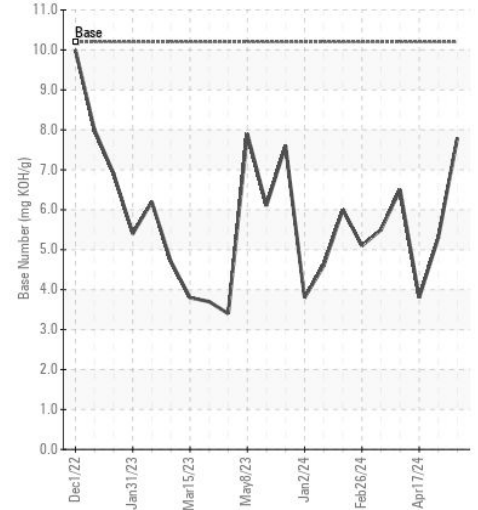
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0120148  
 Lab Number : 06195250  
 Unique Number : 11057373  
 Test Package : FLEET

Received : 30 May 2024  
 Tested : 31 May 2024  
 Diagnosed : 31 May 2024 - Sean Felton

GFL Environmental - 836 - Kansas City Hauling  
 7801 East Truman Road  
 Kansas City, MO  
 US 64126  
 Contact: Loyce Stewart  
 loyce.stewart@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)

T:  
F: