



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

Area

**(FAN283)**

Machine Id

**420063**

Component

**Diesel Engine**

Fluid

**PETRO CANADA DURON SHP 15W40 (--- QTS)**

**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>GFL0077442</b>	GFL0111498	GFL0083068
Sample Date		Client Info		<b>21 May 2024</b>	26 Apr 2024	02 Nov 2023
Machine Age	hrs	Client Info		<b>0</b>	9610	0
Oil Age	hrs	Client Info		<b>0</b>	2873	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>N/A</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

**WEAR**

The aluminum level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>48</b>	48	34
Chromium	ppm	ASTM D5185m	>20	<b>3</b>	4	4
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</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	>20	<b>▲ 29</b>	▲ 29	▲ 28
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>7</b>	6	6
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	1	0
Vanadium	ppm	ASTM D5185m		<b>0</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.

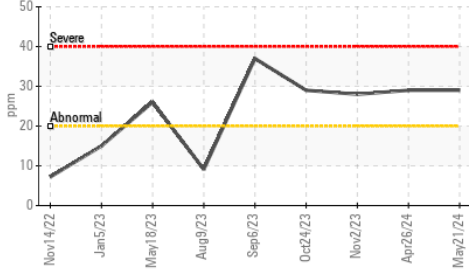
Silicon	ppm	ASTM D5185m	>25	<b>7</b>	6	8
Potassium	ppm	ASTM D5185m	>20	<b>20</b>	18	17
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.9</b>	0.9	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.3</b>	10.9	9.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.3</b>	24.0	21.8
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	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

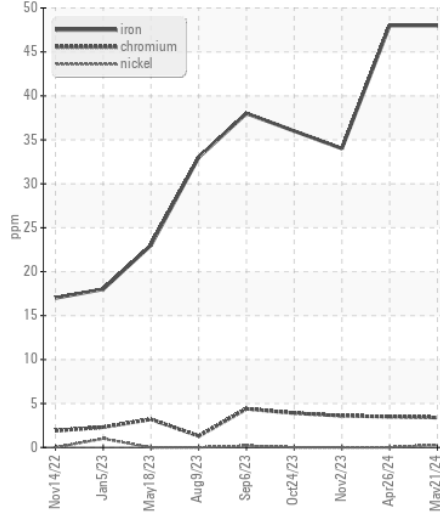
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>6</b>	5	5
Boron	ppm	ASTM D5185m	0	<b>3</b>	2	6
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>64</b>	62	59
Manganese	ppm	ASTM D5185m	0	<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>910</b>	909	866
Calcium	ppm	ASTM D5185m	1070	<b>1069</b>	1068	995
Phosphorus	ppm	ASTM D5185m	1150	<b>1004</b>	987	900
Zinc	ppm	ASTM D5185m	1270	<b>1217</b>	1206	1181
Sulfur	ppm	ASTM D5185m	2060	<b>2732</b>	2691	2496
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.9</b>	20.8	17.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>5.0</b>	4.9	6.7
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.6</b>	13.5	13.5

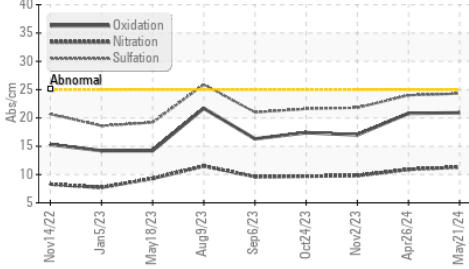
▲ Aluminum (ppm)



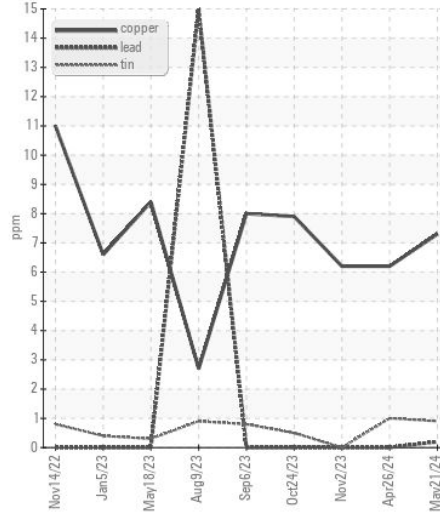
Ferrous Alloys



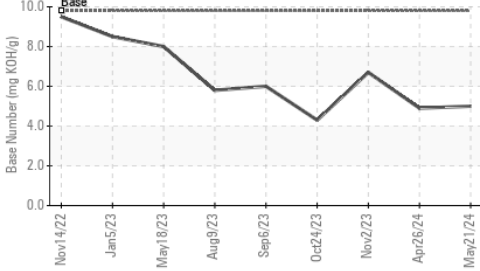
FT-IR (Direct Trend)



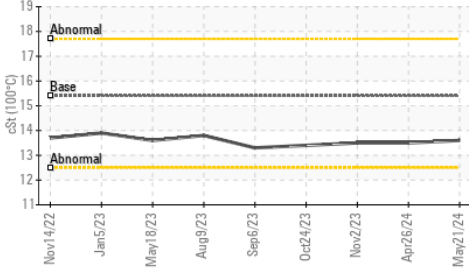
Non-ferrous Metals



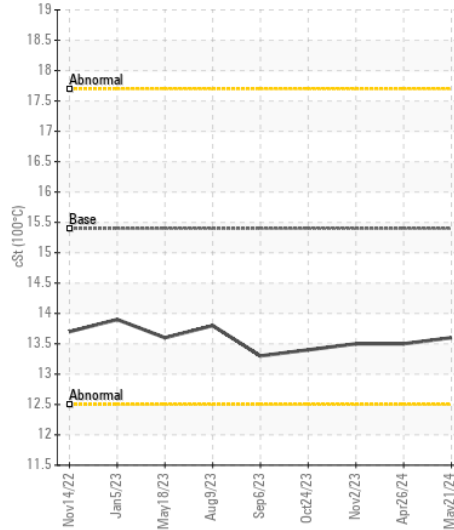
Base Number



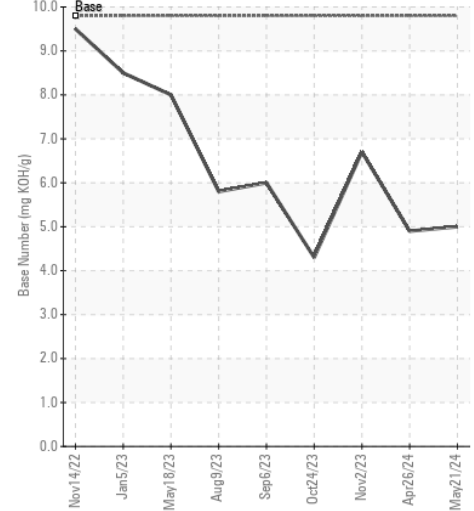
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0077442 **Received** : 29 May 2024  
**Lab Number** : 06193748 **Tested** : 30 May 2024  
**Unique Number** : 11050500 **Diagnosed** : 30 May 2024 - Sean Felton  
**Test Package** : FLEET

**GFL Environmental - 072 - Americus - Transwaste**  
 361 McMath Mill Road  
 Americus, GA  
 US 31719  
 Contact: RICHARD HEINZERLING  
 richard.heinzerling@gflenv.com  
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 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)