



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



Area  
**(BD38783)**  
Machine Id  
**713023**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (38 QTS)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0120911</b>	GFL0120869	GFL0110360
Sample Date		Client Info		<b>11 Jul 2024</b>	31 May 2024	31 Jan 2024
Machine Age	hrs	Client Info		<b>3181</b>	380	380
Oil Age	hrs	Client Info		<b>2801</b>	0	600
Filter Age	hrs	Client Info		<b>2801</b>	0	600
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Changed
Filter Changed		Client Info		<b>Changed</b>	Not Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>32</b>	25	43
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	<1	2
Nickel	ppm	ASTM D5185m	>5	<b>5</b>	5	14
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	4	<1
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>9</b>	10	40
Tin	ppm	ASTM D5185m	>15	<b>2</b>	1	3
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.

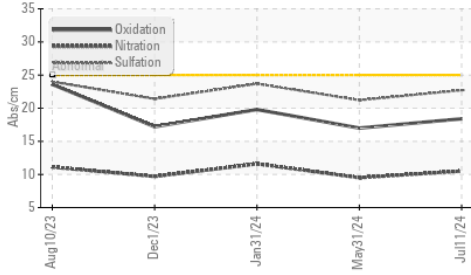
Silicon	ppm	ASTM D5185m	>25	<b>6</b>	4	9
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	3	3
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>1.2</b>	0.8	1.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.5</b>	9.5	11.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.7</b>	21.2	23.7
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**

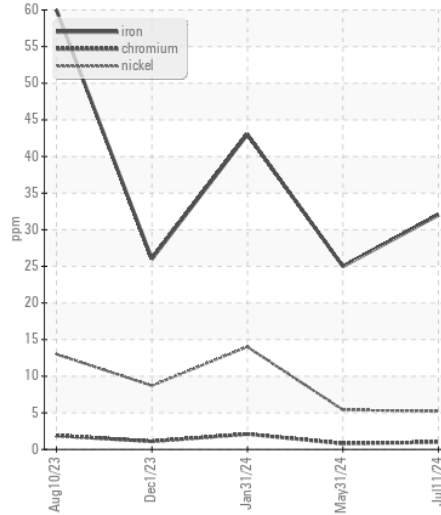
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>6</b>	0	0
Boron	ppm	ASTM D5185m	0	<b>0</b>	<1	5
Barium	ppm	ASTM D5185m	0	<b>0</b>	1	0
Molybdenum	ppm	ASTM D5185m	60	<b>62</b>	66	69
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	2
Magnesium	ppm	ASTM D5185m	1010	<b>935</b>	931	949
Calcium	ppm	ASTM D5185m	1070	<b>1114</b>	1135	1070
Phosphorus	ppm	ASTM D5185m	1150	<b>1046</b>	973	871
Zinc	ppm	ASTM D5185m	1270	<b>1279</b>	1258	1218
Sulfur	ppm	ASTM D5185m	2060	<b>2954</b>	2819	2172
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.4</b>	17.0	19.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>5.9</b>	6.5	4.5
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.5</b>	13.3	13.0

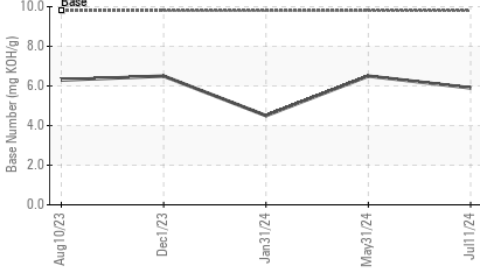
FT-IR (Direct Trend)



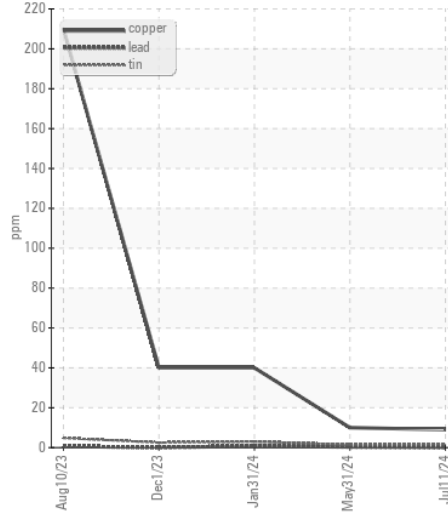
Ferrous Alloys



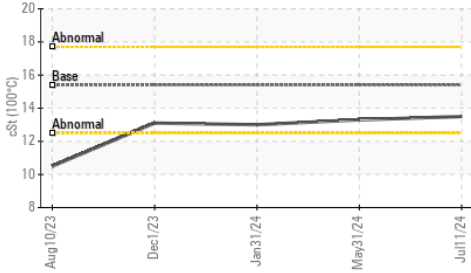
Base Number



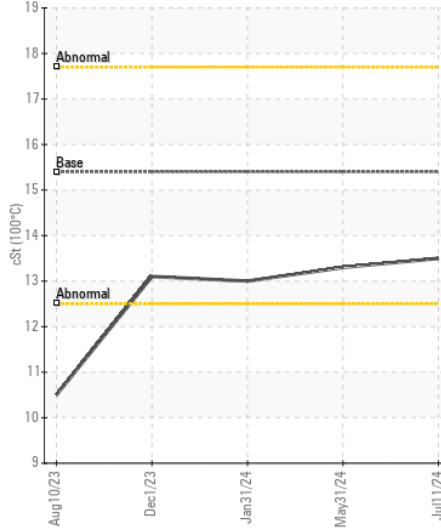
Non-ferrous Metals



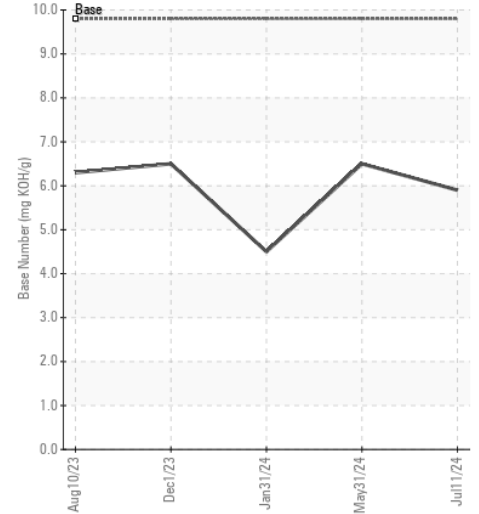
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0120911  
 Lab Number : 06237317  
 Unique Number : 11126151  
 Test Package : FLEET

Received : 15 Jul 2024  
 Tested : 17 Jul 2024  
 Diagnosed : 17 Jul 2024 - Wes Davis

GFL Environmental - 622 - Traverse City Hauling  
 160 Hughes Dr  
 Traverse City, MI  
 US 49686  
 Contact: TECHNICIAN ACCOUNT  
 aw.tc.maint@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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F: