



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

Machine Id  
**928113-443**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**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>GFL0100205</b>	GFL0100233	GFL0091238
Sample Date		Client Info		<b>10 Jan 2024</b>	15 Nov 2023	31 Oct 2023
Machine Age	hrs	Client Info		<b>22788</b>	160862	11494
Oil Age	hrs	Client Info		<b>150</b>	0	0
Filter Age	hrs	Client Info		<b>150</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>	ABNORMAL	ABNORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>10</b>	5	4
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	<1
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>4</b>	2	3
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**

Elemental level of silicon (Si) above normal.

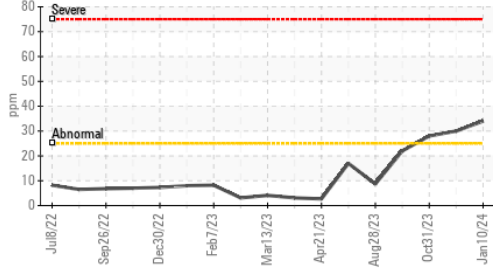
Silicon	ppm	ASTM D5185m	>25	<b>▲ 34</b>	▲ 30	▲ 28
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.5</b>	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.5</b>	7.6	7.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.2</b>	19.7	19.2
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**

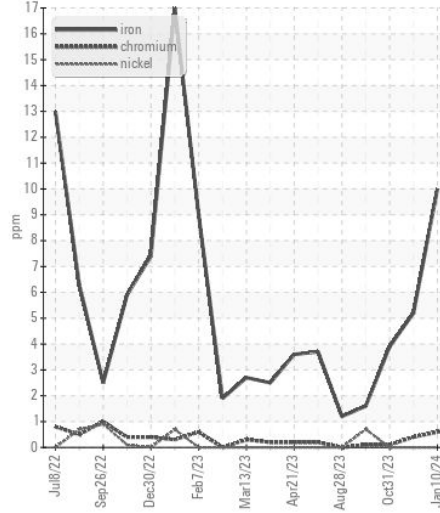
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>4</b>	2	3
Boron	ppm	ASTM D5185m	0	<b>14</b>	16	18
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>56</b>	54	54
Manganese	ppm	ASTM D5185m	0	<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	1010	<b>863</b>	880	857
Calcium	ppm	ASTM D5185m	1070	<b>1146</b>	1174	1168
Phosphorus	ppm	ASTM D5185m	1150	<b>1039</b>	1014	1031
Zinc	ppm	ASTM D5185m	1270	<b>1260</b>	1250	1232
Sulfur	ppm	ASTM D5185m	2060	<b>2947</b>	2990	3029
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.8</b>	15.4	14.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.6</b>	8.3	8.3
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.6</b>	13.8	13.8

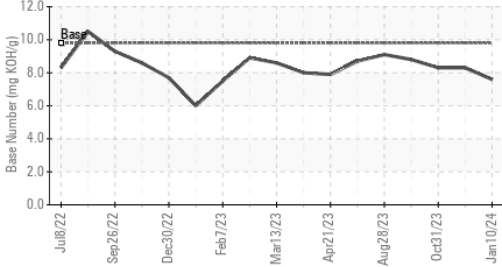
▲ Silicon (ppm)



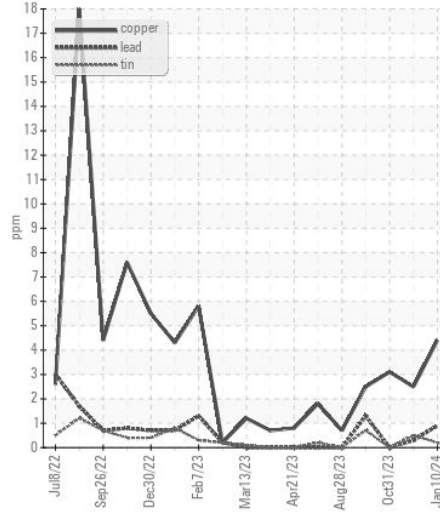
Ferrous Alloys



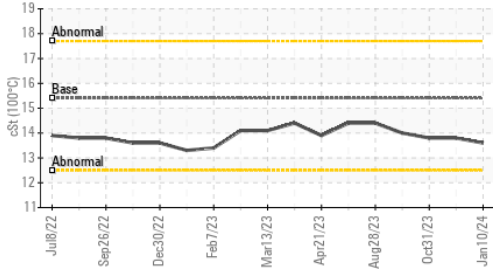
Base Number



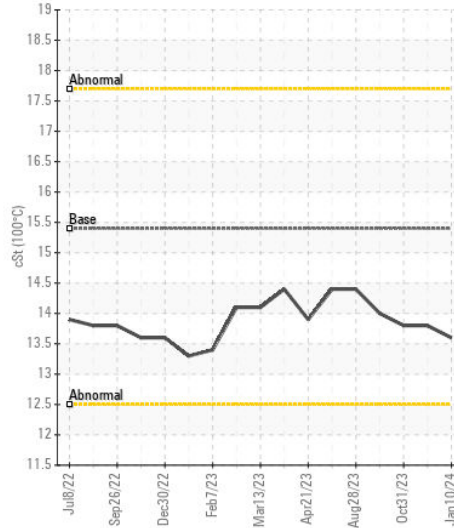
Non-ferrous Metals



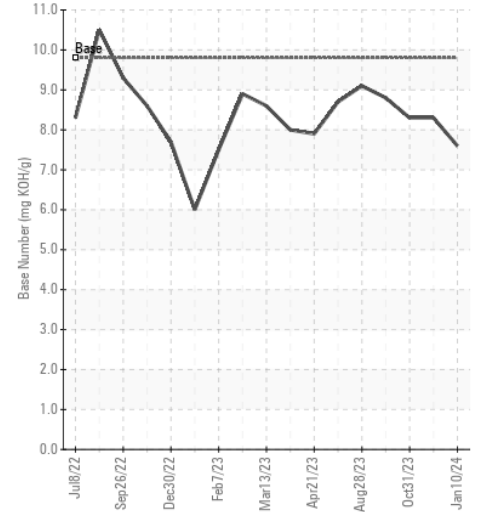
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0100205 **Received** : 16 Jan 2024  
**Lab Number** : 06060696 **Diagnosed** : 17 Jan 2024  
**Unique Number** : 10832078 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET

**GFL Environmental - 166 - Phenix City**  
 18 Old Brickyard Rd  
 Phenix City, AL  
 US 36869  
 Contact: DEAN PEACE JR  
 dean.peace@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: