



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

Machine Id  
**252006**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0110171</b>	GFL0060438	---
Sample Date		Client Info		<b>08 Jan 2024</b>	13 Dec 2022	---
Machine Age	mls	Client Info		<b>217197</b>	182393	---
Oil Age	mls	Client Info		<b>0</b>	0	---
Filter Age	mls	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>ATTENTION</b>	NORMAL	---

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>23</b>	67	---
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	3	---
Nickel	ppm	ASTM D5185m	>4	<b>1</b>	<1	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	---
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	10	---
Lead	ppm	ASTM D5185m	>40	<b>2</b>	0	---
Copper	ppm	ASTM D5185m	>330	<b>1</b>	11	---
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

**CONTAMINATION**

Fuel content negligible. There is no indication of any contamination in the oil.

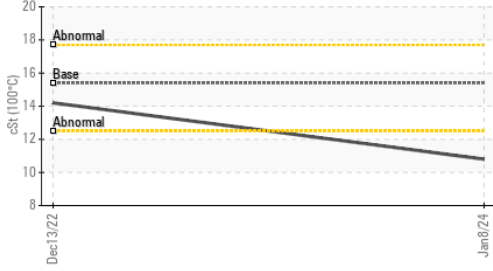
Silicon	ppm	ASTM D5185m	>25	<b>20</b>	21	---
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	---
Fuel	%	ASTM D3524	>5	<b>1.1</b>	<1.0	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.0</b>	20.8	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.8</b>	32.1	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	---

**FLUID CONDITION**

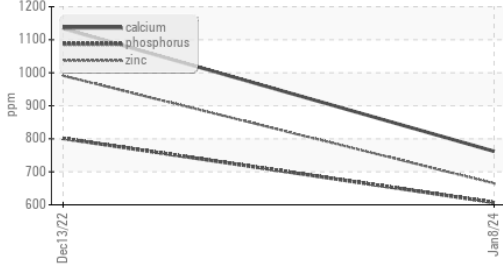
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Additive levels indicate the addition of a different brand, or type of oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		<b>0</b>	12	---
Boron	ppm	ASTM D5185m	0	<b>20</b>	18	---
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m	60	<b>46</b>	77	---
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	1	---
Magnesium	ppm	ASTM D5185m	1010	<b>▲ 642</b>	700	---
Calcium	ppm	ASTM D5185m	1070	<b>▲ 762</b>	1134	---
Phosphorus	ppm	ASTM D5185m	1150	<b>▲ 607</b>	801	---
Zinc	ppm	ASTM D5185m	1270	<b>▲ 665</b>	991	---
Sulfur	ppm	ASTM D5185m	2060	<b>2249</b>	3170	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.7</b>	36.1	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>3.2</b>	6.5	---
Visc @ 100°C	cSt	ASTM D445	15.4	<b>▲ 10.8</b>	14.2	---

▲ Viscosity @ 100°C



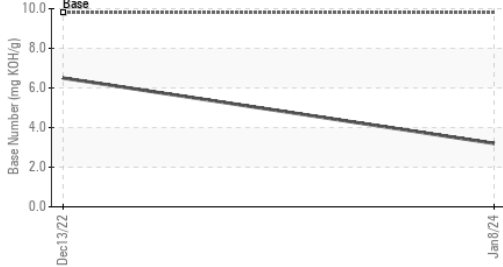
▲ Additives



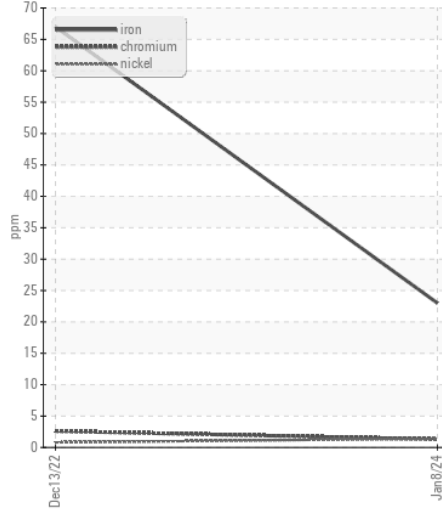
Fuel Dilution



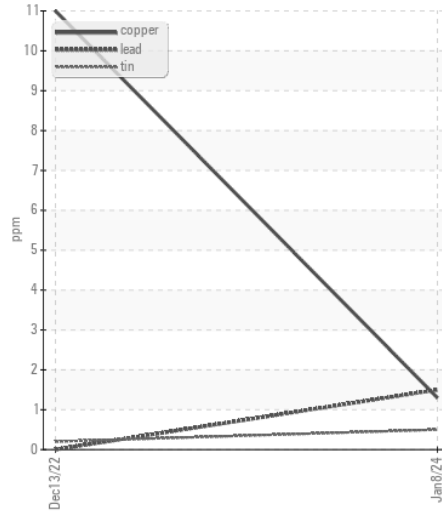
Base Number



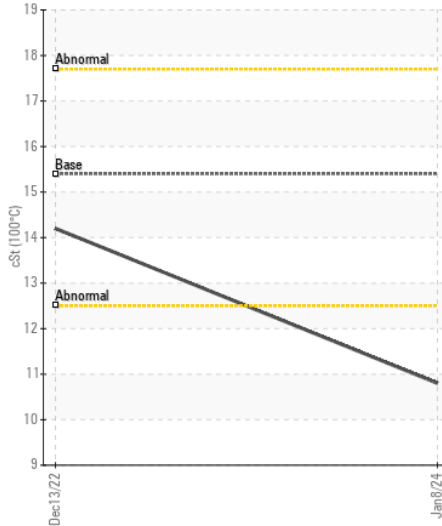
Ferrous Alloys



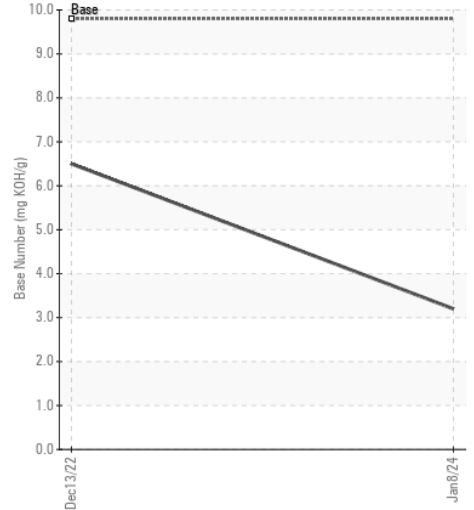
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0110171 **Received** : 11 Jan 2024  
**Lab Number** : 06058629 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10830011 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**GFL Environmental - 660 - Lynchburg Hauling**  
 2410 Mayflower Drive  
 Lynchburg, VA  
 US 24501  
 Contact: Delbert Beasley  
 dbeasley@countyrecycling.net  
 T: (434)665-5998  
 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)