



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

Machine Id  
**10982**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (8 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>GFL0058871</b>	GFL0072412	GFL0072408
Sample Date		Client Info		<b>03 Jan 2024</b>	07 Sep 2023	15 May 2023
Machine Age	hrs	Client Info		<b>4880</b>	4880	0
Oil Age	hrs	Client Info		<b>4880</b>	4880	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	ATTENTION	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	<b>13</b>	18	6
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	<1	<1
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>1</b>	2	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

Light fuel dilution occurring.

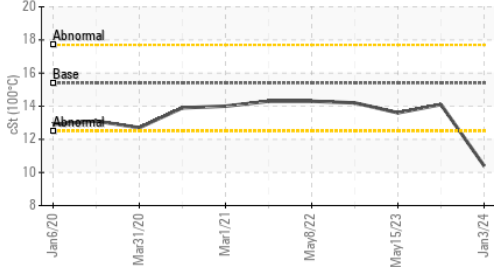
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	6	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	▲ 44	1
Fuel	%	ASTM D3524	>3.0	<b>▲ 2.2</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>6	<b>0.4</b>	0.8	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.3</b>	8.7	6.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.1</b>	19.9	18.5
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	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

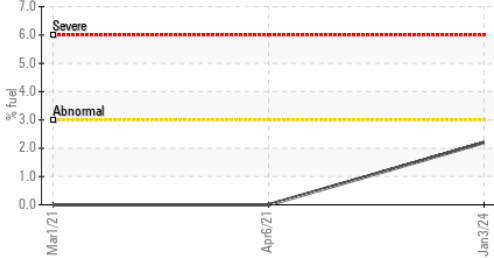
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		<b>4</b>	37	3
Boron	ppm	ASTM D5185m	0	<b>7</b>	3	5
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>52</b>	61	56
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	1010	<b>790</b>	1023	914
Calcium	ppm	ASTM D5185m	1070	<b>939</b>	1345	1192
Phosphorus	ppm	ASTM D5185m	1150	<b>751</b>	1086	1007
Zinc	ppm	ASTM D5185m	1270	<b>1066</b>	1345	1245
Sulfur	ppm	ASTM D5185m	2060	<b>2533</b>	3850	3542
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.6</b>	15.4	14.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>6.9</b>	8.4	9.2
Visc @ 100°C	cSt	ASTM D445	15.4	<b>▲ 10.4</b>	14.1	13.6

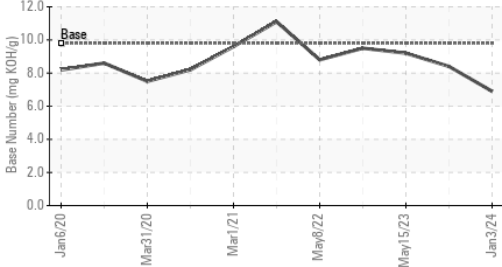
▲ Viscosity @ 100°C



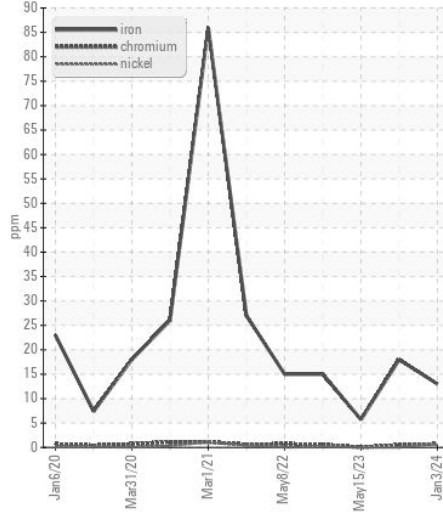
▲ Fuel Dilution



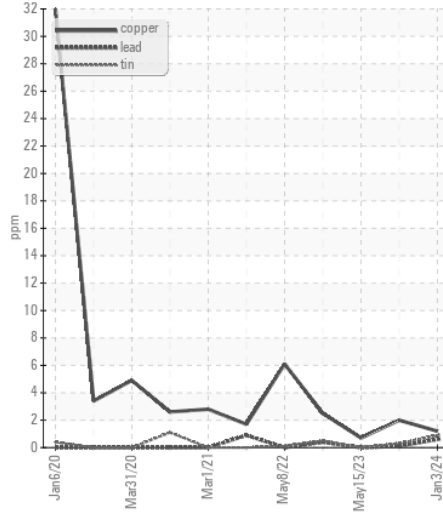
Base Number



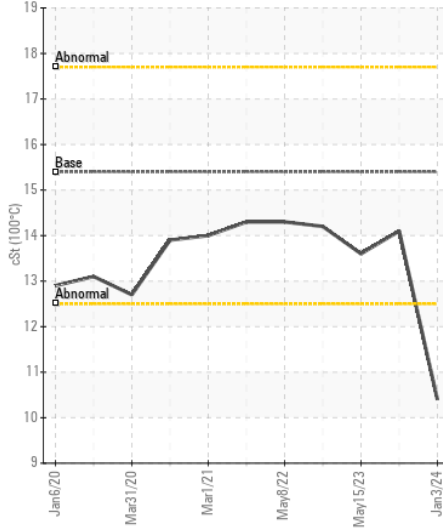
Ferrous Alloys



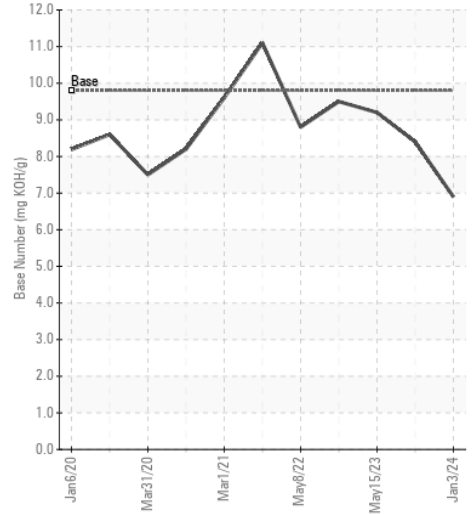
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0058871 **Received** : 09 Jan 2024  
**Lab Number** : 06055214 **Diagnosed** : 11 Jan 2024  
**Unique Number** : 10821163 **Diagnostician** : Sean Felton  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**GFL Environmental - 119 - Williamston Hauling/TriEast**  
 1805 West Main Street  
 Williamston, NC  
 US 27892  
 Contact: Spencer Ligon  
 spencer.ligon@gflenv.com  
 T: (800)207-6618  
 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)