



Machine Id  
**810029**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (28 QTS)**

**RECOMMENDATION**

We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

**WEAR**

All component wear rates are normal.

**CONTAMINATION**

Sodium and/or potassium levels remain high. There is a high concentration of glycol present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a high amount of fuel present in the oil.

**FLUID CONDITION**

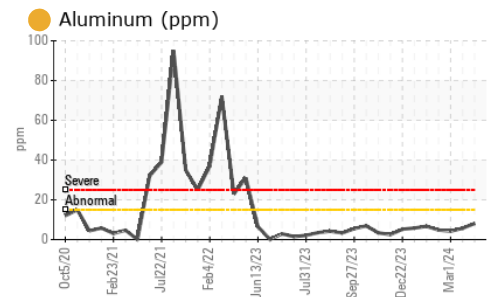
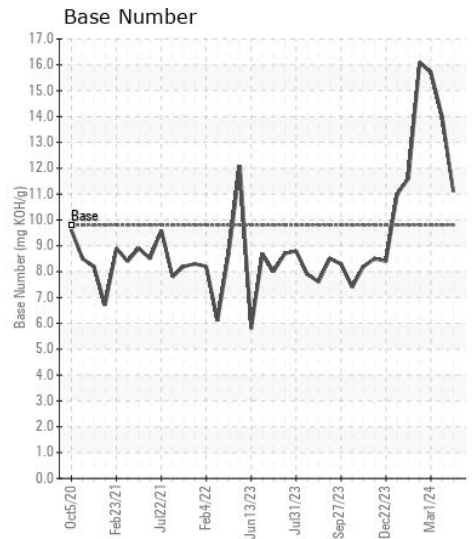
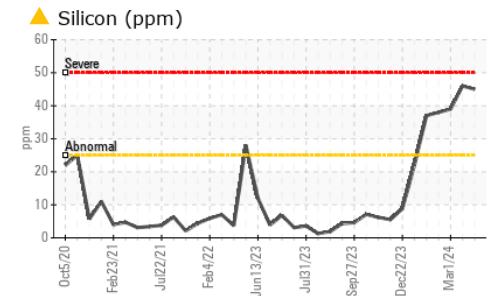
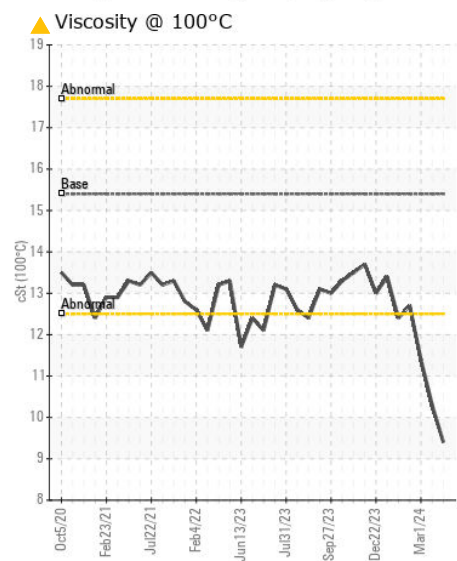
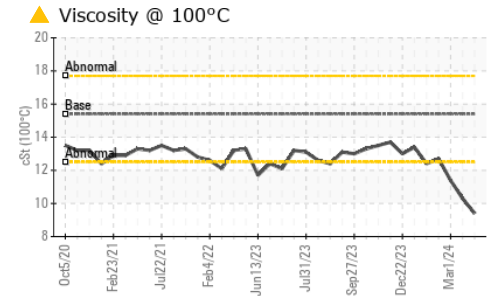
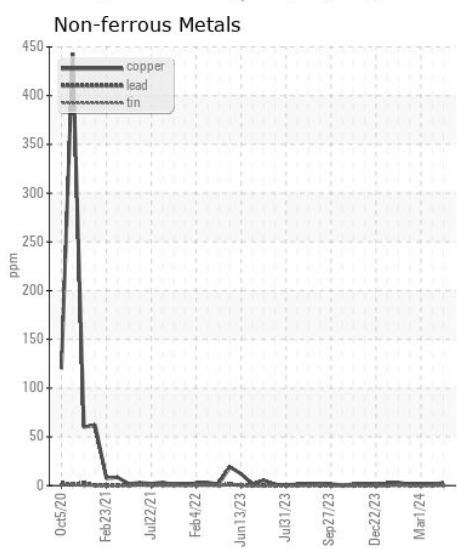
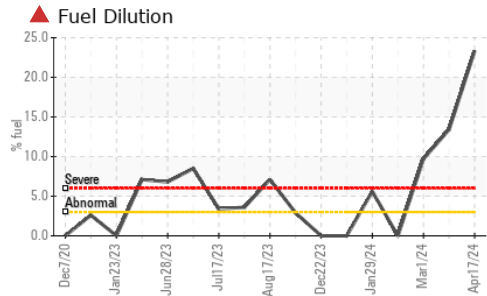
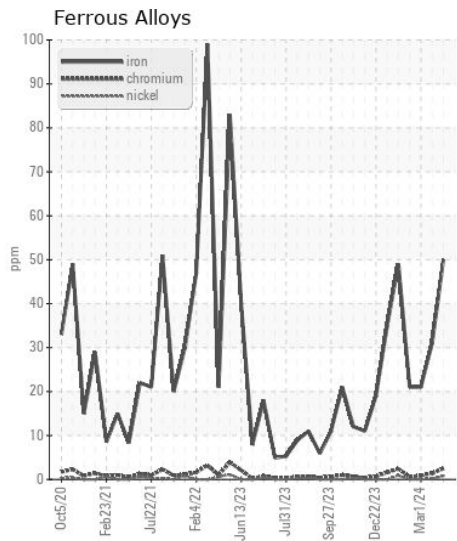
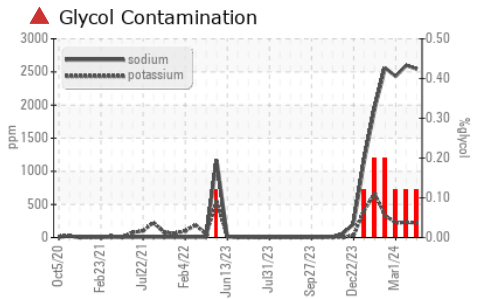
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0111486</b>	GFL0068809	GFL0068841
Sample Date		Client Info		<b>17 Apr 2024</b>	19 Mar 2024	01 Mar 2024
Machine Age	hrs	Client Info		<b>10212</b>	10045	9908
Oil Age	hrs	Client Info		<b>520</b>	353	216
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Not Changed	Not Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>SEVERE</b>	SEVERE	SEVERE

Iron	ppm	ASTM D5185m	>75	<b>50</b>	31	21
Chromium	ppm	ASTM D5185m	>5	<b>2</b>	1	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>8</b>	6	4
Lead	ppm	ASTM D5185m	>25	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>100	<b>3</b>	2	2
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

Silicon	ppm	ASTM D5185m	>25	<b>45</b>	46	39
Potassium	ppm	ASTM D5185m	>20	<b>225</b>	230	223
Fuel	%	ASTM D3524	>3.0	<b>23.3</b>	13.4	9.7
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>0.12</b>	0.12	0.12
Soot %	%	*ASTM D7844	>6	<b>1.3</b>	1	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>16.4</b>	14.2	12.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.3</b>	22.1	21.3
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

Sodium	ppm	ASTM D5185m		<b>2543</b>	2599	2433
Boron	ppm	ASTM D5185m	0	<b>48</b>	67	69
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>127</b>	139	137
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>601</b>	701	809
Calcium	ppm	ASTM D5185m	1070	<b>746</b>	847	899
Phosphorus	ppm	ASTM D5185m	1150	<b>586</b>	680	864
Zinc	ppm	ASTM D5185m	1270	<b>843</b>	979	1019
Sulfur	ppm	ASTM D5185m	2060	<b>2428</b>	2434	2818
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>22.3</b>	17.3	15.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>11.1</b>	14.0	15.7
Visc @ 100°C	cSt	ASTM D445	15.4	<b>9.4</b>	10.3	11.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0111486 **Received** : 19 Apr 2024  
**Lab Number** : 06155045 **Tested** : 23 Apr 2024  
**Unique Number** : 10990468 **Diagnosed** : 24 Apr 2024 - Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: PercentFuel )

**GFL Environmental - 073 - Warner Robins - Transwaste**  
 155 Story Road  
 Warner Robins, GA  
 US 31093  
 Contact: JOSH MALONEY  
 jmaloney@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)