



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

Machine Id  
**920077-205331**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0118259</b>	GFL0118194	GFL0118240
Sample Date		Client Info		<b>12 Jul 2024</b>	03 Jun 2024	13 May 2024
Machine Age	hrs	Client Info		<b>12243</b>	11990	11820
Oil Age	hrs	Client Info		<b>700</b>	150	150
Filter Age	hrs	Client Info		<b>700</b>	150	150
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Changed	Changed
Sample Status				<b>SEVERE</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>48</b>	4	3
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	1
Aluminum	ppm	ASTM D5185m	>20	<b>6</b>	2	1
Lead	ppm	ASTM D5185m	>40	<b>4</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>1</b>	<1	1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

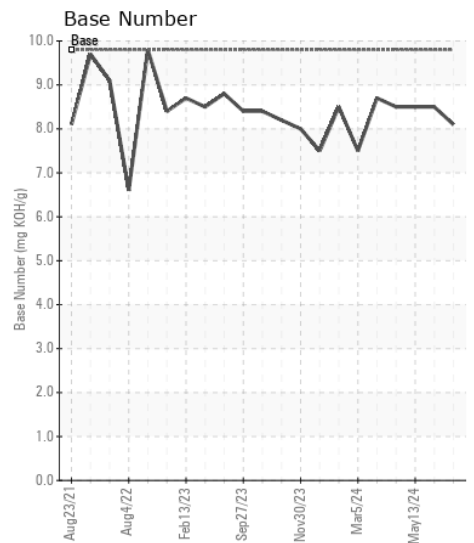
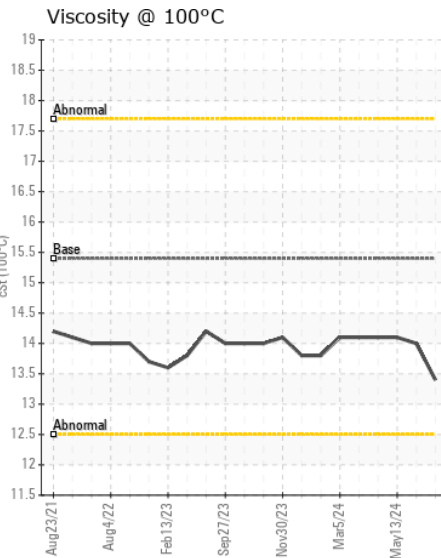
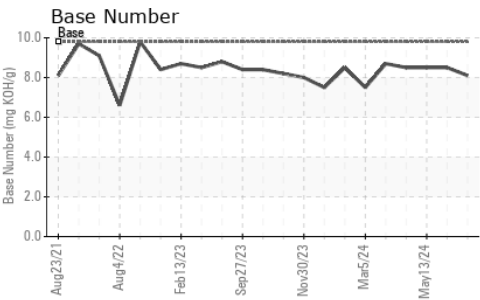
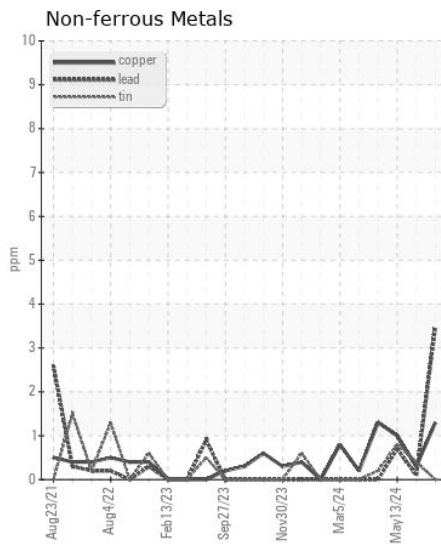
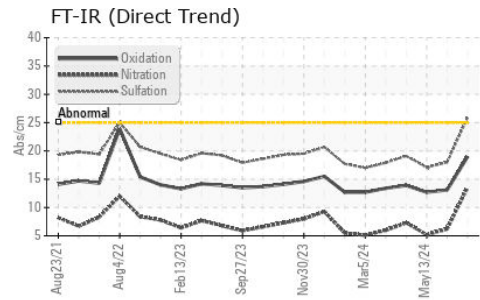
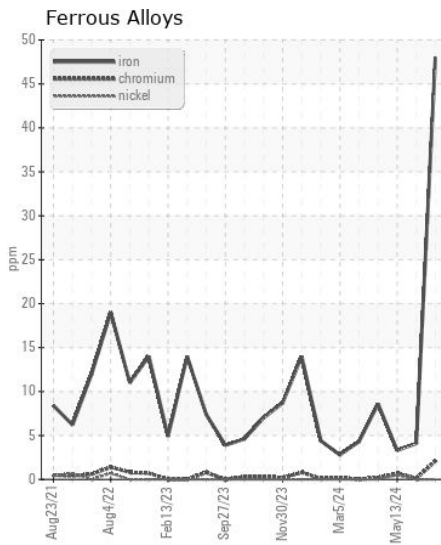
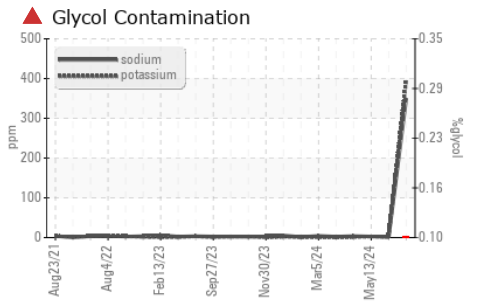
Sodium and/or potassium levels are high. Test for glycol is positive.

Silicon	ppm	ASTM D5185m	>25	<b>11</b>	3	4
Potassium	ppm	ASTM D5185m	>20	<b>▲ 398</b>	2	3
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>▲ 0.10</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1.9</b>	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>13.6</b>	6.2	5.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.9</b>	18.0	17.1
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 oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		<b>▲ 349</b>	1	3
Boron	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	<1
Barium	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	<1
Molybdenum	ppm	ASTM D5185m	60	<b>129</b>	57	57
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	1010	<b>905</b>	877	924
Calcium	ppm	ASTM D5185m	1070	<b>1071</b>	1022	1038
Phosphorus	ppm	ASTM D5185m	1150	<b>961</b>	950	998
Zinc	ppm	ASTM D5185m	1270	<b>1175</b>	1136	1201
Sulfur	ppm	ASTM D5185m	2060	<b>3248</b>	3041	3239
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.0</b>	13.1	12.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.1</b>	8.5	8.5
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.4</b>	14.0	14.1



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0118259 **Received** : 17 Jul 2024  
**Lab Number** : 06238858 **Tested** : 19 Jul 2024  
**Unique Number** : 11127692 **Diagnosed** : 19 Jul 2024 - Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: Glycol )

**GFL Environmental - 822 - Springfield Hauling**  
 2120 West Bennett Street  
 Springfield, MO  
 US 65807  
 Contact: Dennis Moore  
 dennis.moore@gflenv.com  
 T: (417)403-3641  
 F:

Certificate L2367  
 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)