



Machine Id  
**929088-205308**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0118258</b>	GFL0118183	GFL0109195
Sample Date		Client Info		<b>12 Jul 2024</b>	25 Apr 2024	08 Apr 2024
Machine Age	hrs	Client Info		<b>13562</b>	13001	12846
Oil Age	hrs	Client Info		<b>700</b>	150	300
Filter Age	hrs	Client Info		<b>700</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	N/A	N/A
Filter Changed		Client Info		<b>Changed</b>	Not Changed	Not Changed
Sample Status				<b>ABNORMAL</b>	SEVERE	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>13</b>	13	6
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>1</b>	3	1
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	0
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	<1
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**

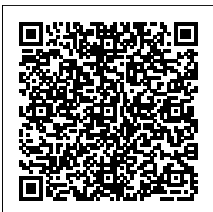
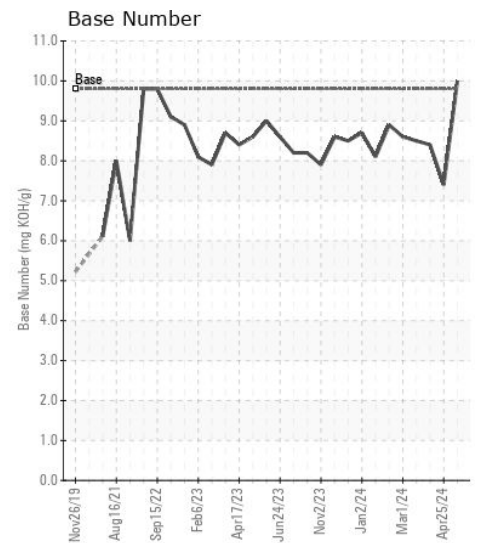
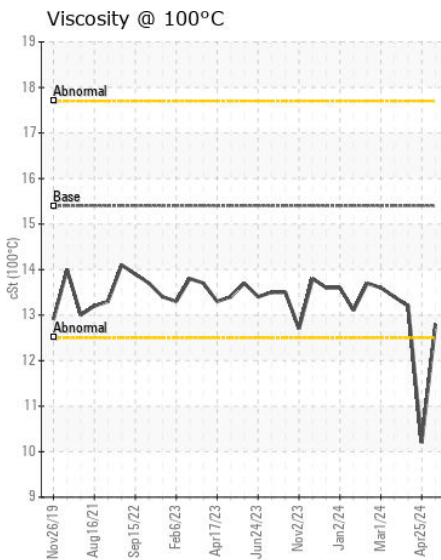
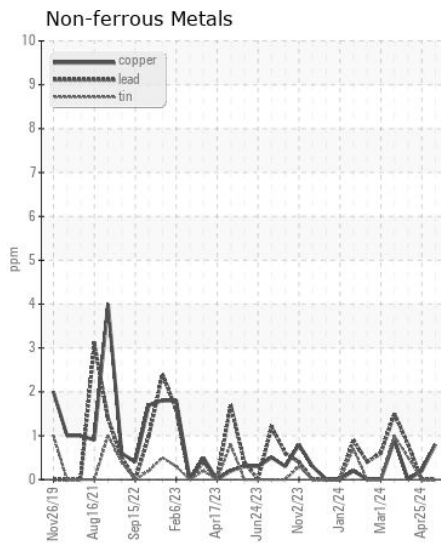
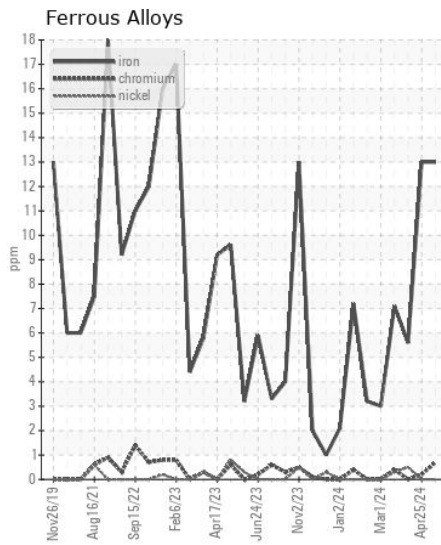
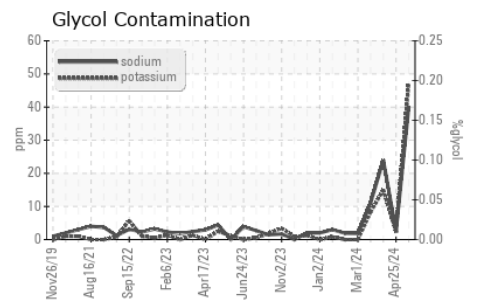
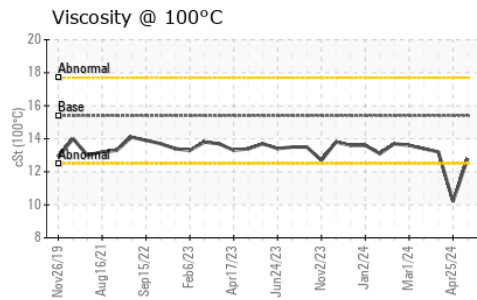
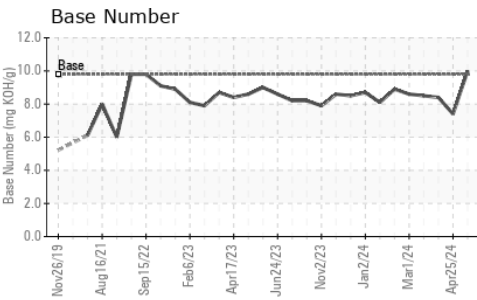
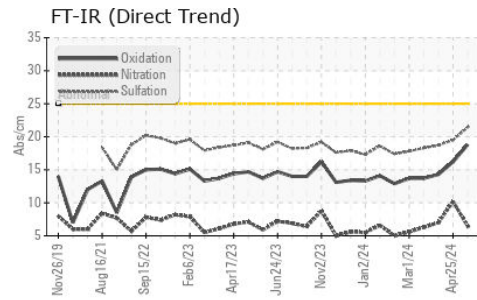
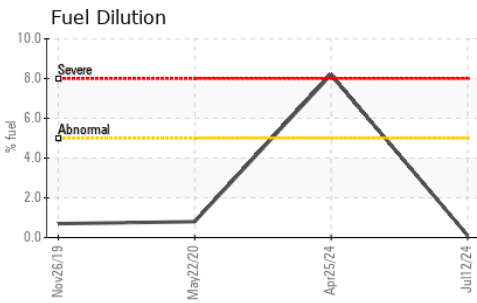
Sodium and/or potassium levels are high. Test for glycol is negative.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	24	2
Potassium	ppm	ASTM D5185m	>20	<b>47</b>	2	15
Fuel	%	ASTM D3524	>5	<b>0.1</b>	8.2	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.6	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.5</b>	10.2	7.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.4</b>	19.5	18.7
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>40</b>	2	24
Boron	ppm	ASTM D5185m	0	<b>33</b>	48	2
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>53</b>	16	61
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	1010	<b>571</b>	709	979
Calcium	ppm	ASTM D5185m	1070	<b>1598</b>	1084	1090
Phosphorus	ppm	ASTM D5185m	1150	<b>806</b>	696	1081
Zinc	ppm	ASTM D5185m	1270	<b>947</b>	819	1323
Sulfur	ppm	ASTM D5185m	2060	<b>2915</b>	2886	3755
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.8</b>	16.2	14.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>10.0</b>	7.4	8.4
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.8</b>	10.2	13.2



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0118258 **Received** : 17 Jul 2024  
**Lab Number** : 06238857 **Tested** : 18 Jul 2024  
**Unique Number** : 11127691 **Diagnosed** : 18 Jul 2024 - Sean Felton  
**Test Package** : FLEET ( Additional Tests: Glycol, PercentFuel )

**GFL Environmental - 822 - Springfield Hauling**  
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 Springfield, MO  
 US 65807  
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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)