



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

Machine Id  
**401113**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Check for low coolant level. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0096762</b>	GFL0084203	GFL0084039
Sample Date		Client Info		<b>17 Jun 2024</b>	25 Jul 2023	07 Jun 2023
Machine Age	hrs	Client Info		<b>36872</b>	33740	33232
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>600</b>	600	600
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>ATTENTION</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>9</b>	11	20
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	4	6
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	<1	2
Copper	ppm	ASTM D5185(m)	>330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

**CONTAMINATION**

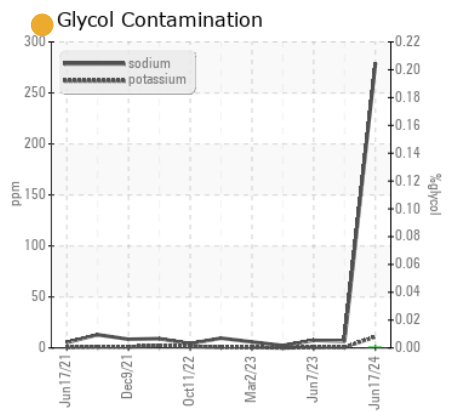
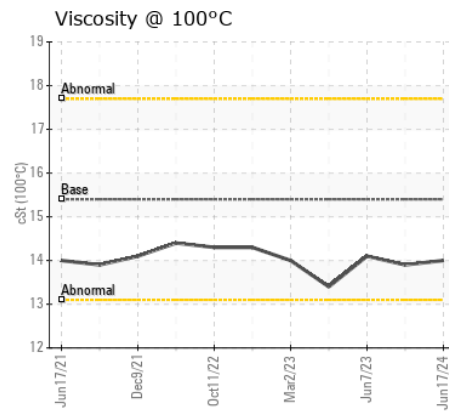
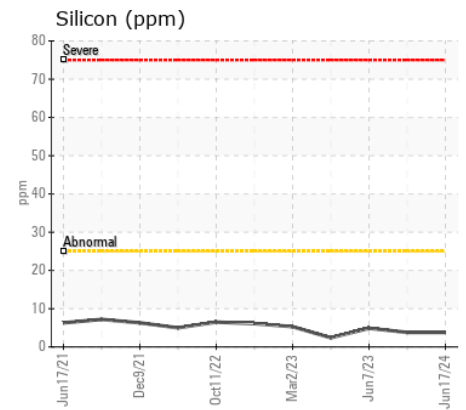
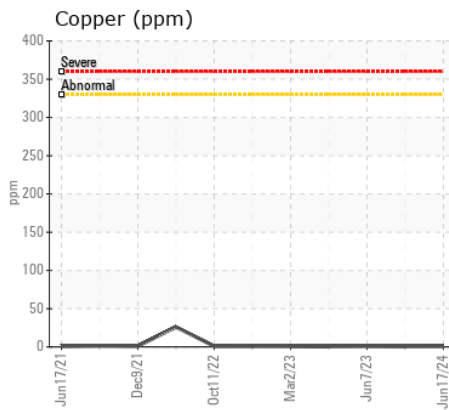
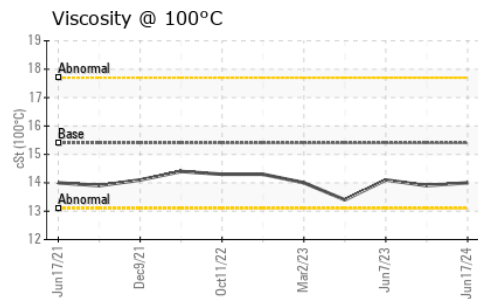
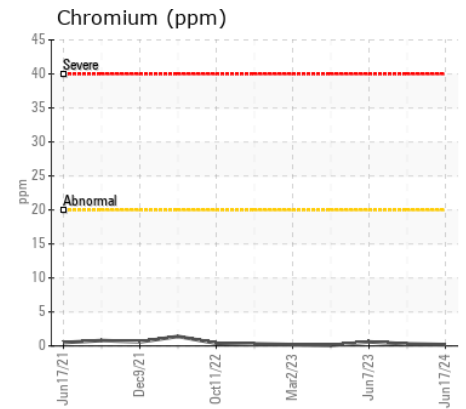
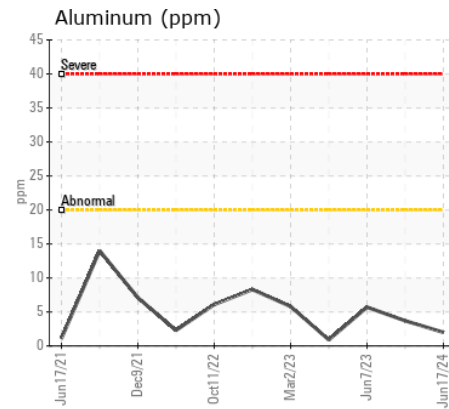
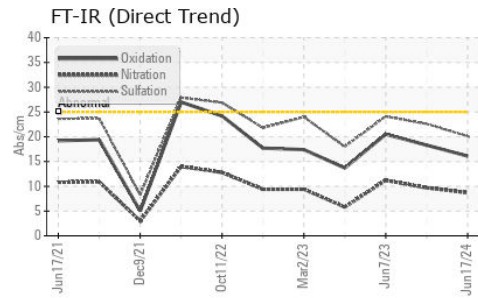
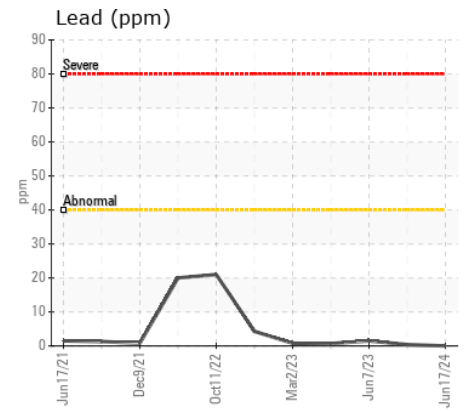
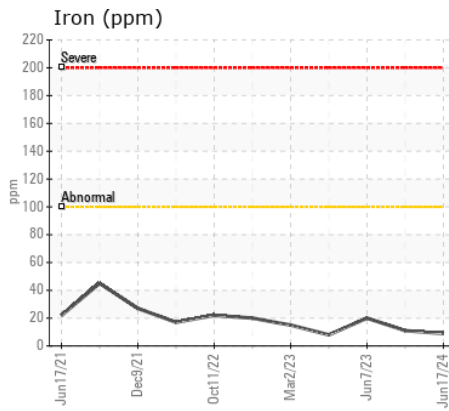
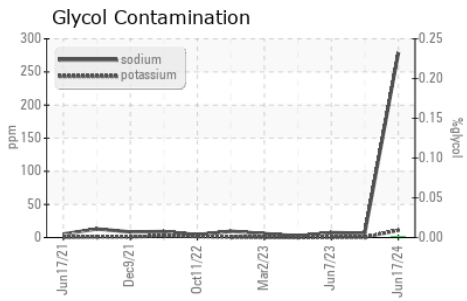
Water treatment chemicals present, indicating slow coolant leak. Test for glycol is negative. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	4	5
Potassium	ppm	ASTM D5185(m)	>20	<b>11</b>	<1	<1
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 D7922*		<b>0.0</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>0.4</b>	0.4	0.7
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.7</b>	9.7	11.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.1</b>	22.6	24.1
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	---	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The condition of the oil is acceptable for the time in service (see recommendation).

Sodium	ppm	ASTM D5185(m)		<b>279</b>	7	8
Boron	ppm	ASTM D5185(m)	0	<b>2</b>	4	5
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>67</b>	62	66
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>962</b>	1018	1070
Calcium	ppm	ASTM D5185(m)	1070	<b>1046</b>	1071	1139
Phosphorus	ppm	ASTM D5185(m)	1150	<b>990</b>	1100	1130
Zinc	ppm	ASTM D5185(m)	1270	<b>1215</b>	1237	1288
Sulfur	ppm	ASTM D5185(m)	2060	<b>2586</b>	2586	2548
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>16.1</b>	18.3	20.5
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>14.0</b>	13.9	14.1



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0096762  
**Lab Number** : 02644763  
**Unique Number** : 5802302  
**Test Package** : MOB 1 ( Additional Tests: Glycol, Visual )  
**Received** : 02 Jul 2024  
**Tested** : 02 Jul 2024  
**Diagnosed** : 02 Jul 2024 - Kevin Marson

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