



Machine Id  
**4586**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 10W30 (--- GAL)**

**RECOMMENDATION**

We advise that you check the fuel injection system. 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>GFL0118975</b>	GFL0112519	GFL0090623
Sample Date		Client Info		<b>18 Jun 2024</b>	19 May 2024	06 Aug 2023
Machine Age	kms	Client Info		<b>846090</b>	565	25969
Oil Age	kms	Client Info		<b>0</b>	0	0
Filter Age	kms	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>SEVERE</b>	SEVERE	SEVERE

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>110	<b>14</b>	61	61
Chromium	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	3	▲ 7
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<b>1</b>	4	9
Lead	ppm	ASTM D5185(m)	>45	<b>&lt;1</b>	8	6
Copper	ppm	ASTM D5185(m)	>85	<b>25</b>	158	47
Tin	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	1	1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

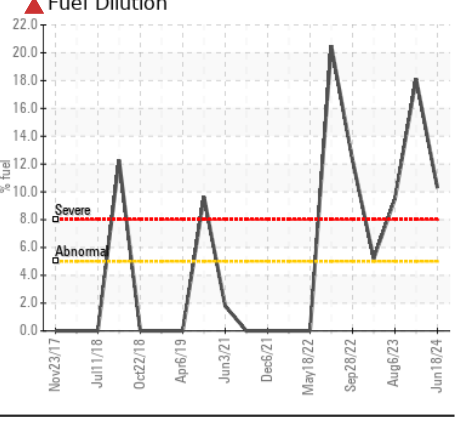
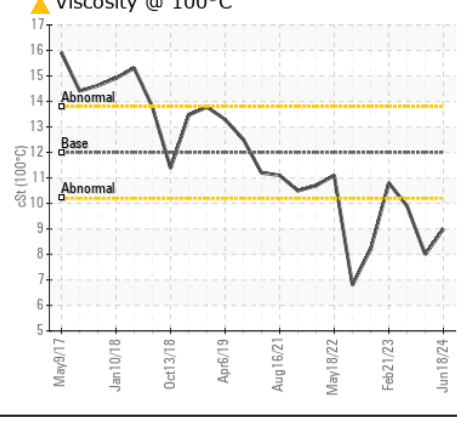
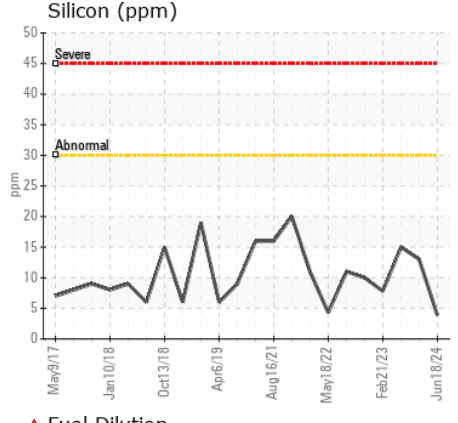
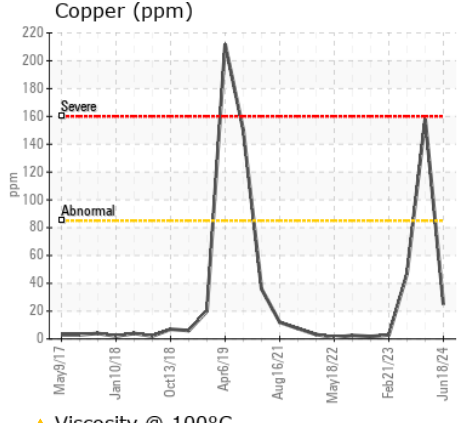
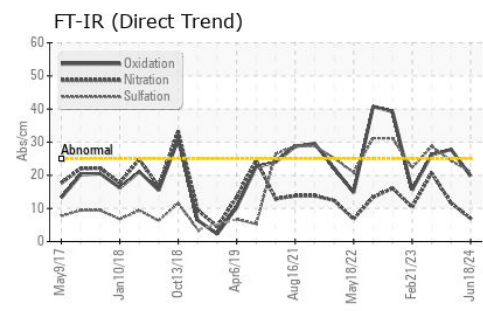
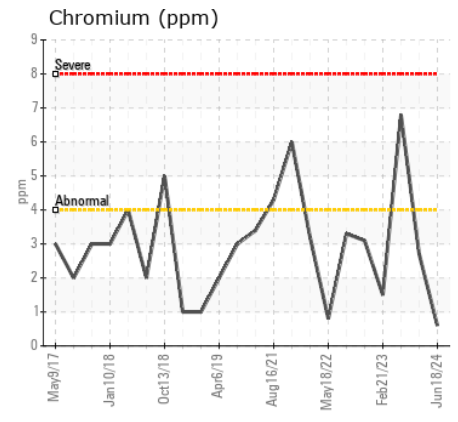
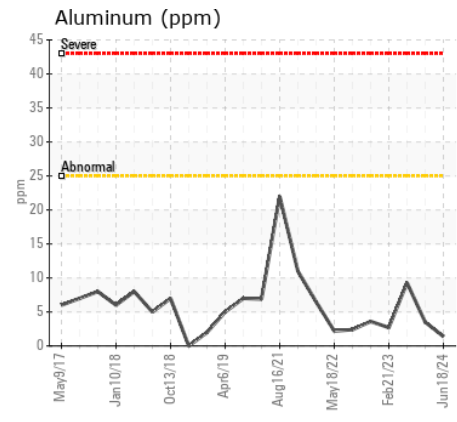
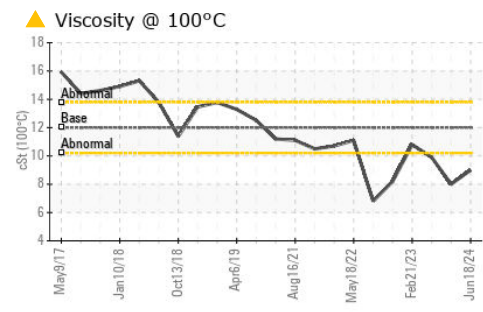
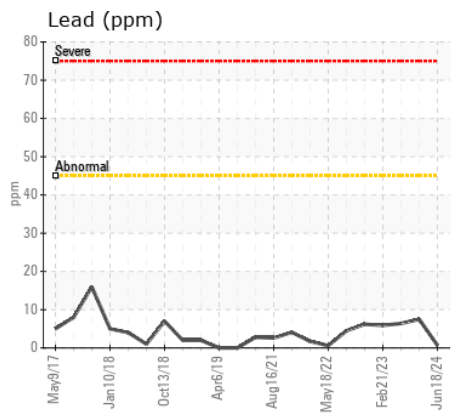
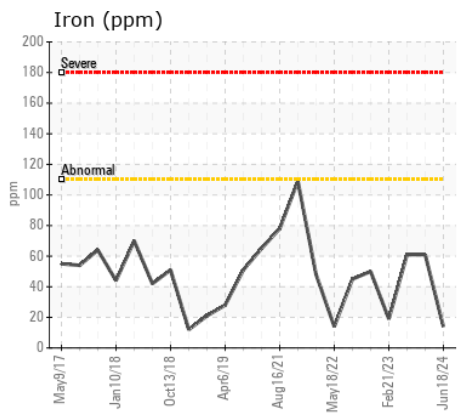
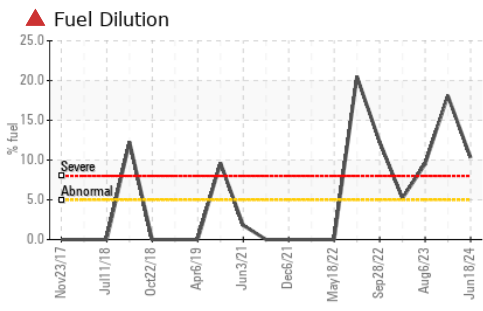
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>30	<b>4</b>	13	15
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	3	▲ 62
Fuel	%	ASTM D7593*	>5	<b>▲ 10.3</b>	▲ 18.1	▲ 9.5
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	0.0	▲ 0.137
Soot %	%	ASTM D7844*	>3	<b>0.1</b>	0.5	1.5
Nitration	Abs/cm	ASTM D7624*	>20	<b>7.0</b>	11.6	20.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>21.1</b>	24.4	28.7
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 oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		<b>3</b>	6	● 3250
Boron	ppm	ASTM D5185(m)	2	<b>2</b>	3	2
Barium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	3	0
Molybdenum	ppm	ASTM D5185(m)	50	<b>47</b>	44	202
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	1	<1
Magnesium	ppm	ASTM D5185(m)	950	<b>747</b>	708	798
Calcium	ppm	ASTM D5185(m)	1050	<b>830</b>	803	1019
Phosphorus	ppm	ASTM D5185(m)	995	<b>808</b>	715	868
Zinc	ppm	ASTM D5185(m)	1180	<b>931</b>	857	1030
Sulfur	ppm	ASTM D5185(m)	2600	<b>2020</b>	1565	2190
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>19.8</b>	27.8	26.2
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	<b>▲ 9.0</b>	▲ 8.0	▲ 9.9



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0118975 **Received** : 19 Jun 2024  
**Lab Number** : 02642762 **Tested** : 20 Jun 2024  
**Unique Number** : 5800301 **Diagnosed** : 20 Jun 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: PercentFuel )

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To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.