

Machine Id  
**0547**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON HP 15W40 (--- GAL)**

**RECOMMENDATION**

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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0117254</b>	GFL0117317	GFL0099536
Sample Date		Client Info		<b>13 Jun 2024</b>	11 Apr 2024	20 Dec 2023
Machine Age	kms	Client Info		<b>368911</b>	19566	349325
Oil Age	kms	Client Info		<b>0</b>	532	0
Filter Age	kms	Client Info		<b>0</b>	532	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>SEVERE</b>	SEVERE	SEVERE

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>42</b>	52	24
Chromium	ppm	ASTM D5185(m)	>20	<b>2</b>	2	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	4	3
Lead	ppm	ASTM D5185(m)	>40	<b>4</b>	4	2
Copper	ppm	ASTM D5185(m)	>330	<b>4</b>	5	2
Tin	ppm	ASTM D5185(m)	>15	<b>2</b>	3	1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

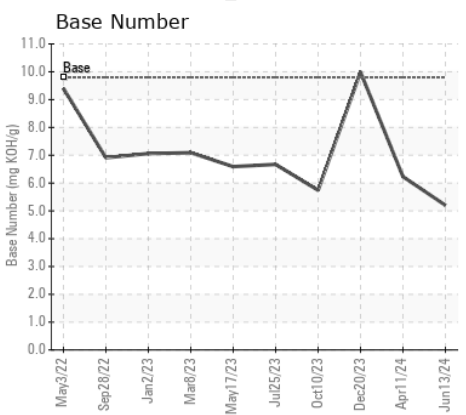
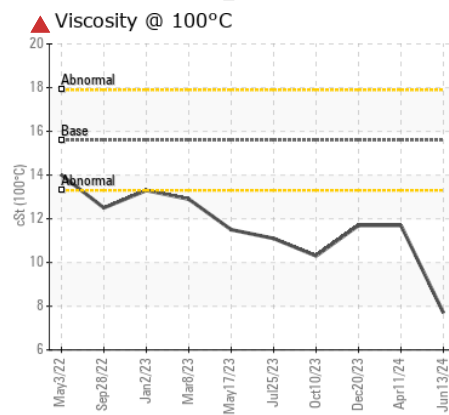
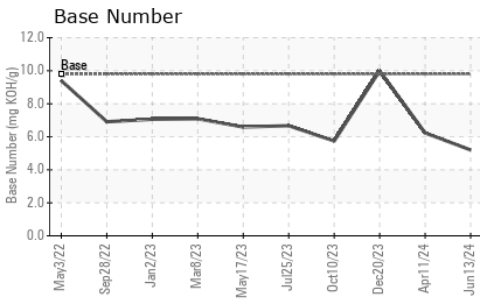
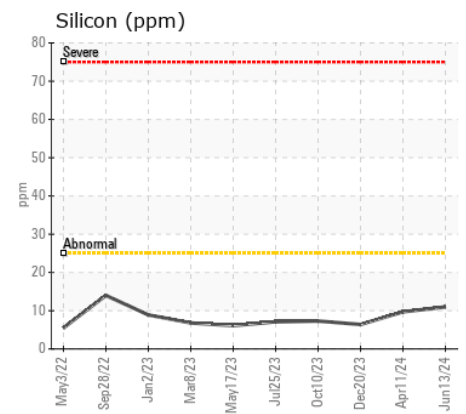
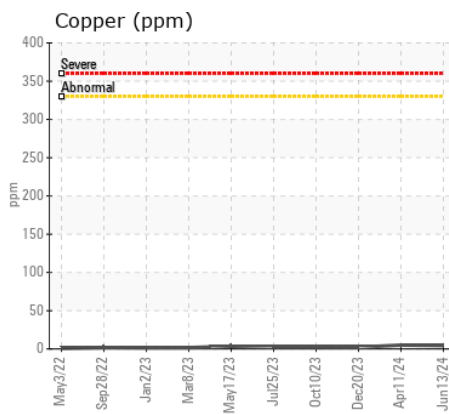
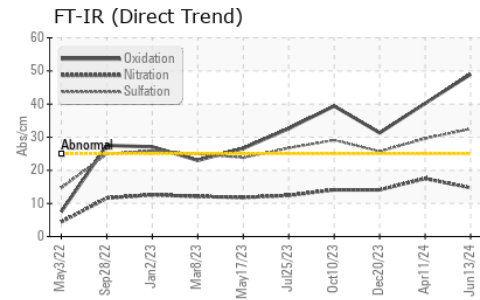
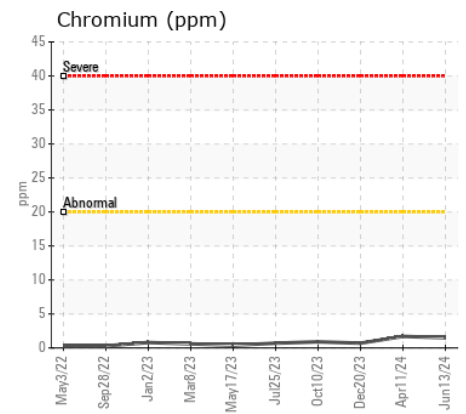
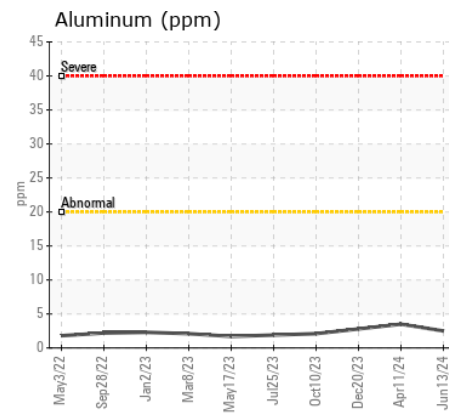
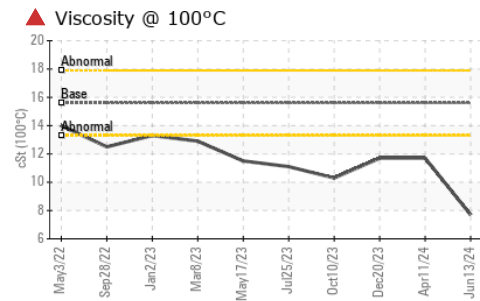
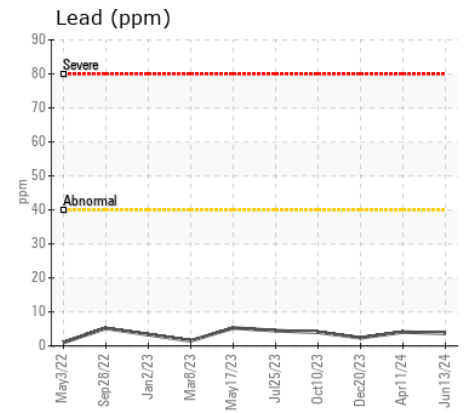
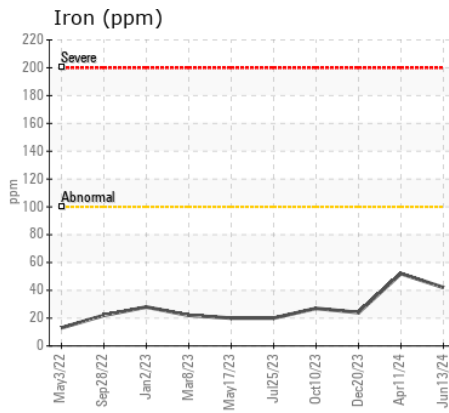
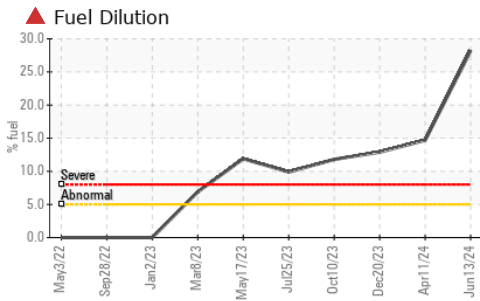
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>11</b>	10	6
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	3
Fuel	%	ASTM D7593*	>5	<b>▲ 28.2</b>	▲ 14.7	▲ 12.9
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>0.7</b>	1	0.6
Nitration	Abs/cm	ASTM D7624*	>20	<b>14.7</b>	17.5	14.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>32.5</b>	29.6	25.7
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. 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>2</b>	3	1
Boron	ppm	ASTM D5185(m)	0	<b>3</b>	2	2
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>37</b>	47	48
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185(m)	1010	<b>574</b>	767	767
Calcium	ppm	ASTM D5185(m)	1070	<b>648</b>	853	907
Phosphorus	ppm	ASTM D5185(m)	1150	<b>594</b>	793	844
Zinc	ppm	ASTM D5185(m)	1270	<b>724</b>	942	975
Sulfur	ppm	ASTM D5185(m)	2060	<b>1427</b>	1858	2140
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>49.0</b>	40.2	31.3
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	<b>5.20</b>	6.23	9.99
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	<b>▲ 7.7</b>	▲ 11.7	▲ 11.7



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0117254  
**Lab Number** : 02644002  
**Unique Number** : 5801541  
**Test Package** : MOB 2 ( Additional Tests: PercentFuel )  
**Received** : 25 Jun 2024  
**Tested** : 26 Jun 2024  
**Diagnosed** : 26 Jun 2024 - Kevin Marson

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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.