

Machine Id  
**70**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON HP 15W40 (--- GAL)**

**RECOMMENDATION**

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>PC0078169</b>	PC0077631	PC0071644
Sample Date		Client Info		<b>23 Feb 2024</b>	28 Sep 2023	20 Mar 2023
Machine Age	kms	Client Info		<b>54581</b>	48641	41901
Oil Age	kms	Client Info		<b>8000</b>	8000	8000
Filter Age	kms	Client Info		<b>8000</b>	8000	8000
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

**WEAR**

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>200	<b>8</b>	13	9
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>30	<b>2</b>	2	1
Lead	ppm	ASTM D5185(m)	>30	<b>3</b>	10	6
Copper	ppm	ASTM D5185(m)	>30	<b>1</b>	2	<1
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

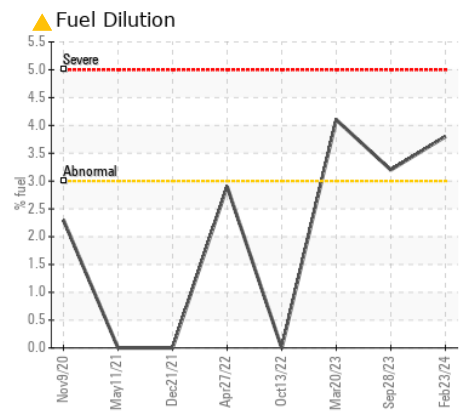
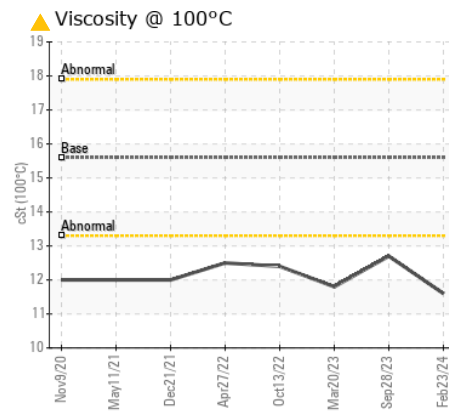
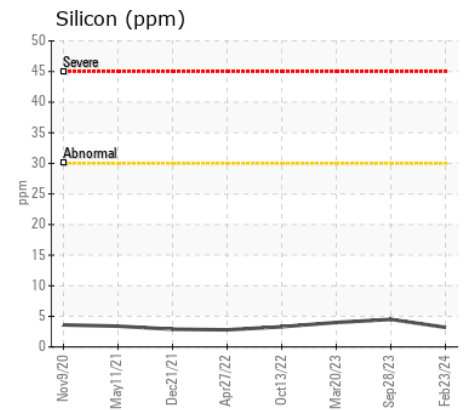
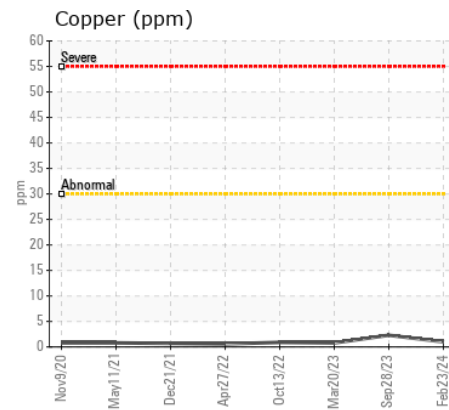
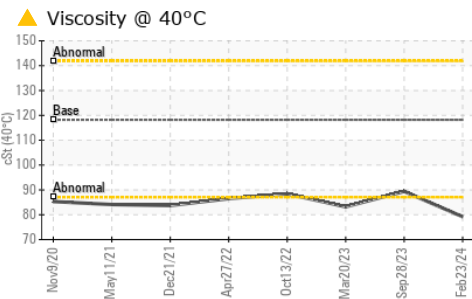
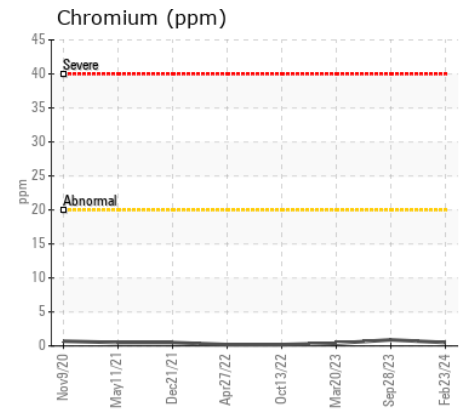
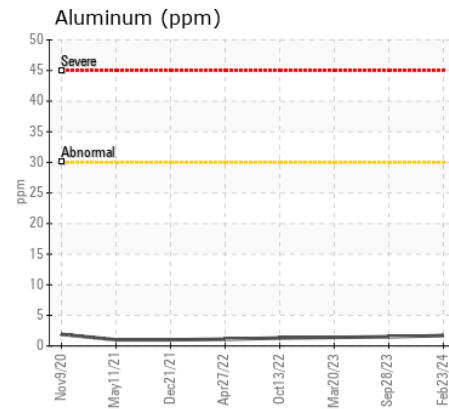
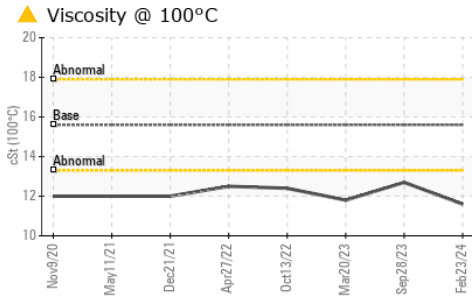
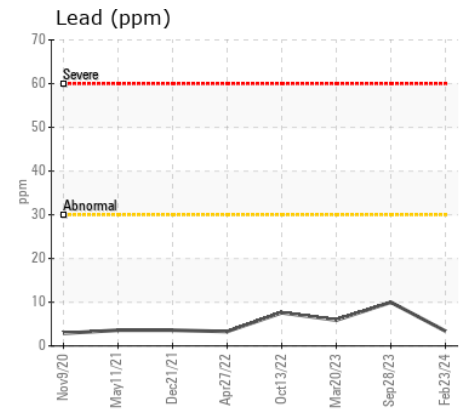
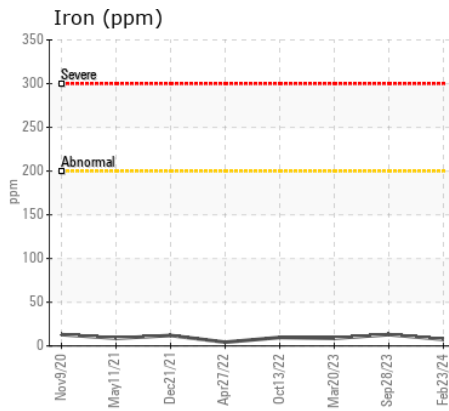
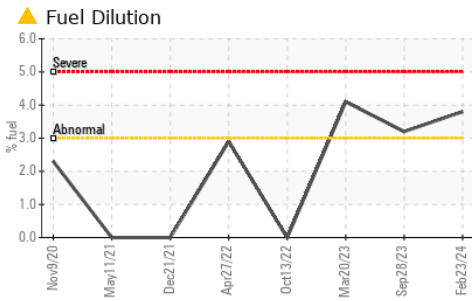
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>30	<b>3</b>	4	4
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Fuel	%	ASTM D7593*	>3.0	<b>▲ 3.8</b>	▲ 3.2	▲ 4.1
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>0.4</b>	1	0.3
Nitration	Abs/cm	ASTM D7624*	>20	<b>6.9</b>	6.6	7.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>18.7</b>	20.4	21.6
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>1</b>	2	2
Boron	ppm	ASTM D5185(m)	0	<b>8</b>	2	1
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>58</b>	59	60
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>913</b>	962	966
Calcium	ppm	ASTM D5185(m)	1070	<b>1058</b>	1035	1123
Phosphorus	ppm	ASTM D5185(m)	1150	<b>993</b>	1004	1110
Zinc	ppm	ASTM D5185(m)	1270	<b>1142</b>	1169	1191
Sulfur	ppm	ASTM D5185(m)	2060	<b>2731</b>	2545	2790
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>14.3</b>	14.8	14.5
Visc @ 40°C	cSt	ASTM D7279(m)	118.2	<b>▲ 79.2</b>	89.4	▲ 83.2
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	<b>▲ 11.6</b>	12.7	▲ 11.8
Viscosity Index (VI)	Scale	ASTM D2270*	139	<b>138</b>	139	134



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0078169  
**Lab Number** : 02619473  
**Unique Number** : 5736583  
**Test Package** : MOB 1 ( Additional Tests: KV40, PercentFuel, VI )

**Received** : 04 Mar 2024  
**Tested** : 05 Mar 2024  
**Diagnosed** : 05 Mar 2024 - Wes Davis

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.

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