

Machine Id  
**RST9963**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON UHP 5W40 (8 LTR)**

**DIAGNOSIS**

**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.

**Wear**

All component wear rates are normal.

**Contamination**

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

**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.

**SAMPLE INFORMATION**

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PC0078317</b>	PC0078299	PC0082050
Sample Date	Client Info		<b>14 Feb 2024</b>	09 Feb 2024	30 Jan 2024
Machine Age	hrs	Client Info	<b>6249</b>	9963	6023
Oil Age	hrs	Client Info	<b>0</b>	0	250
Oil Changed	Client Info		<b>N/A</b>	Not Changd	Changed
Sample Status			<b>SEVERE</b>	SEVERE	SEVERE

**CONTAMINATION**

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

**WEAR METALS**

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>100	<b>44</b>	24	8
Chromium	ppm	ASTM D5185(m)	>20	<b>3</b>	2	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	<1	0
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>4</b>	4	2
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185(m)	>330	<b>&lt;1</b>	2	<1
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**ADDITIVES**

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	65	<b>17</b>	24	35
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	65	<b>23</b>	30	37
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	1160	<b>450</b>	▲ 564	724
Calcium	ppm	ASTM D5185(m)	820	<b>334</b>	▲ 415	539
Phosphorus	ppm	ASTM D5185(m)	1160	<b>394</b>	▲ 510	673
Zinc	ppm	ASTM D5185(m)	1260	<b>473</b>	▲ 605	772
Sulfur	ppm	ASTM D5185(m)	3000	<b>1009</b>	▲ 1409	1928
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

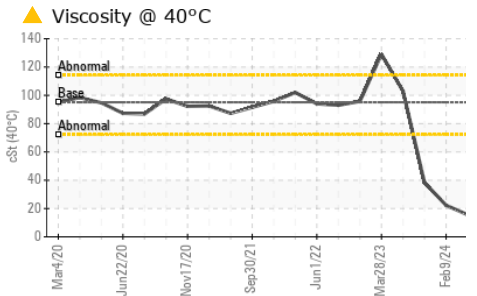
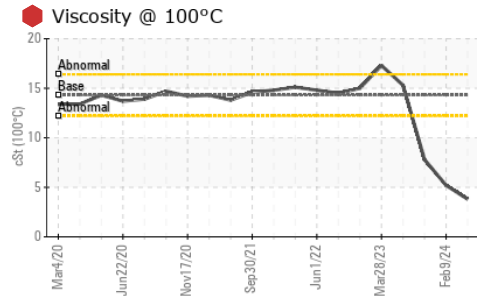
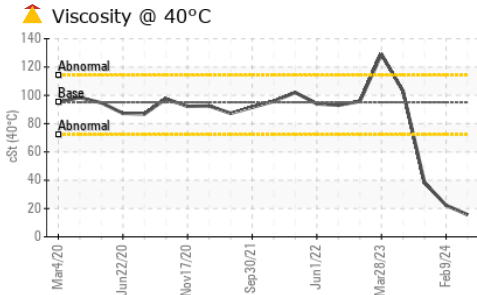
**CONTAMINANTS**

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>5</b>	7	6
Sodium	ppm	ASTM D5185(m)		<b>2</b>	2	2
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Fuel	%	ASTM D7593*	>5	<b>59.6</b>	46.5	29.3

**INFRA-RED**

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	<b>0.1</b>	0.1	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.0</b>	8.6	7.7
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>17.1</b>	17.9	18.1

# OIL ANALYSIS REPORT

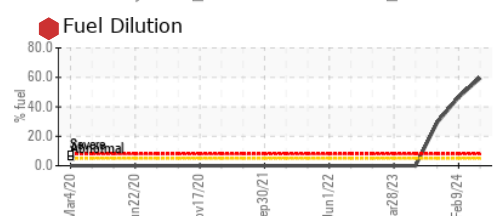
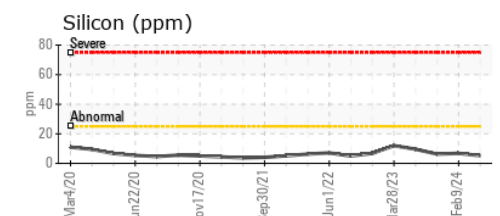
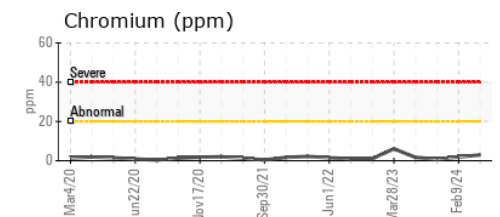
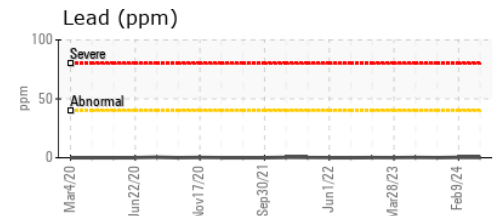
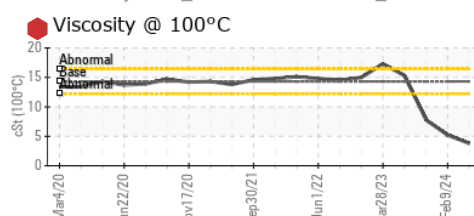
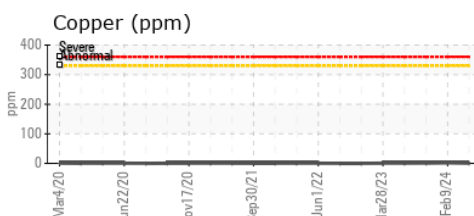
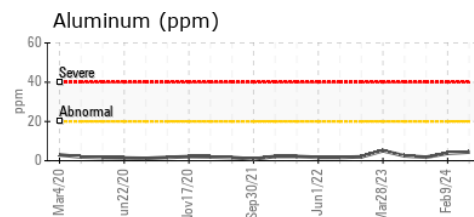
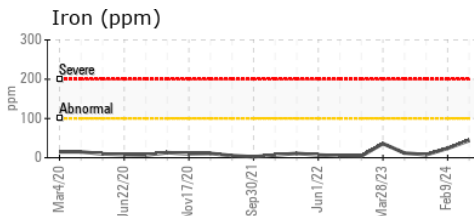


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>15.3</b>	15.4	15.2

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>VLITE</b>	VLITE	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	95.1	<b>15.6</b>	22.3	38.3
Visc @ 100°C	cSt	ASTM D7279(m)	14.3	<b>3.8</b>	5.2	7.8
Viscosity Index (VI)	Scale	ASTM D2270*	169	<b>138</b>	176	179

## GRAPHS



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0078317  
**Lab Number** : 02617405  
**Unique Number** : 5734515  
**Test Package** : MOB 1 ( Additional Tests: KV40, PercentFuel, VI, Visual )

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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.