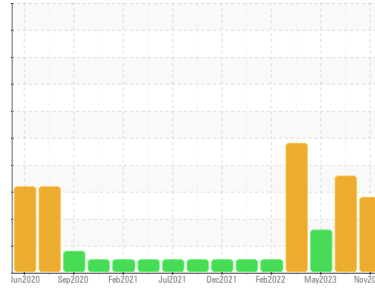
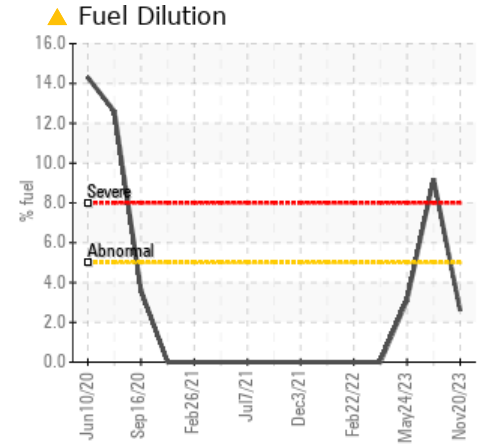
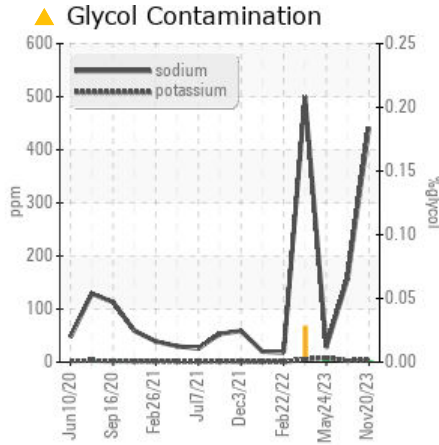
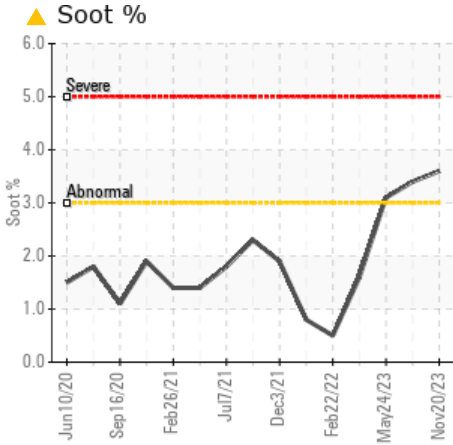




Machine Id  
**1201**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON HP 15W40 (--- GAL)**



**COMPONENT CONDITION SUMMARY**



**RECOMMENDATION**

Check for low coolant level. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. No other corrective action is recommended at this time.

**PROBLEMATIC TEST RESULTS**

Sample Status			<b>ABNORMAL</b>	<b>SEVERE</b>	<b>ABNORMAL</b>
Sodium	ppm	ASTM D5185(m)	▲ <b>442</b>	157	28
Fuel	%	ASTM D7593* >5	▲ <b>2.6</b>	● 9.2	▲ 3.1
Soot %	%	ASTM D7844* >3	▲ <b>3.6</b>	▲ 3.4	▲ 3.1

Customer Id: STJNEW  
Sample No.: PC0076646  
Lab Number: 02601472  
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Kevin Marson +1 (289)291-4644 x4644  
[Kevin.Marson@wearcheck.com](mailto:Kevin.Marson@wearcheck.com)

To change component or sample information:  
Gloria Gonzalez +1 (289)291-4643 x4643  
[gloria.gonzalez@wearcheck.com](mailto:gloria.gonzalez@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.

## HISTORICAL DIAGNOSIS

### 24 Aug 2023 Diag: Kevin Marson

#### FUEL



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. All component wear rates are normal. There is a high amount of fuel present in the oil. Light concentration of carbon/soot present in the oil. Tests confirm the presence of fuel 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.

[view report](#)



### 24 May 2023 Diag: Kevin Marson

#### SOOT



The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. No other corrective action is recommended at this time. All component wear rates are normal. Light fuel dilution occurring. Light concentration of carbon/soot present in the oil. Test for glycol is negative. No other contaminants were detected in the oil. Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable due to the presence of contaminants.

[view report](#)



### 25 Mar 2022 Diag: Wes Davis

#### GLYCOL

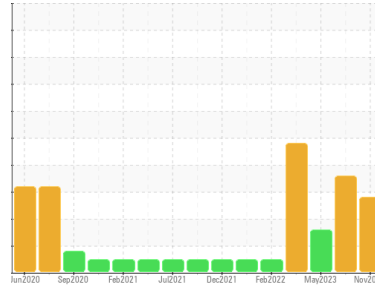


We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. Test for glycol is positive. There is a light concentration of glycol present in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

[view report](#)



Machine Id  
**1201**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON HP 15W40 (--- GAL)**



**DIAGNOSIS**

**Recommendation**

Check for low coolant level. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. No other corrective action is recommended at this time.

**Wear**

All component wear rates are normal.

**Contamination**

Light fuel dilution occurring. Water treatment chemicals present, indicating slow coolant leak. Light concentration of carbon/soot present in the oil. Test for glycol is negative. No other contaminants were detected in the oil.

**Fluid Condition**

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service (see recommendation). 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>PC0076646</b>	PC0031711	PC0031584
Sample Date	Client Info			<b>20 Nov 2023</b>	24 Aug 2023	24 May 2023
Machine Age	kms	Client Info		<b>711452</b>	695983	681323
Oil Age	kms	Client Info		<b>13685</b>	14660	14116
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	SEVERE	ABNORMAL

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

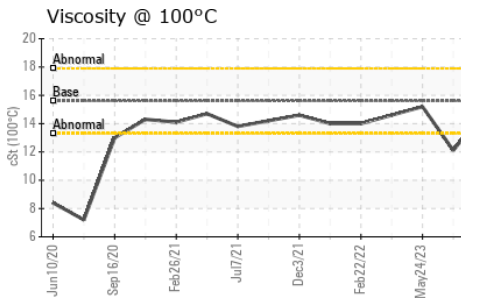
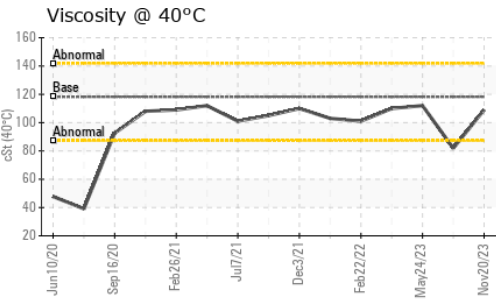
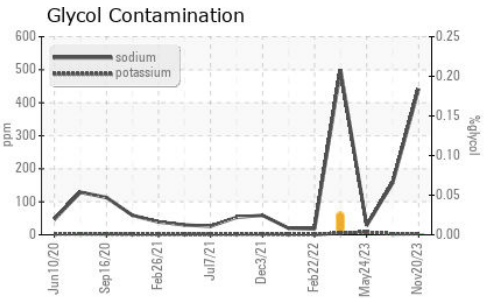
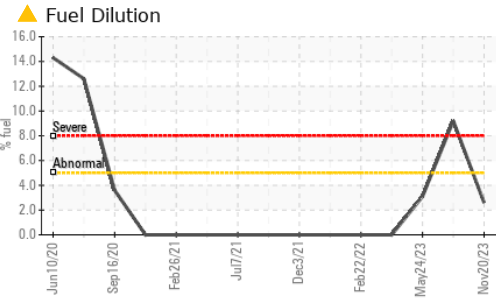
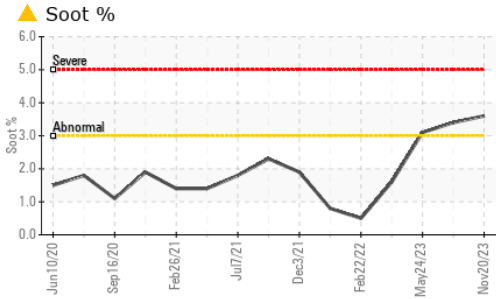
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	<b>40</b>	39	28
Chromium	ppm	ASTM D5185(m)	>20	<b>2</b>	2	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	2	2
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>330	<b>4</b>	4	6
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	<1
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)	0	<b>9</b>	10	55
Barium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>80</b>	59	9
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>1005</b>	845	43
Calcium	ppm	ASTM D5185(m)	1070	<b>1237</b>	1247	2582
Phosphorus	ppm	ASTM D5185(m)	1150	<b>1033</b>	1042	1121
Zinc	ppm	ASTM D5185(m)	1270	<b>1295</b>	1178	1264
Sulfur	ppm	ASTM D5185(m)	2060	<b>2582</b>	2317	2936
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>15</b>	10	8
Sodium	ppm	ASTM D5185(m)		<b>▲ 442</b>	157	28
Potassium	ppm	ASTM D5185(m)	>20	<b>3</b>	3	8
Fuel	%	ASTM D7593*	>5	<b>▲ 2.6</b>	9.2	▲ 3.1
Glycol	%	ASTM D7922*		<b>0.0</b>	0.0	0.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	<b>▲ 3.6</b>	▲ 3.4	▲ 3.1
Nitration	Abs/cm	ASTM D7624*	>20	<b>15.6</b>	15.6	14.1
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>32.4</b>	32.6	33.1

# OIL ANALYSIS REPORT

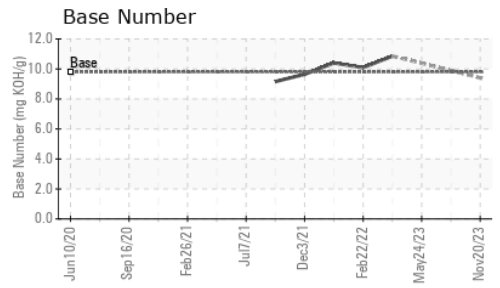
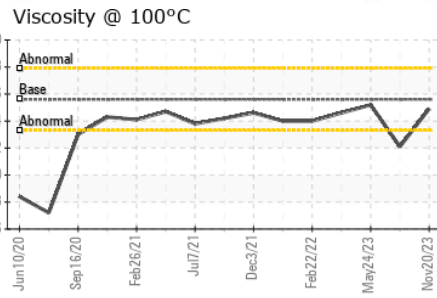
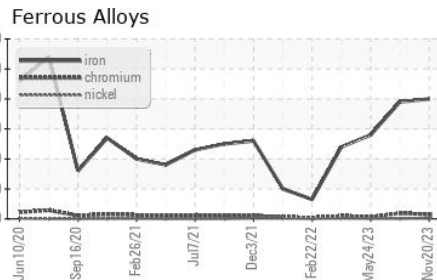


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>22.6</b>	23.0	24.6
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	<b>9.41</b>	---	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	---	---
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
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	118.2	<b>109</b>	▲ 81.9	112
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	<b>14.9</b>	▲ 12.1	15.2
Viscosity Index (VI)	Scale	ASTM D2270*	139	<b>141</b>	142	141

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0076646 **Received** : 07 Dec 2023  
**Lab Number** : **02601472** **Diagnosed** : 07 Dec 2023  
**Unique Number** : 5694557 **Diagnostician** : Kevin Marson  
**Test Package** : IND 2 ( Additional Tests: Glycol, KV40, PercentFuel, VI )

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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 CA A1B 0H6  
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 danny.oliver@metrobus.com  
 T: (709)570-2025  
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