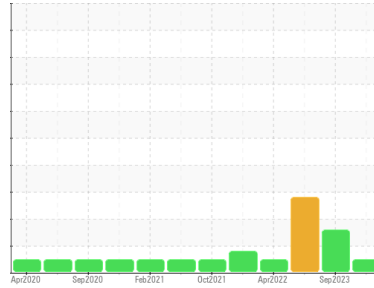


# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**1202**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON HP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PC0076645</b>	PC0031839	PC0031895
Sample Date	Client Info		<b>22 Nov 2023</b>	13 Sep 2023	09 Jun 2023
Machine Age	kms	Client Info	<b>678739</b>	664998	650094
Oil Age	kms	Client Info	<b>12743</b>	14795	15897
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	ABNORMAL	SEVERE

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	▲ 3.9	● 9
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	0.0	0.0

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>100	<b>25</b>	32	26
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	1	<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>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	2	2
Lead	ppm	ASTM D5185(m)	>40	<b>1</b>	2	1
Copper	ppm	ASTM D5185(m)	>330	<b>13</b>	11	10
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)	0	<b>4</b>	13	38
Barium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>67</b>	50	12
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>1042</b>	761	162
Calcium	ppm	ASTM D5185(m)	1070	<b>1235</b>	1422	1946
Phosphorus	ppm	ASTM D5185(m)	1150	<b>1080</b>	1010	1000
Zinc	ppm	ASTM D5185(m)	1270	<b>1334</b>	1236	1101
Sulfur	ppm	ASTM D5185(m)	2060	<b>2407</b>	2392	2529
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

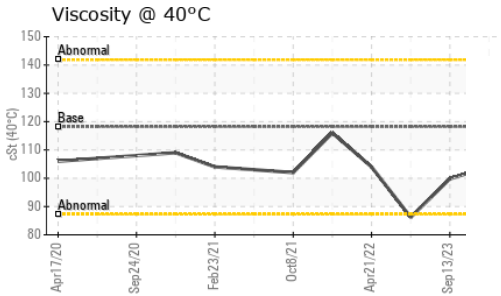
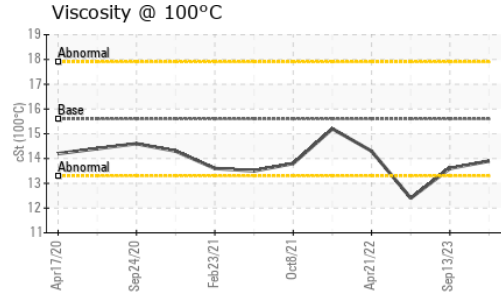
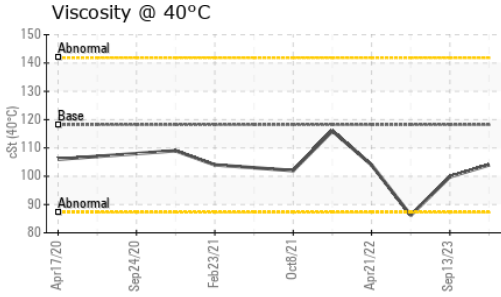
## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>7</b>	8	10
Sodium	ppm	ASTM D5185(m)		<b>53</b>	20	21
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	16	7

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	<b>2.7</b>	▲ 3	2.1
Nitration	Abs/cm	ASTM D7624*	>20	<b>12.9</b>	14.0	12.7
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>28.3</b>	30.2	29.2

# OIL ANALYSIS REPORT

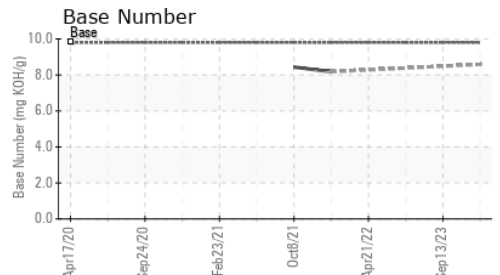
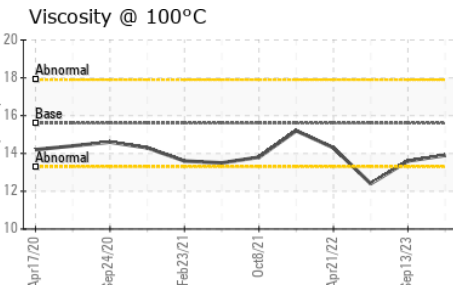
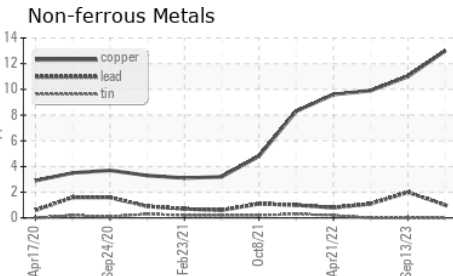
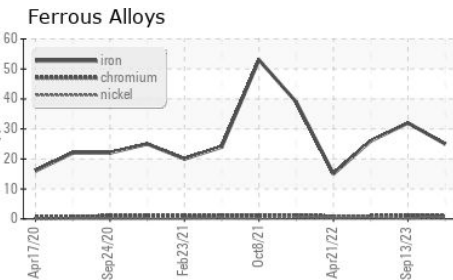


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>21.4</b>	22.7	23.2
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	<b>8.59</b>	---	---

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>104</b>	99.8	▲ 86.2
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	<b>13.9</b>	13.6	▲ 12.4
Viscosity Index (VI)	Scale	ASTM D2270*	139	<b>134</b>	136	139

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0076645 **Received** : 07 Dec 2023  
**Lab Number** : **02601473** **Diagnosed** : 13 Dec 2023  
**Unique Number** : 5694558 **Diagnostician** : Wes Davis  
**Test Package** : IND 2 ( Additional Tests: KV40, VI )

**Metrobus Transit**  
 25 Messenger Drive  
 St. John's, NL  
 CA A1B 0H6  
 Contact: Danny Oliver  
 danny.oliver@metrobus.com  
 T: (709)570-2025  
 F:

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.