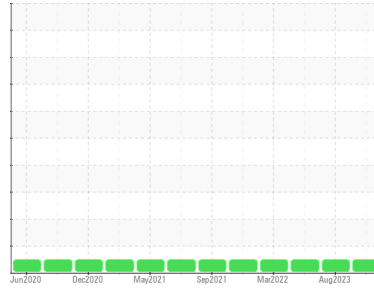


# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id

**1521**

Component

**Rear 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>PC0076642</b>	PC0031704	PC0031892
Sample Date	Client Info		<b>23 Nov 2023</b>	28 Aug 2023	31 May 2023
Machine Age	kms	Client Info	<b>542920</b>	529286	514295
Oil Age	kms	Client Info	<b>13634</b>	14991	16104
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
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>26</b>	14	20
Chromium	ppm	ASTM D5185(m) >20	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185(m) >4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m) >3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m) >20	<b>6</b>	2	4
Lead	ppm	ASTM D5185(m) >40	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185(m) >330	<b>2</b>	1	1
Tin	ppm	ASTM D5185(m) >15	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)	<b>0</b>	0	<1
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>	11	62
Barium	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 60	<b>62</b>	57	13
Manganese	ppm	ASTM D5185(m) 0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	<b>1005</b>	916	108
Calcium	ppm	ASTM D5185(m) 1070	<b>1148</b>	1306	2181
Phosphorus	ppm	ASTM D5185(m) 1150	<b>1044</b>	1110	1056
Zinc	ppm	ASTM D5185(m) 1270	<b>1281</b>	1277	1183
Sulfur	ppm	ASTM D5185(m) 2060	<b>2563</b>	2652	2817
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

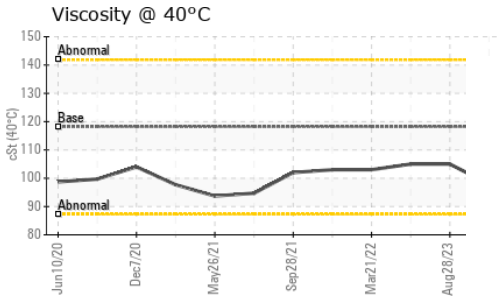
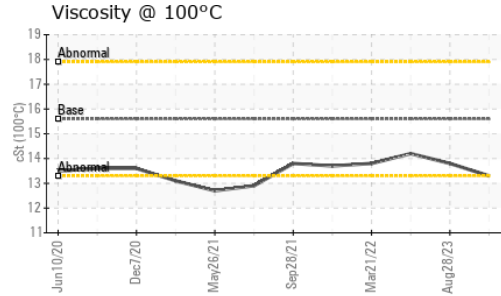
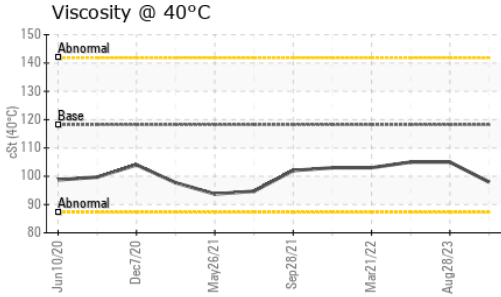
## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	<b>13</b>	5	6
Sodium	ppm	ASTM D5185(m)	<b>7</b>	6	6
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	1	7

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	<b>0.3</b>	0	0.5
Nitration	Abs/cm	ASTM D7624* >20	<b>9.1</b>	7.8	9.3
Sulfation	Abs./1mm	ASTM D7415* >30	<b>21.0</b>	20.5	23.8

# OIL ANALYSIS REPORT

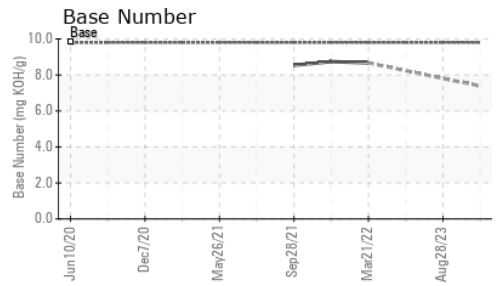
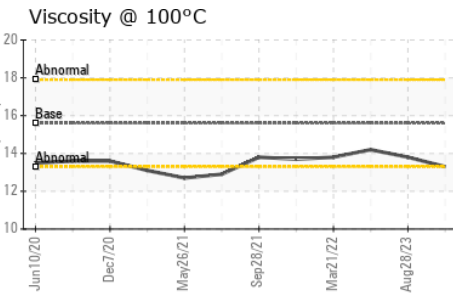
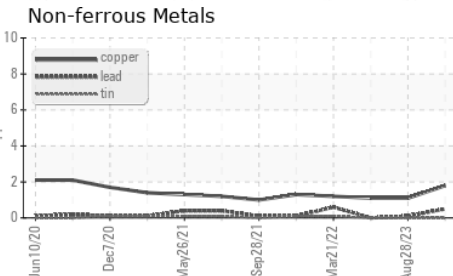
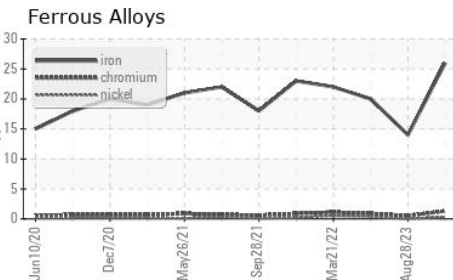


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>17.5</b>	16.0	19.2
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	<b>7.38</b>	---	---

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>97.9</b>	105	105
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	<b>13.3</b>	13.8	14.2
Viscosity Index (VI)	Scale	ASTM D2270*	139	<b>134</b>	131	137

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0076642 **Received** : 07 Dec 2023  
**Lab Number** : **02601493** **Diagnosed** : 07 Dec 2023  
**Unique Number** : 5694578 **Diagnostician** : Wes Davis  
**Test Package** : IND 2 ( Additional Tests: KV40, VI )

**Metrobus Transit**  
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 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.