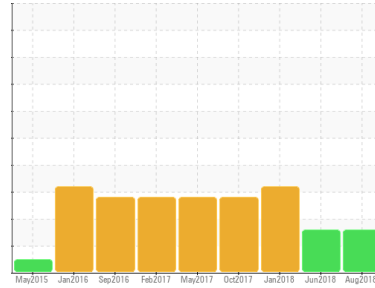


Area  
**LA VEINTITRES LTDA 23**  
Machine Id  
**TOYOTA COASTER AB5428**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON HP 15W40 (4 GAL)**



**DIAGNOSIS**

**Recommendation**

The oil change at the time of sampling has been noted.

**Wear**

All component wear rates are normal.

**Contamination**

Light concentration of carbon/soot present in the oil.

**Fluid Condition**

The oil viscosity is higher than normal. 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.

**SAMPLE INFORMATION**

	method	limit/base	current	history 1	history 2
Sample Number			<b>PC977029</b>	PC977989	PC402746
Sample Date			<b>28 Aug 2018</b>	09 Jun 2018	17 Jan 2018
Machine Age	kms		<b>300560</b>	289379	264762
Oil Age	kms		<b>15598</b>	11479	17600
Oil Changed			<b>Changed</b>	Changed	Changed
Sample Status			<b>ABNORMAL</b>	ABNORMAL	SEVERE

**CONTAMINATION**

	method	limit/base	current	history 1	history 2
Fuel	ASTM D3524	>5	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	ASTM D2982		<b>NEG</b>	NEG	NEG

**WEAR METALS**

	method	limit/base	current	history 1	history 2	
Iron	ppm	ASTM D5185	>100	<b>13</b>	19	35
Chromium	ppm	ASTM D5185	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185	>20	<b>2</b>	3	3
Lead	ppm	ASTM D5185	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185	>330	<b>&lt;1</b>	1	2
Tin	ppm	ASTM D5185	>15	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185		<b>0</b>	<1	1
Vanadium	ppm	ASTM D5185		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185		<b>0</b>	0	0

**ADDITIVES**

	method	limit/base	current	history 1	history 2	
Boron	ppm	ASTM D5185	0	<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185	60	<b>53</b>	62	61
Manganese	ppm	ASTM D5185	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185	1010	<b>861</b>	1011	1009
Calcium	ppm	ASTM D5185	1070	<b>1064</b>	1068	1097
Phosphorus	ppm	ASTM D5185	1150	<b>928</b>	1039	1020
Zinc	ppm	ASTM D5185	1270	<b>1134</b>	1283	1279
Sulfur	ppm	ASTM D5185	2060	<b>2376</b>	2554	2453
Lithium	ppm	ASTM D5185		<b>0</b>	0	<1

**CONTAMINANTS**

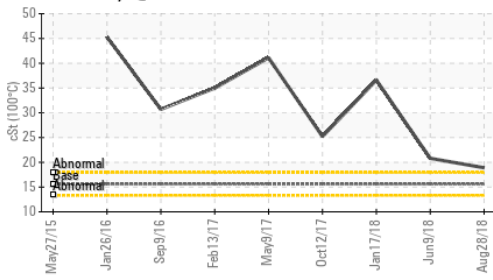
	method	limit/base	current	history 1	history 2	
Silicon	ppm	ASTM D5185	>25	<b>3</b>	3	4
Sodium	ppm	ASTM D5185		<b>2</b>	2	3
Potassium	ppm	ASTM D5185	>20	<b>0</b>	0	<1

**INFRA-RED**

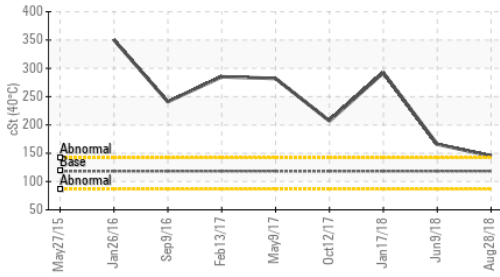
	method	limit/base	current	history 1	history 2	
Soot %	%	ASTM D7686	>3	<b>▲ 4.4</b>	▲ 4.8	● 6.5
Nitration	Abs/cm	ASTM D7624	>20	<b>13.9</b>	16.4	25.1
Sulfation	Abs/1mm	ASTM D7415	>30	<b>29.3</b>	34.2	75.0

# OIL ANALYSIS REPORT

▲ Viscosity @ 100°C



▲ Viscosity @ 40°C

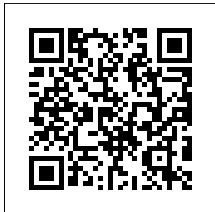
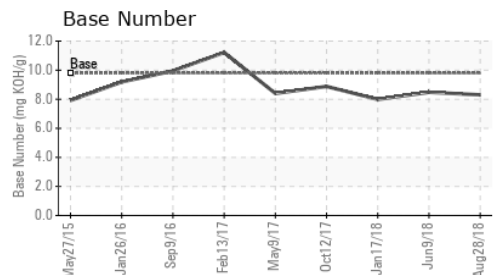
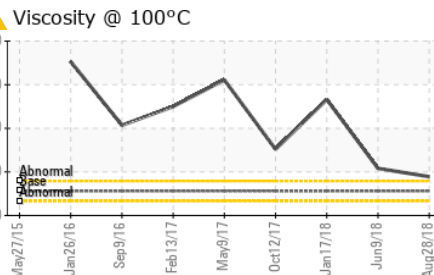
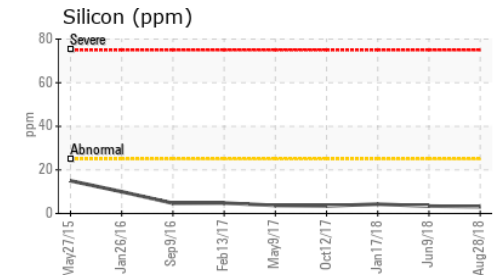
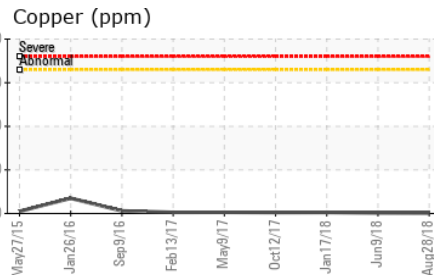
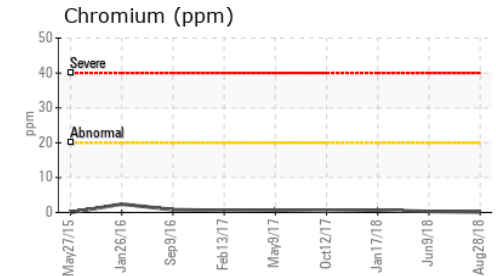
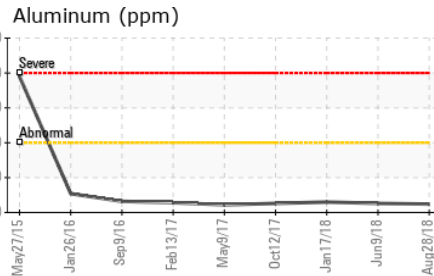
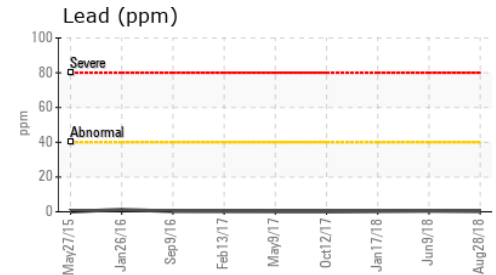
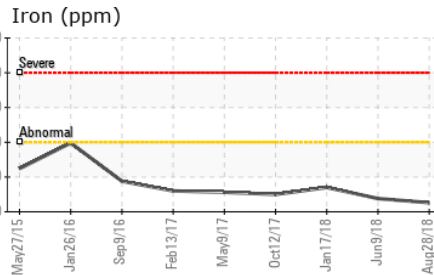


FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs./1mm	ASTM D7414	>25	<b>17.4</b>	19.9	54.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.30</b>	8.48	7.99

VISUAL		method	limit/base	current	history 1	history 2
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	history 1	history 2
Visc @ 40°C	cSt	ASTM D7279	118.2	▲ <b>145</b>	▲ 166	▲ 292
Visc @ 100°C	cSt	ASTM D7279	15.6	▲ <b>18.9</b>	▲ 20.8	▲ 36.6
Viscosity Index (VI)	Scale	ASTM D2270	139	<b>147</b>	147	▲ 174

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC1234567      **Received** : 02 Oct 2018  
**Lab Number** : 01234567      **Diagnosed** : 03 Oct 2018  
**Unique Number** : 12345678      **Diagnostician** : Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: KV40, VI )

**Cusany Logistics Inc.**  
 1212 Industrial Place  
 Centerville, OH  
 USA 75900  
 Contact: Jim Leduc  
 jim.leduc@cusanylogisticsinc.com  
 T: (305)555-1212  
 F: (305)555-1222

*To discuss diagnosis or test data, contact Technical Support at 1-800-268-2131.  
 To change component or sample information, contact Customer Service at 1-800-268-2131.*