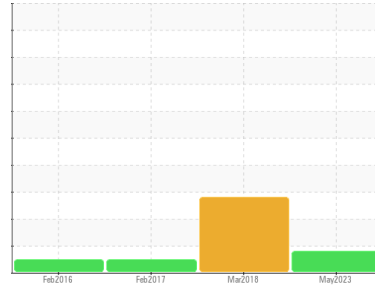


Machine Id  
**FREIGHTLINER 30037**  
Component  
**Front Diesel Engine**  
Fluid  
**CASTROL VECTON 15W40 CK4 (18 LTR)**



## DIAGNOSIS

### Recommendation

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 moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

### Fluid Condition

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>PC0075266</b>	AP103379	AP103305
Sample Date	Client Info			<b>10 May 2023</b>	14 Mar 2018	08 Feb 2017
Machine Age	kms	Client Info		<b>305692</b>	184107	163525
Oil Age	kms	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	SEVERE	NORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>130	<b>13</b>	13	16
Chromium	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	4	3
Lead	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>125	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>4	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185(m)		<b>0</b>	2	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

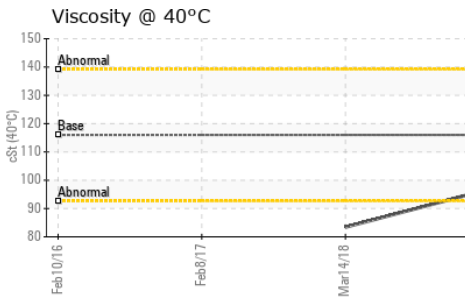
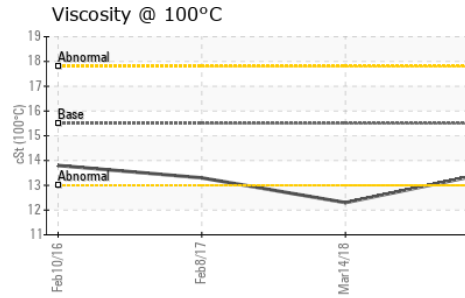
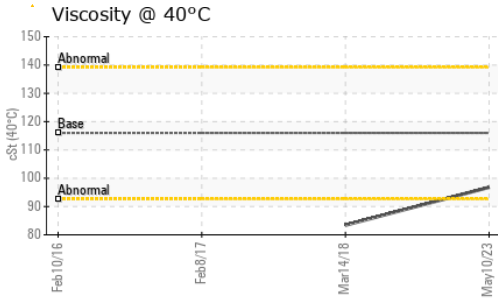
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		<b>9</b>	32	30
Barium	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	<1
Molybdenum	ppm	ASTM D5185(m)		<b>60</b>	3	<1
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)		<b>955</b>	10	8
Calcium	ppm	ASTM D5185(m)		<b>1016</b>	2186	2322
Phosphorus	ppm	ASTM D5185(m)		<b>993</b>	898	900
Zinc	ppm	ASTM D5185(m)		<b>1184</b>	1111	1136
Sulfur	ppm	ASTM D5185(m)		<b>2543</b>	3076	3071
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>2</b>	3	3
Sodium	ppm	ASTM D5185(m)		<b>2</b>	2	1
Potassium	ppm	ASTM D5185(m)	>20	<b>3</b>	4	1
Fuel	%	ASTM D7593*	>3.0	<b>▲ 3.3</b>	◆ 7.4	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	<b>0.5</b>	0.5	0.5
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.5</b>	9.9	10.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.8</b>	21.7	24.8

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>17.8</b>	19.4	20.1

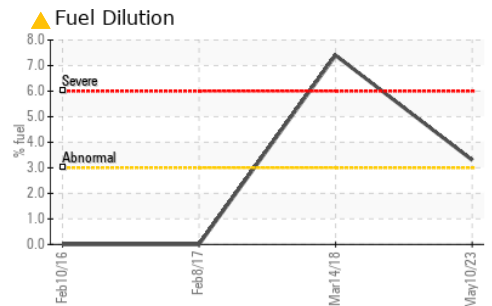
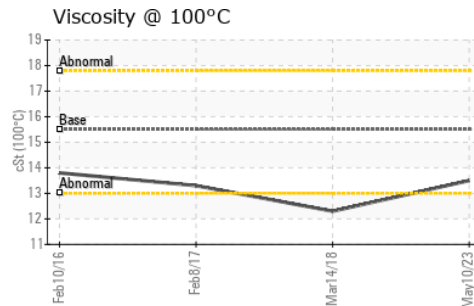
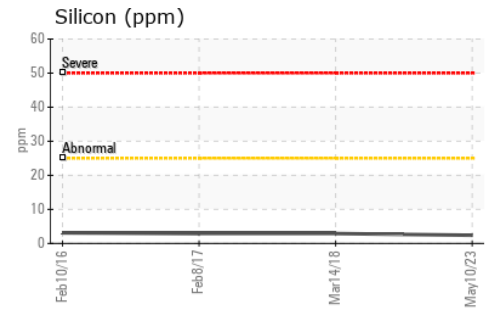
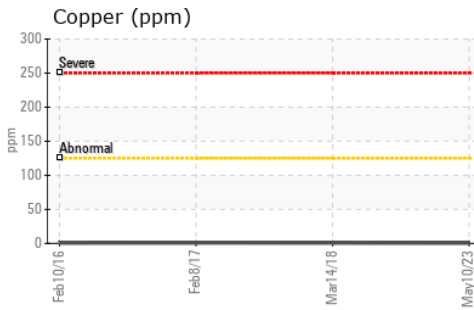
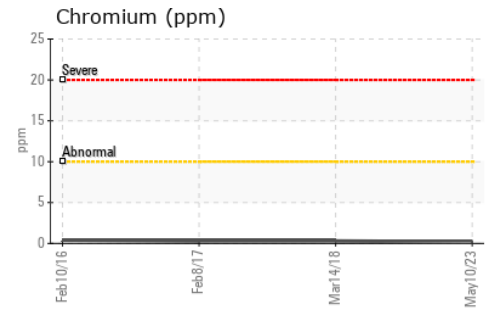
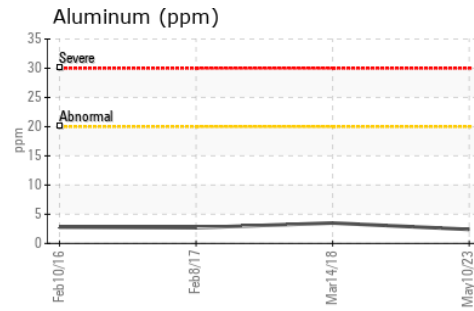
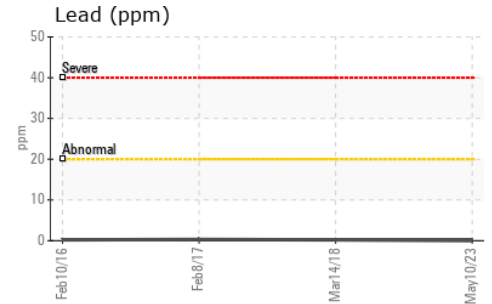
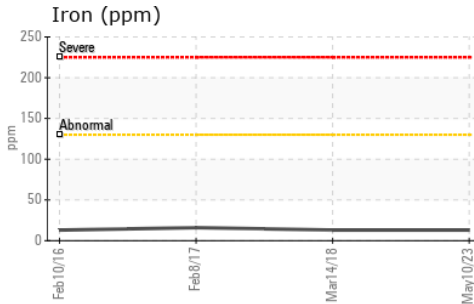
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	116	96.8	▲ 83.4	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.5	13.5	▲ 12.3	13.3
Viscosity Index (VI)	Scale	ASTM D2270*	140	139	143	---

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0075266 **Received** : 06 Nov 2023  
**Lab Number** : 02594137 **Diagnosed** : 07 Nov 2023  
**Unique Number** : 5671216 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: KV40, PercentFuel, VI )

**TORONTO FIRE SERVICES**  
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 TORONTO, ON  
 CA M9L 1X6  
 Contact: Antonio Rodrigues  
 antonio.rodrigues@tonroto.ca  
 T:  
 F: (416)338-9207

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.