



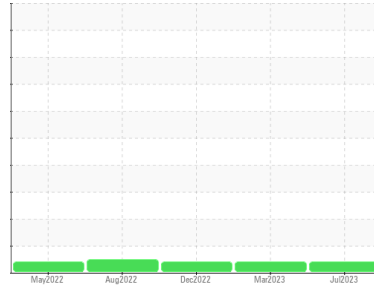
# PROBLEM SUMMARY

Sample Rating Trend

VISCOSITY

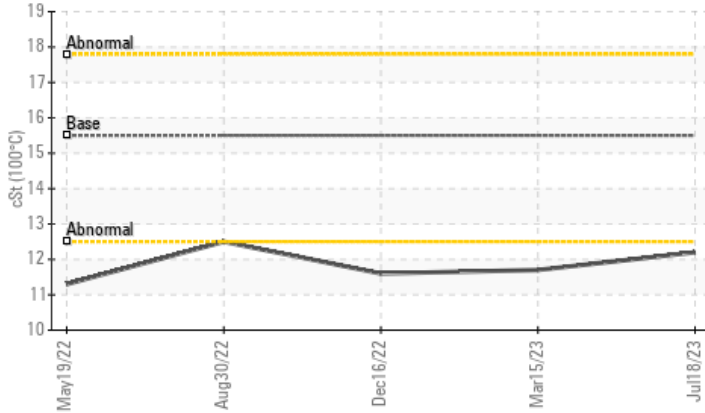


Machine Id  
**FREIGHTLINER BUS 12421 (S/N 4VZGCJAAXYCG73370)**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON XL SYN BLEND 15W40 (--- GAL)**



## COMPONENT CONDITION SUMMARY

### ▲ Viscosity @ 100°C



## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status				ATTENTION	ATTENTION	ATTENTION
Visc @ 100°C	cSt	ASTM D445	15.5	▲ 12.2	▲ 11.7	▲ 11.6

Customer Id: TRANEW  
 Sample No.: WC0831194  
 Lab Number: 05905222  
 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.

## HISTORICAL DIAGNOSIS

### 15 Mar 2023 Diag: Jonathan Hester

#### VISCOSITY



Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

[view report](#)



### 16 Dec 2022 Diag: Don Baldrige

#### VISCOSITY



Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. Fuel content negligible. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

[view report](#)



### 30 Aug 2022 Diag: Wes Davis

#### NORMAL



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

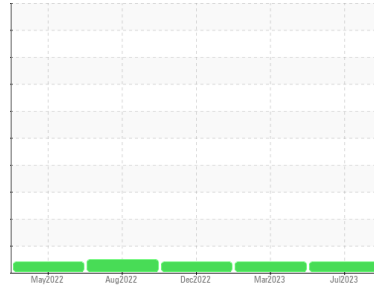
[view report](#)





# OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id  
**FREIGHTLINER BUS 12421 (S/N 4VZGCJAAXYCG73370)**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON XL SYN BLEND 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. 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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>WC0831194</b>	WC0791067	WC0755074
Sample Date	Client Info	<b>18 Jul 2023</b>	15 Mar 2023	16 Dec 2022
Machine Age	days	<b>0</b>	0	0
Oil Age	days	<b>124</b>	89	107
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed
Sample Status		<b>ATTENTION</b>	ATTENTION	ATTENTION

## 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 D5185m >100	<b>3</b>	4	4
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185m >40	<b>0</b>	<1	1
Copper	ppm	ASTM D5185m >330	<b>0</b>	<1	1
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 1	<b>17</b>	15	24
Barium	ppm	ASTM D5185m 1	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>66</b>	61	60
Manganese	ppm	ASTM D5185m 1	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>1052</b>	916	935
Calcium	ppm	ASTM D5185m 1070	<b>1200</b>	1161	1122
Phosphorus	ppm	ASTM D5185m 1150	<b>1163</b>	1046	998
Zinc	ppm	ASTM D5185m 1270	<b>1372</b>	1238	1240
Sulfur	ppm	ASTM D5185m 2060	<b>4194</b>	3780	3580

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	<b>3</b>	3	2
Sodium	ppm	ASTM D5185m	<b>1</b>	1	1
Potassium	ppm	ASTM D5185m >20	<b>0</b>	0	0
Fuel	%	ASTM D3524 >5	<b>&lt;1.0</b>	<1.0	0.5

## INFRA-RED

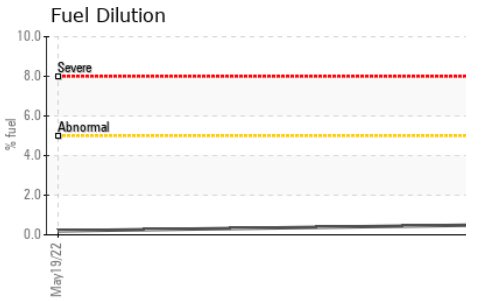
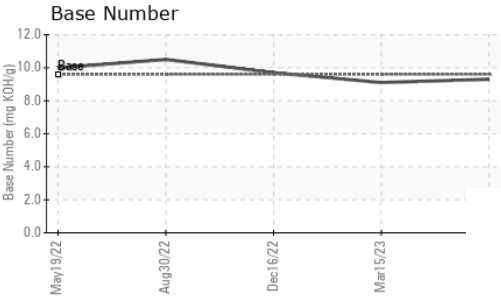
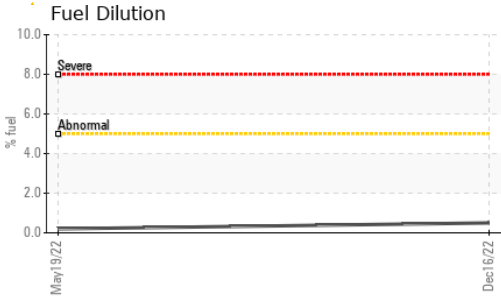
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>5.1</b>	5.0	5.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.0</b>	17.3	17.9

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>12.6</b>	12.5	13.0
Base Number (BN)	mg KOH/g	ASTM D2896 9.6	<b>9.3</b>	9.1	9.7



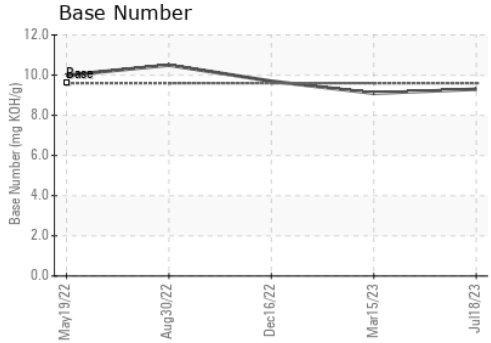
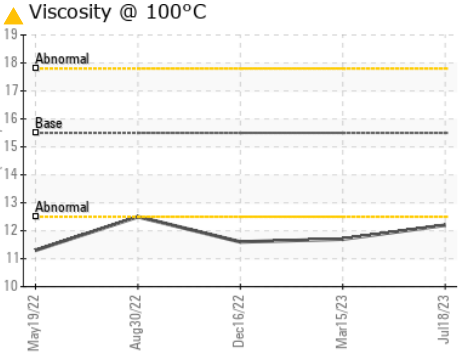
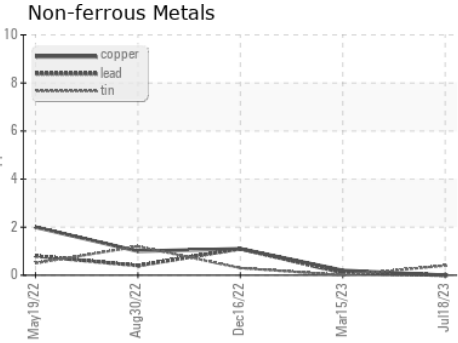
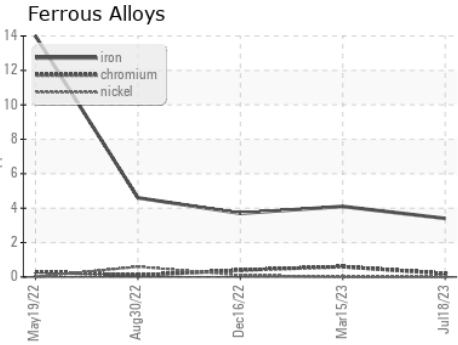
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.5	▲ 12.2	▲ 11.7	▲ 11.6

### GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0831194 **Received** : 24 Jul 2023  
**Lab Number** : 05905222 **Diagnosed** : 25 Jul 2023  
**Unique Number** : 10566578 **Diagnostician** : Don Baldrige  
**Test Package** : CONST ( Additional Tests: FuelDilution, TBN )

**TRADER CONSTRUCTION CO.**  
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 US 28563  
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To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)