



# PROBLEM SUMMARY



Machine Id  
**CATERPILLAR 745D 13398 (S/N 3T605951)**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON XL SYN BLEND 15W40 (--- GAL)**

Sample Rating Trend

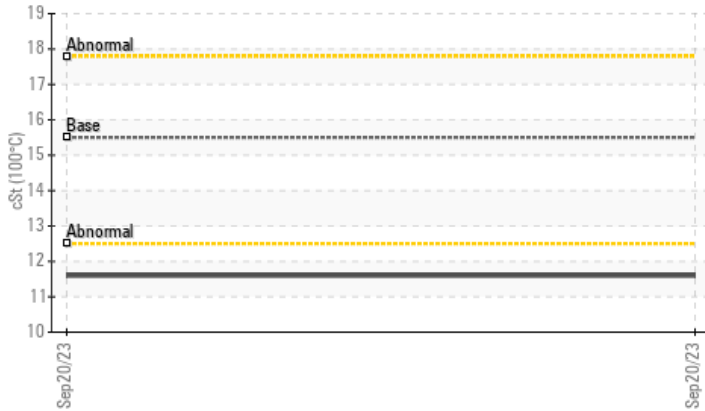


FUEL

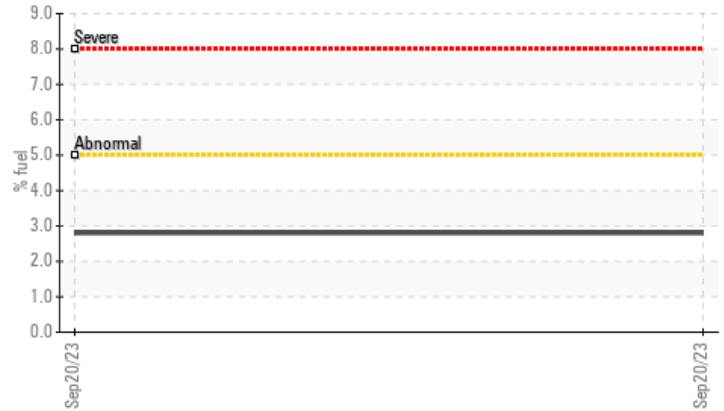


## COMPONENT CONDITION SUMMARY

▲ Viscosity @ 100°C



▲ Fuel Dilution



## RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status				<b>ABNORMAL</b>	---	---
Fuel	%	ASTM D3524	>5	▲ 2.8	---	---
Visc @ 100°C	cSt	ASTM D445	15.5	▲ 11.6	---	---

Customer Id: TRANEW  
 Sample No.: WC0831309  
 Lab Number: 05965053  
 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Wes Davis +1 905-569-8600 x223  
[wesd@wearcheck.ca](mailto:wesd@wearcheck.ca)

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

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS



# OIL ANALYSIS REPORT

Sample Rating Trend

FUEL



Machine Id  
**CATERPILLAR 745D 13398 (S/N 3T605951)**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON XL SYN BLEND 15W40 (--- GAL)**



## DIAGNOSIS

### Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

Metal levels are typical for a components first oil change.

### Contamination

Light fuel dilution occurring.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0831309</b>	---	---
Sample Date	Client Info		<b>20 Sep 2023</b>	---	---
Machine Age	hrs	Client Info	<b>807</b>	---	---
Oil Age	hrs	Client Info	<b>807</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

## CONTAMINATION

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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>62</b>	---	---
Chromium	ppm	ASTM D5185m >20	<b>2</b>	---	---
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m >2	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >25	<b>5</b>	---	---
Lead	ppm	ASTM D5185m >40	<b>3</b>	---	---
Copper	ppm	ASTM D5185m >330	<b>956</b>	---	---
Tin	ppm	ASTM D5185m >15	<b>2</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 1	<b>11</b>	---	---
Barium	ppm	ASTM D5185m 1	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m 60	<b>48</b>	---	---
Manganese	ppm	ASTM D5185m 1	<b>2</b>	---	---
Magnesium	ppm	ASTM D5185m 1010	<b>584</b>	---	---
Calcium	ppm	ASTM D5185m 1070	<b>1409</b>	---	---
Phosphorus	ppm	ASTM D5185m 1150	<b>933</b>	---	---
Zinc	ppm	ASTM D5185m 1270	<b>1121</b>	---	---
Sulfur	ppm	ASTM D5185m 2060	<b>2698</b>	---	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>14</b>	---	---
Sodium	ppm	ASTM D5185m	<b>4</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>2</b>	---	---
Fuel	%	ASTM D3524 >5	<b>▲ 2.8</b>	---	---

## INFRA-RED

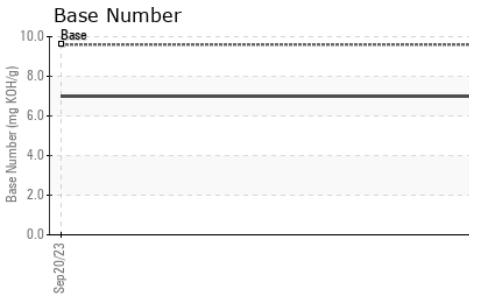
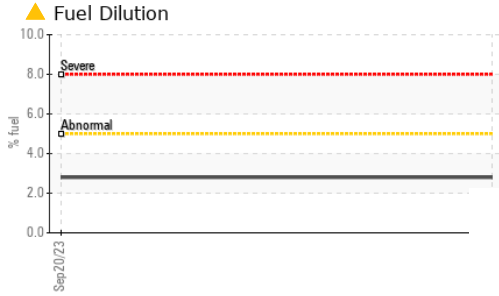
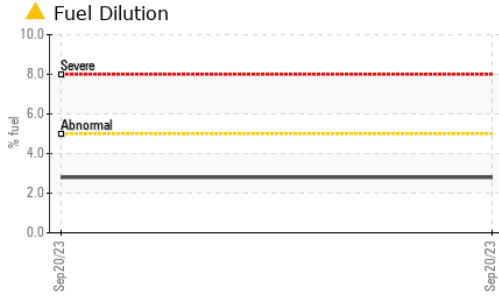
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.5</b>	---	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.5</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>23.9</b>	---	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>22.3</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.6	<b>7.0</b>	---	---



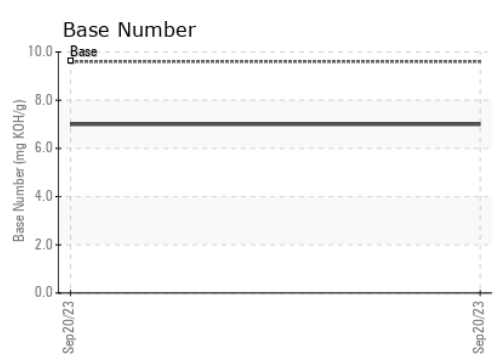
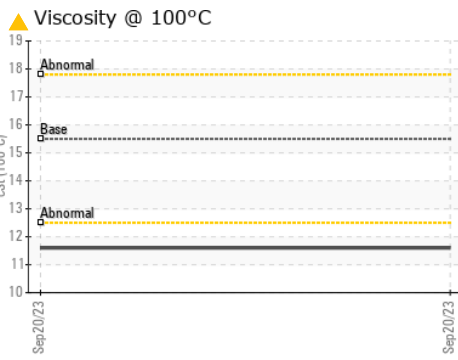
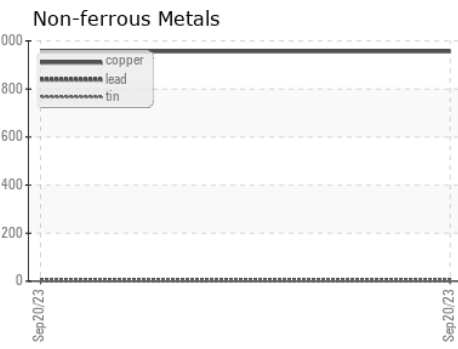
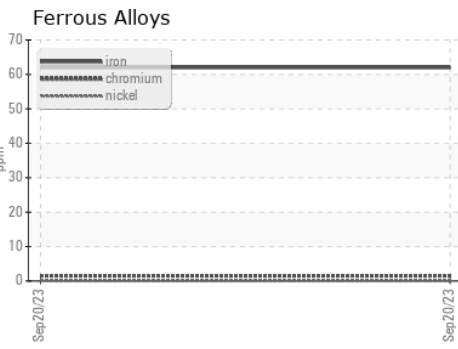
# OIL ANALYSIS REPORT



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

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

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0831309      **Received** : 29 Sep 2023  
**Lab Number** : 05965053      **Diagnosed** : 03 Oct 2023  
**Unique Number** : 10671604      **Diagnostician** : Wes Davis  
**Test Package** : CONST ( Additional Tests: FuelDilution, PercentFuel, TBN )

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Certificate L2367  
 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)