



TRAAP

Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>ABNORMAL</b>

Machine Id  
**CATERPILLAR 5695-17**

Component  
**Diesel Engine**

Fluid  
**TRC PRO-SPEC III SAE 10W30 (51 LTR)**

## 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR02606885</b>	---	---
Sample Date		Client Info		<b>25 Nov 2023</b>	---	---
Machine Age	hrs	Client Info		<b>1487</b>	---	---
Oil Age	hrs	Client Info		<b>835</b>	---	---
Filter Age	hrs	Client Info		<b>835</b>	---	---
Oil Changed		Client Info		<b>Not Changed</b>	---	---
Filter Changed		Client Info		<b>Changed</b>	---	---
Sample Status				<b>ABNORMAL</b>	---	---

## WEAR

All component wear rates are normal.

PQ		ASTM D8184*		<b>0</b>	---	---
Iron	ppm	ASTM D5185(m)	>100	<b>31</b>	---	---
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	---	---
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185(m)	>25	<b>3</b>	---	---
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	---	---
Copper	ppm	ASTM D5185(m)	>330	<b>12</b>	---	---
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	---	---
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

## CONTAMINATION

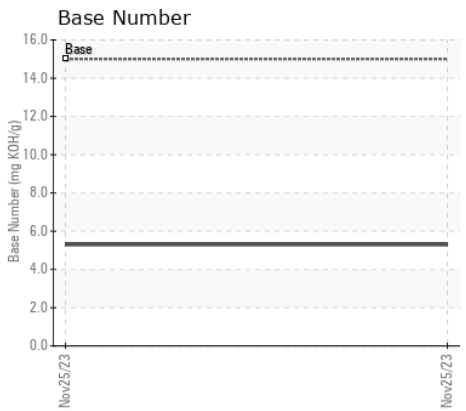
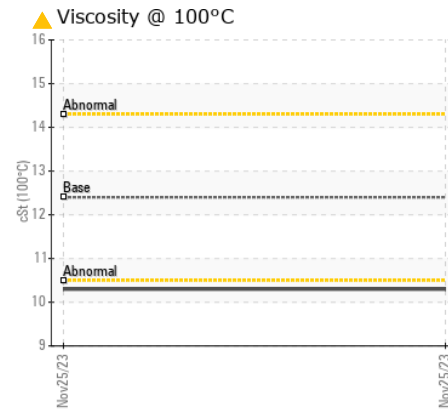
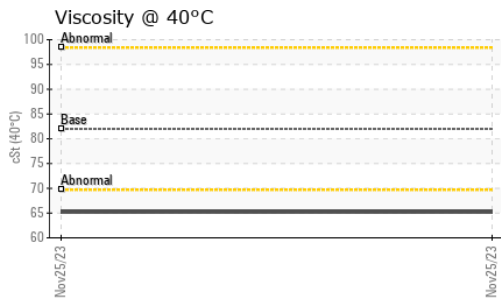
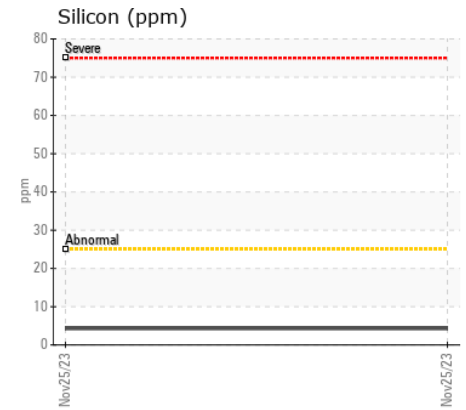
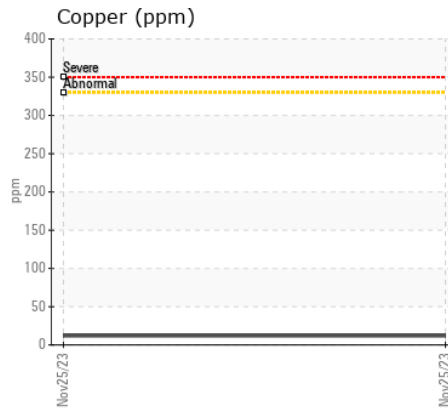
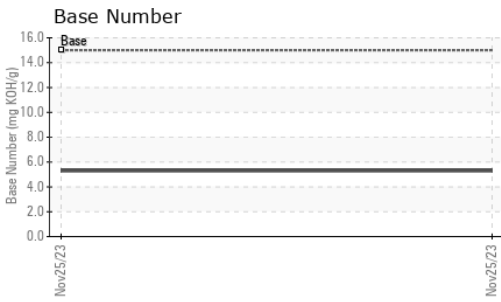
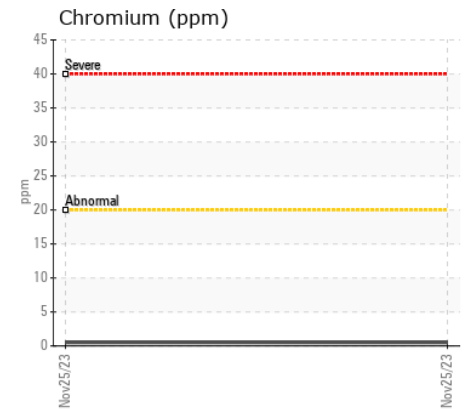
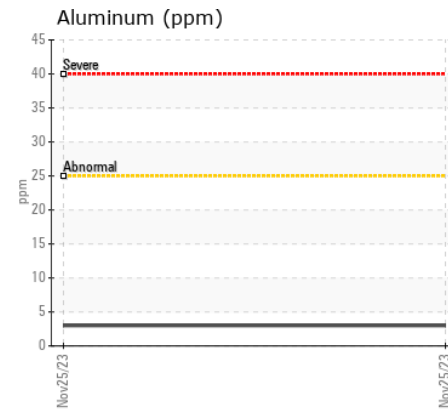
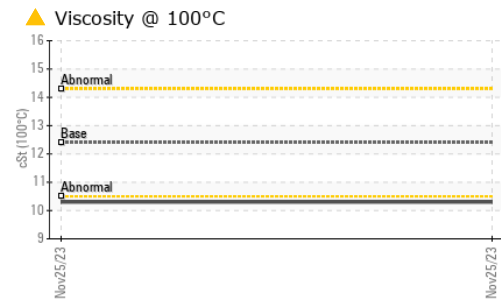
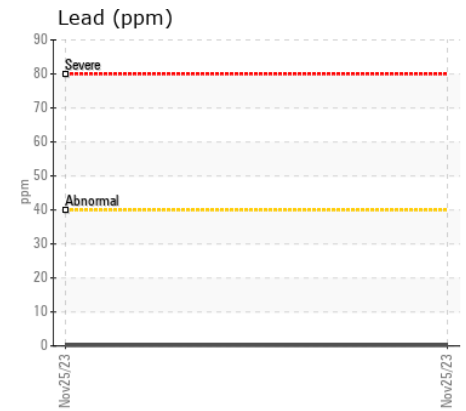
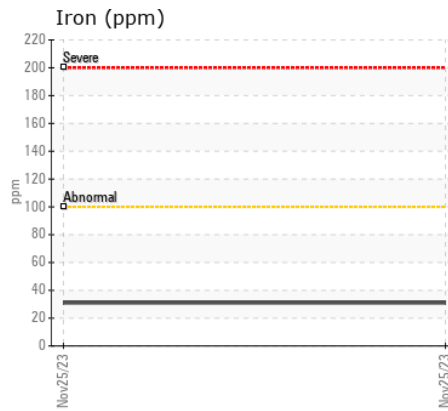
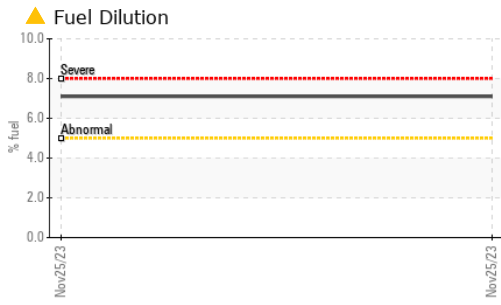
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	---	---
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	---	---
Fuel	%	ASTM D7593*	>5	<b>▲ 7.1</b>	---	---
Water		WC Method	>0.2	<b>NEG</b>	---	---
Glycol		WC Method		<b>NEG</b>	---	---
Soot %	%	ASTM D7844*	>3	<b>0.3</b>	---	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>12.7</b>	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>26.5</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>	---	---
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	---	---

## 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 oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		<b>4</b>	---	---
Boron	ppm	ASTM D5185(m)		<b>17</b>	---	---
Barium	ppm	ASTM D5185(m)		<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185(m)		<b>80</b>	---	---
Manganese	ppm	ASTM D5185(m)		<b>0</b>	---	---
Magnesium	ppm	ASTM D5185(m)		<b>124</b>	---	---
Calcium	ppm	ASTM D5185(m)	4500	<b>1916</b>	---	---
Phosphorus	ppm	ASTM D5185(m)		<b>879</b>	---	---
Zinc	ppm	ASTM D5185(m)	1400	<b>1044</b>	---	---
Sulfur	ppm	ASTM D5185(m)		<b>3057</b>	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>22.8</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*	15	<b>5.30</b>	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	82	<b>65.2</b>	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	12.4	<b>▲ 10.3</b>	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	150	<b>145</b>	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : TR02606885 **Received** : 08 Jan 2024  
**Lab Number** : 02606885 **Diagnosed** : 10 Jan 2024  
**Unique Number** : 5707971 **Diagnostician** : Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, KV40, PercentFuel, PQ, VI, Visual )

**WILCO CONTRACTORS**  
 3031 ARTHUR ST  
 ROSSLYN, ON  
 CA P7K 0P2  
 Contact: David Cramer

To discuss this sample report, contact Customer Service at 1-800-827-0711.

\* - 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)

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