



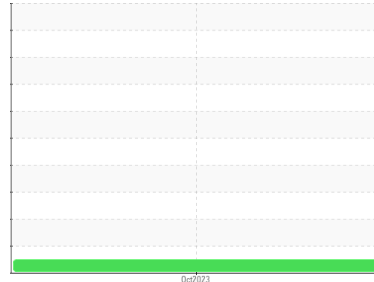
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**MINING**  
Machine Id  
**ME-77 CATERPILLAR 982M K1Y01559**  
Component  
**Diesel Engine**  
Fluid  
**SHELL RIMULA SUPER SAE 15W40 (10 GAL)**



## DIAGNOSIS

### Recommendation

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0864721</b>	---	---
Sample Date	Client Info		<b>26 Oct 2023</b>	---	---
Machine Age	hrs	Client Info	<b>16960</b>	---	---
Oil Age	hrs	Client Info	<b>0</b>	---	---
Oil Changed	Client Info		<b>N/A</b>	---	---
Sample Status			<b>NORMAL</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	---	---
Glycol	WC Method		<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>20</b>	---	---
Chromium	ppm	ASTM D5185m >20	<b>1</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>2</b>	---	---
Lead	ppm	ASTM D5185m >40	<b>11</b>	---	---
Copper	ppm	ASTM D5185m >330	<b>5</b>	---	---
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Barium	ppm	ASTM D5185m	<b>5</b>	---	---
Molybdenum	ppm	ASTM D5185m	<b>70</b>	---	---
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m	<b>634</b>	---	---
Calcium	ppm	ASTM D5185m 2840	<b>1816</b>	---	---
Phosphorus	ppm	ASTM D5185m 1150	<b>1190</b>	---	---
Zinc	ppm	ASTM D5185m 1270	<b>1352</b>	---	---
Sulfur	ppm	ASTM D5185m 2829	<b>3284</b>	---	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>5</b>	---	---
Sodium	ppm	ASTM D5185m	<b>7</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>4</b>	---	---

## INFRA-RED

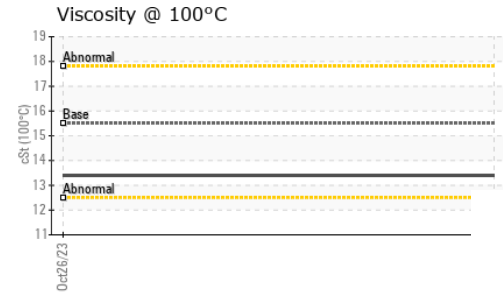
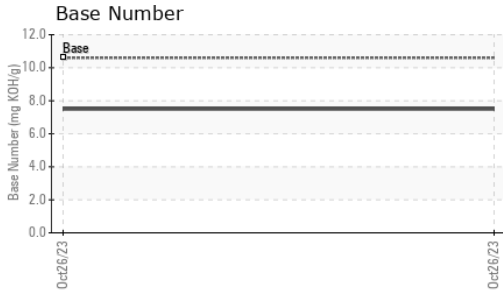
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.6</b>	---	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>12.3</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>27.2</b>	---	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>24.8</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 10.6	<b>7.5</b>	---	---



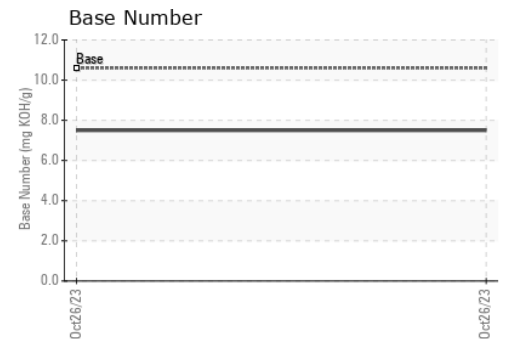
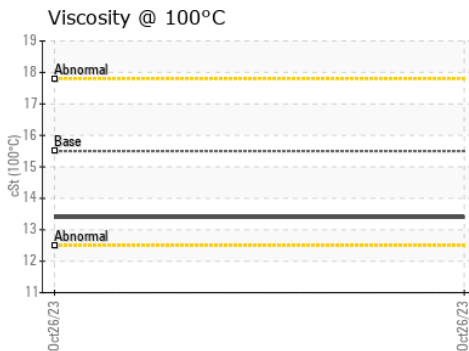
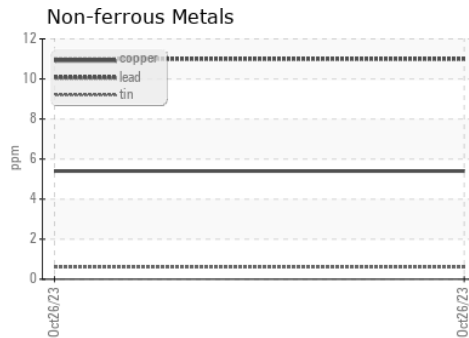
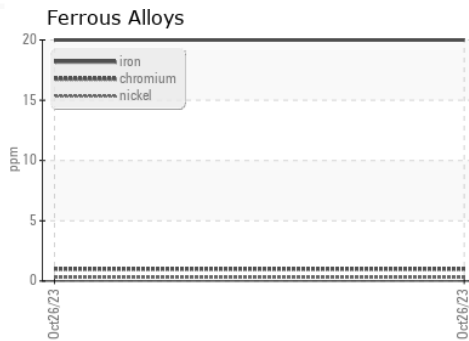
# OIL ANALYSIS REPORT



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	<b>13.4</b>	---	---

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0864721 **Received** : 07 Nov 2023  
**Lab Number** : 06000289 **Diagnosed** : 07 Nov 2023  
**Unique Number** : 10728649 **Diagnostician** : Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

**COVIA - GUION**  
 421 MAIN STREET  
 GUION, AR  
 US 72540

Contact: DANIEL DELGADO  
 daniel.delgado@coviacorp.com

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)

T:  
F: