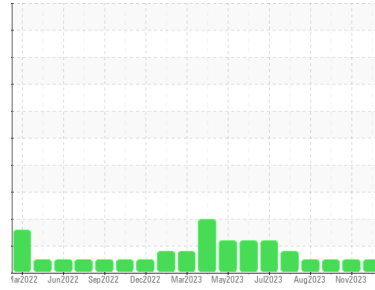




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**CATERPILLAR C15 HOBBS GENERATOR**  
 Component  
**Diesel Engine**  
 Fluid  
**SHELL ROTELLA T 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Light fuel dilution occurring. No other contaminants were detected 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>KL0013251</b>	KL0013234	KL0013253
Sample Date	Client Info		<b>27 Dec 2023</b>	06 Nov 2023	27 Sep 2023
Machine Age	hrs	Client Info	<b>45272</b>	45160	0
Oil Age	hrs	Client Info	<b>0</b>	45160	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>0</b>	0	1
Chromium	ppm	ASTM D5185m >6	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m >4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >30	<b>2</b>	2	2
Lead	ppm	ASTM D5185m >10	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m >150	<b>&lt;1</b>	0	<1
Tin	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	0
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 316	<b>453</b>	430	439
Barium	ppm	ASTM D5185m 0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 1.2	<b>80</b>	83	89
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m 24	<b>421</b>	412	402
Calcium	ppm	ASTM D5185m 2292	<b>1397</b>	1346	1354
Phosphorus	ppm	ASTM D5185m 1064	<b>1087</b>	960	886
Zinc	ppm	ASTM D5185m 1160	<b>1318</b>	1141	1115
Sulfur	ppm	ASTM D5185m 4996	<b>3555</b>	3161	3223

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>4</b>	4	5
Sodium	ppm	ASTM D5185m	<b>1</b>	0	0
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	2
Fuel	%	ASTM D3524 >5	<b>1.1</b>	<1.0	<1.0

## INFRA-RED

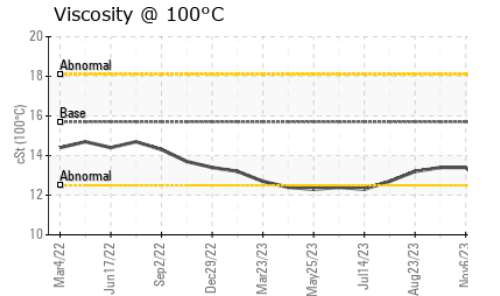
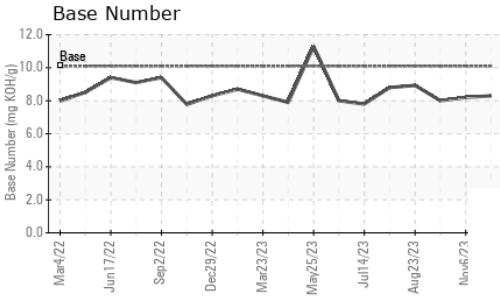
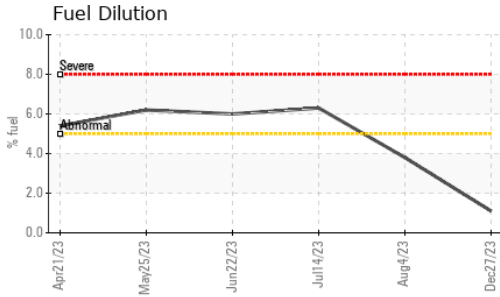
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0</b>	0	0
Nitration	Abs/cm	*ASTM D7624 >20	<b>5.2</b>	5.3	5.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.6</b>	20.0	19.8

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.0</b>	14.4	14.1
Base Number (BN)	mg KOH/g	ASTM D2896 10.1	<b>8.3</b>	8.2	8.0



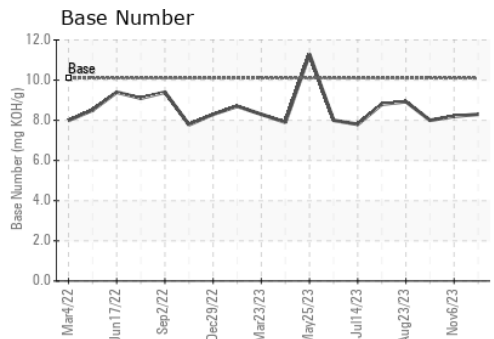
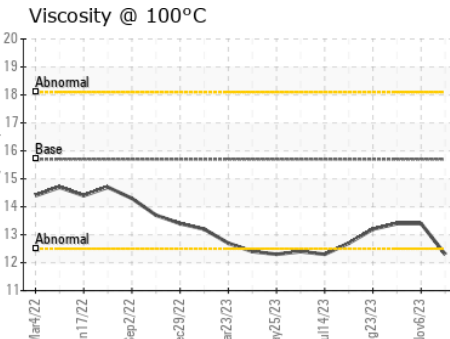
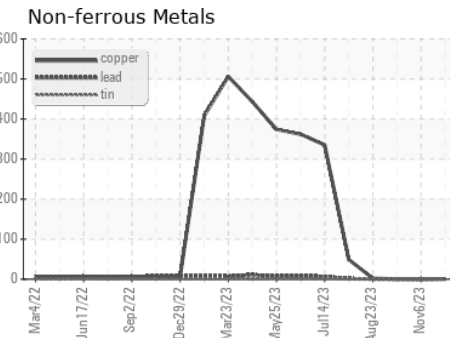
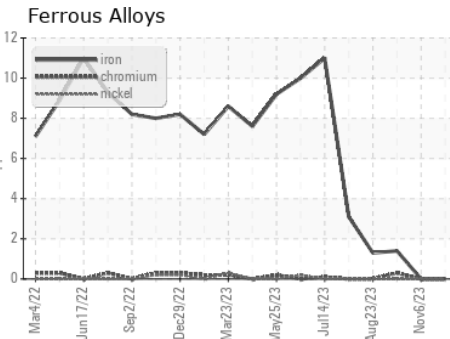
# OIL ANALYSIS REPORT



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	15.7	<b>12.3</b>	13.4

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KL0013251 **Received** : 08 Jan 2024  
**Lab Number** : **06054737** **Diagnosed** : 12 Jan 2024  
**Unique Number** : 10820686 **Diagnostician** : Wes Davis  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**RAMIREZ & SONS**  
 3404 N ENTERPRISE DR  
 HOBBS, NM  
 US 88240  
 Contact: Rick Davidson  
 rickdavidson.rs@gmail.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)

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F: