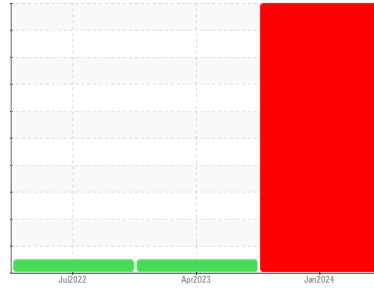




# PROBLEM SUMMARY

Sample Rating Trend



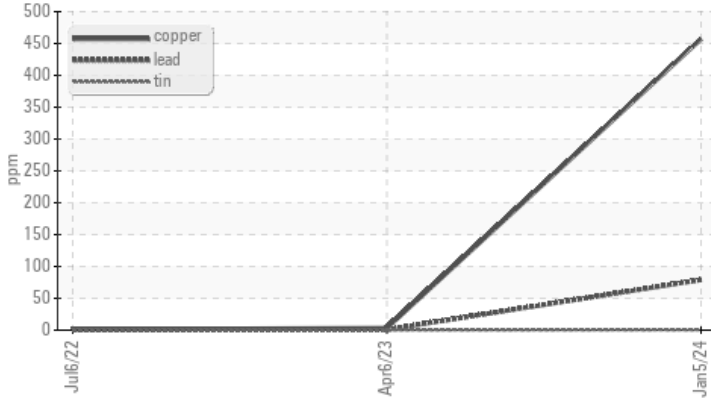
VISUAL METAL



Machine Id  
**LIEBHERR CR6611 - OUTER**  
 Component  
**Rear Left Final Drive**  
 Fluid  
**GEAR OIL ISO 220 (--- GAL)**

## COMPONENT CONDITION SUMMARY

### Non-ferrous Metals



## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

## PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	NORMAL
Lead	ppm	ASTM D5185m	>25	▲ 79	<1	<1
Copper	ppm	ASTM D5185m	>50	● 457	3	1
Yellow Metal	scalar	*Visual	NONE	● HEAVY	MODER	NONE

Customer Id: BUCGRA  
 Sample No.: WC0867461  
 Lab Number: 06057517  
 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Sean Felton +1 919-379-4092  
[sfelton@wearcheckusa.com](mailto:sfelton@wearcheckusa.com)

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
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
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.
Resample	---	---	?	We recommend an early resample to monitor this condition.

## HISTORICAL DIAGNOSIS

### 06 Apr 2023 Diag: Don Baldrige

NORMAL



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 condition of the oil is acceptable for the time in service.

view report



### 06 Jul 2022 Diag: Jonathan Hester

NORMAL



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 condition of the oil is acceptable for the time in service.

view report

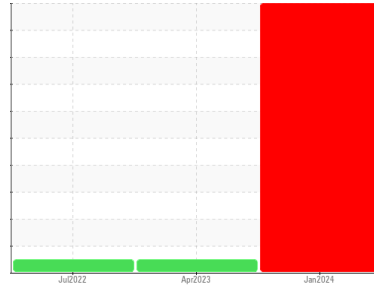




# OIL ANALYSIS REPORT

Sample Rating Trend

VISUAL METAL



Machine Id  
**LIEBHERR CR6611 - OUTER**

Component  
**Rear Left Final Drive**

Fluid  
**GEAR OIL ISO 220 (--- GAL)**

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

### Wear

High concentration of visible metal present. Bearing and/or bushing wear is indicated.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0867461</b>	WC0746695	WC0687187
Sample Date	Client Info		<b>05 Jan 2024</b>	06 Apr 2023	06 Jul 2022
Machine Age	hrs	Client Info	<b>13889</b>	13215	12454
Oil Age	hrs	Client Info	<b>0</b>	754	404
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>SEVERE</b>	NORMAL	NORMAL

## CONTAMINATION

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

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>500	<b>32</b>	28	17
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	2	<1
Lead	ppm	ASTM D5185m	>25	<b>79</b>	<1	<1
Copper	ppm	ASTM D5185m	>50	<b>457</b>	3	1
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	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	50	<b>12</b>	2	4
Barium	ppm	ASTM D5185m	15	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	15	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	<1
Magnesium	ppm	ASTM D5185m	50	<b>&lt;1</b>	1	0
Calcium	ppm	ASTM D5185m	50	<b>4</b>	7	3
Phosphorus	ppm	ASTM D5185m	350	<b>331</b>	441	437
Zinc	ppm	ASTM D5185m	100	<b>369</b>	3	<1
Sulfur	ppm	ASTM D5185m	12500	<b>5371</b>	5837	972

## CONTAMINANTS

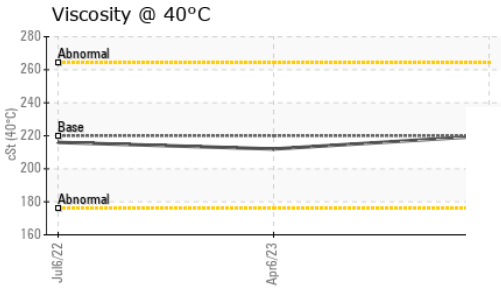
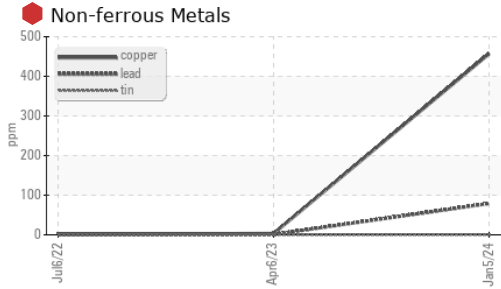
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>75	<b>4</b>	6	15
Sodium	ppm	ASTM D5185m		<b>0</b>	1	<1
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	3	0

## VISUAL

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



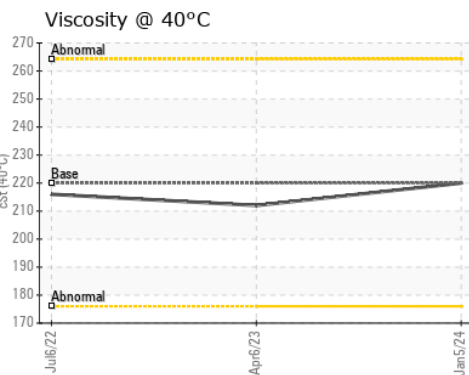
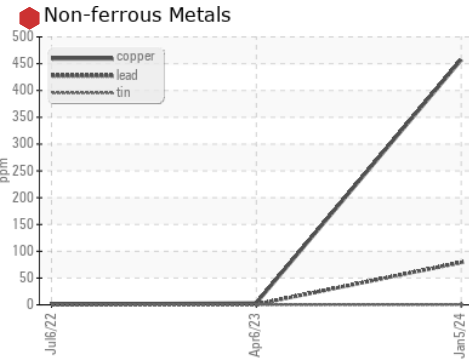
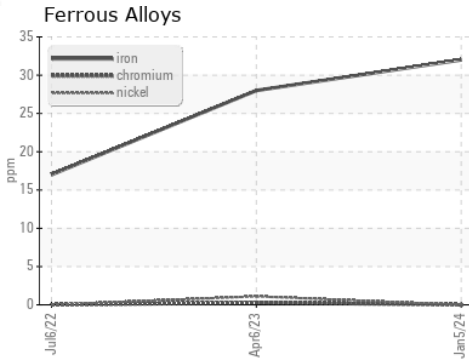
# OIL ANALYSIS REPORT



FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 220	<b>220</b>	212	216

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					no image
Bottom					no image

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : WC0867461  
 Lab Number : **06057517**  
 Unique Number : 10823466  
 Test Package : CONST

Received : 10 Jan 2024  
 Diagnosed : 12 Jan 2024  
 Diagnostician : Sean Felton

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)

**BUCKNER HEAVY LIFT**  
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 US 27253-9215

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