



# OIL ANALYSIS REPORT

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

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

## 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

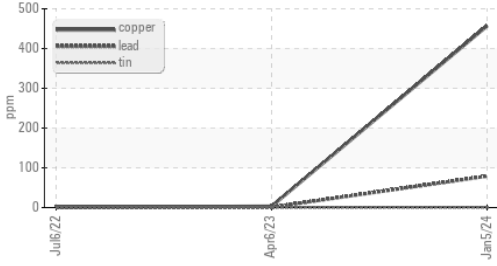
There is no indication of any contamination in the oil.

## FLUID CONDITION

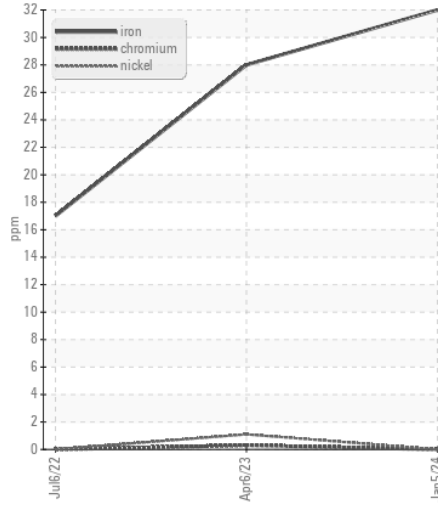
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	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
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>SEVERE</b>	NORMAL	NORMAL
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
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	MODER
Yellow Metal	scalar	*Visual	NONE	<b>● HEAVY</b>	MODER	NONE
Silicon	ppm	ASTM D5185m	>75	<b>4</b>	6	15
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	3	0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
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
Sodium	ppm	ASTM D5185m		<b>0</b>	1	<1
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
Visc @ 40°C	cSt	ASTM D445	220	<b>220</b>	212	216

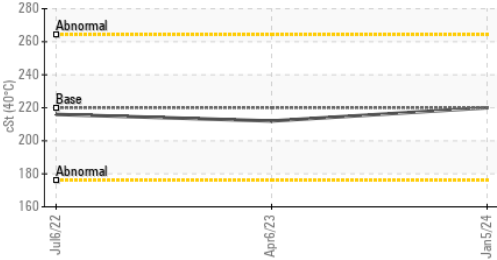
**Non-ferrous Metals**



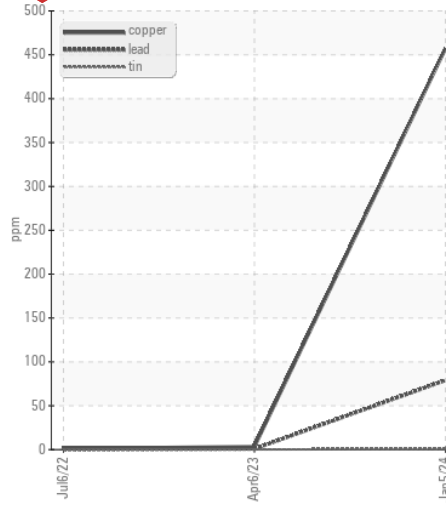
**Ferrous Alloys**



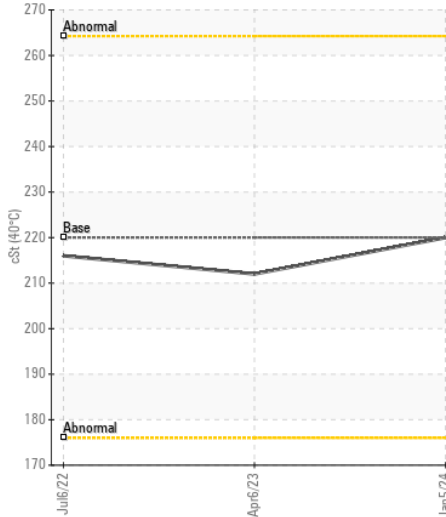
**Viscosity @ 40°C**



**Non-ferrous Metals**



**Viscosity @ 40°C**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0867461 **Received** : 10 Jan 2024  
**Lab Number** : 06057517 **Diagnosed** : 12 Jan 2024  
**Unique Number** : 10823466 **Diagnostician** : Sean Felton  
**Test Package** : CONST

**BUCKNER HEAVY LIFT**

4732 NC 54 EAST  
 GRAHAM, NC  
 US 27253-9215

Contact: MICHAEL LAWSON  
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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)