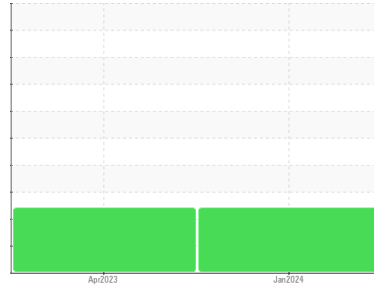




# OIL ANALYSIS REPORT

Sample Rating Trend



**DIRT**



Machine Id  
**LIEBHERR CR6611 - 4.1**  
 Component  
**Left Winch**  
 Fluid  
**GEAR OIL ISO 220 (--- GAL)**

## DIAGNOSIS

### Recommendation

We advise that you check all areas where dirt can enter the system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

### Fluid Condition

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>WC0873410</b>	WC0746701	---
Sample Date	Client Info			<b>09 Jan 2024</b>	06 Apr 2023	---
Machine Age	hrs	Client Info		<b>13887</b>	13215	---
Oil Age	hrs	Client Info		<b>0</b>	754	---
Oil Changed	Client Info			<b>Changed</b>	Changed	---
Sample Status				<b>ABNORMAL</b>	ABNORMAL	---

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>150	<b>48</b>	58	---
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Silver	ppm	ASTM D5185m		<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>5	<b>▲ 10</b>	▲ 12	---
Lead	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	---
Copper	ppm	ASTM D5185m	>80	<b>&lt;1</b>	<1	---
Tin	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	---

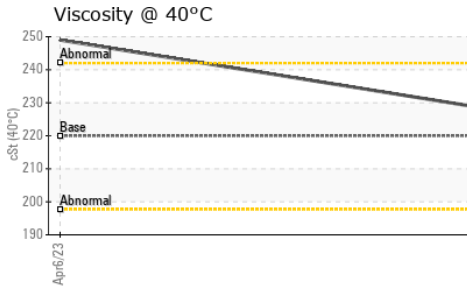
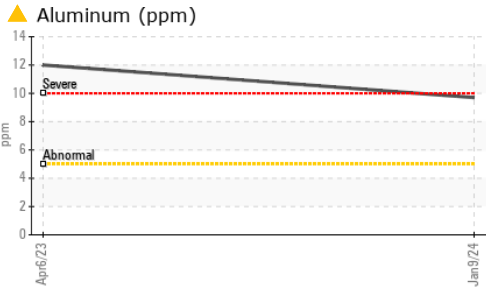
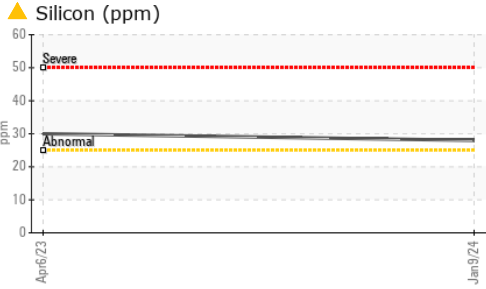
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	<b>32</b>	58	---
Barium	ppm	ASTM D5185m	15	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m	15	<b>&lt;1</b>	<1	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m	50	<b>4</b>	5	---
Calcium	ppm	ASTM D5185m	50	<b>65</b>	49	---
Phosphorus	ppm	ASTM D5185m	350	<b>538</b>	805	---
Zinc	ppm	ASTM D5185m	100	<b>27</b>	20	---
Sulfur	ppm	ASTM D5185m	12500	<b>12208</b>	17830	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>▲ 28</b>	▲ 30	---
Sodium	ppm	ASTM D5185m		<b>0</b>	2	---
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	6	---

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



# OIL ANALYSIS REPORT



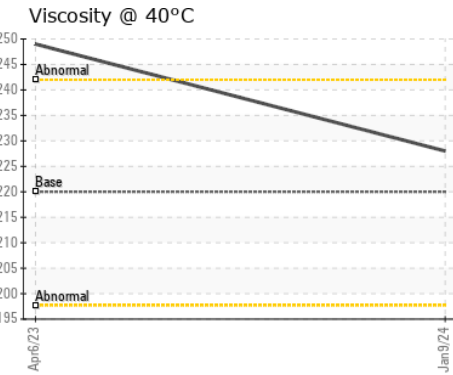
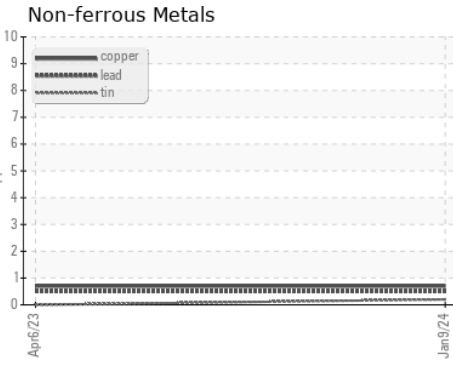
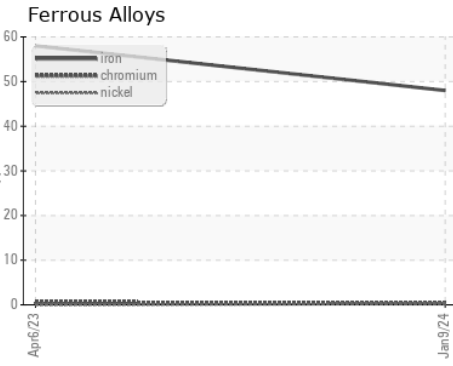
### FLUID PROPERTIES

method	limit/base	current	history1	history2		
Visc @ 40°C	cSt	ASTM D445	220	<b>228</b>	249	---

### SAMPLE IMAGES

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

### GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0873410      **Received** : 30 Jan 2024  
**Lab Number** : **06074179**      **Diagnosed** : 31 Jan 2024  
**Unique Number** : 10856270      **Diagnostician** : Sean Felton  
**Test Package** : CONST

**BUCKNER HEAVY LIFT**  
 4732 NC 54 EAST  
 GRAHAM, NC  
 US 27253-9215

Contact: MICHAEL LAWSON  
 michael@bucknercompanies.com  
 T: (336)376-8888  
 F: (336)376-4090

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)