



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id  
**LIEBHERR LR 1600/2 CR 6606 - 4.2 (S/N 074 509)**

Component  
**Winch**

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

## RECOMMENDATION

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0823346	---	---
Sample Date		Client Info		24 Feb 2024	---	---
Machine Age	hrs	Client Info		17237	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Not Changed	---	---
Sample Status				ABNORMAL	---	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	126	---	---
Chromium	ppm	ASTM D5185m	>10	1	---	---
Nickel	ppm	ASTM D5185m	>10	1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m	>5	2	---	---
Lead	ppm	ASTM D5185m	>15	<1	---	---
Copper	ppm	ASTM D5185m	>80	<1	---	---
Tin	ppm	ASTM D5185m		<1	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

## CONTAMINATION

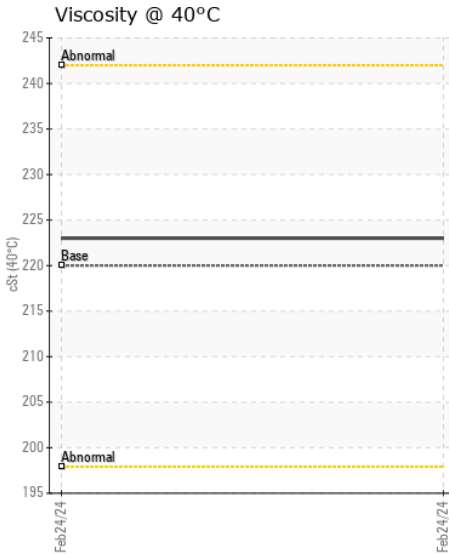
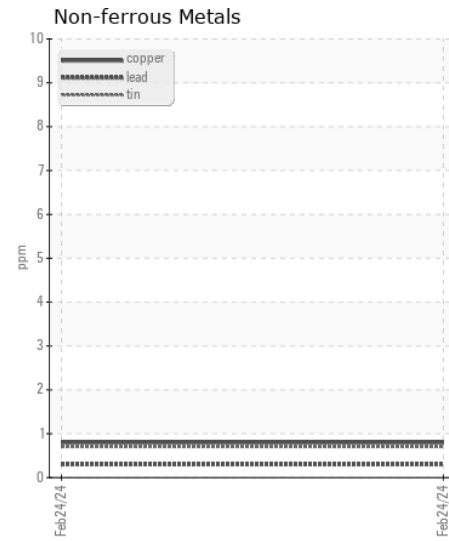
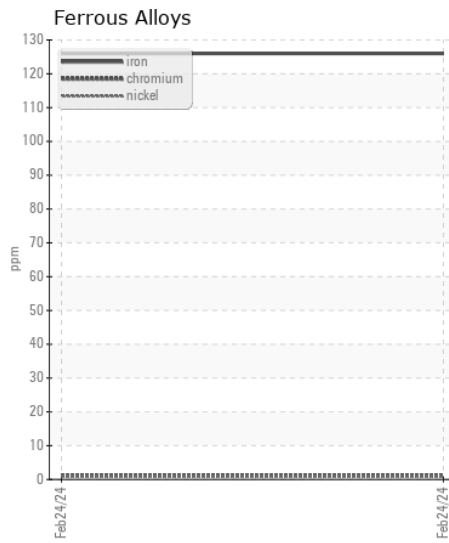
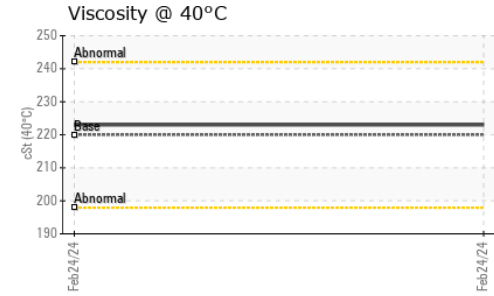
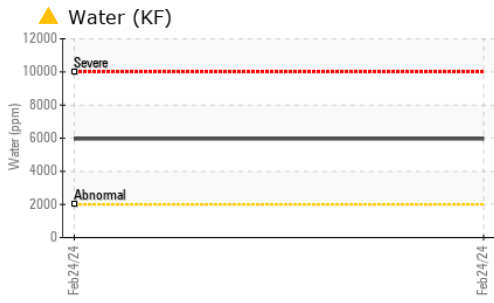
There is a moderate concentration of water present in the oil.

Silicon	ppm	ASTM D5185m	>25	11	---	---
Potassium	ppm	ASTM D5185m	>20	2	---	---
Water	%	ASTM D6304	>0.2	▲ 0.596	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ 5960	---	---
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	▲ 0.2%	---	---

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		<1	---	---
Boron	ppm	ASTM D5185m	50	7	---	---
Barium	ppm	ASTM D5185m	15	1	---	---
Molybdenum	ppm	ASTM D5185m	15	1	---	---
Manganese	ppm	ASTM D5185m		2	---	---
Magnesium	ppm	ASTM D5185m	50	3	---	---
Calcium	ppm	ASTM D5185m	50	11	---	---
Phosphorus	ppm	ASTM D5185m	350	409	---	---
Zinc	ppm	ASTM D5185m	100	35	---	---
Sulfur	ppm	ASTM D5185m	12500	7315	---	---
Visc @ 40°C	cSt	ASTM D445	220	223	---	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0823346 **Received** : 28 Feb 2024  
**Lab Number** : 06103859 **Tested** : 29 Feb 2024  
**Unique Number** : 10902089 **Diagnosed** : 01 Mar 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: KF )

**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)

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