



# OIL ANALYSIS REPORT

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

Machine Id  
**LIEBHERR LTR1100 HC1110 (S/N 97351)**

Component  
**1 Winch**

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

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

## WEAR

All component wear rates are normal.

## CONTAMINATION

There is no indication of any contamination in the oil.

## FLUID CONDITION

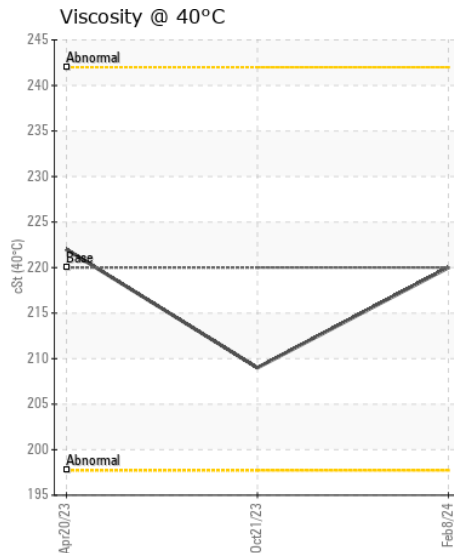
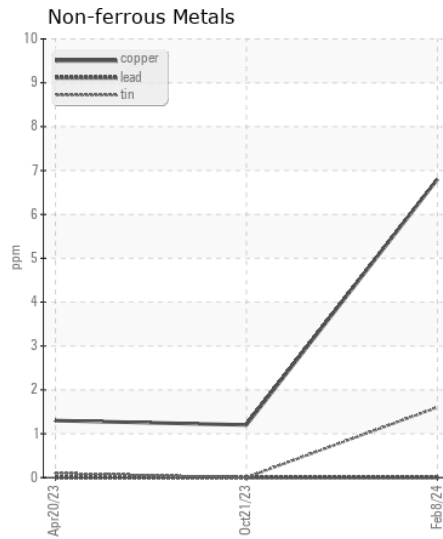
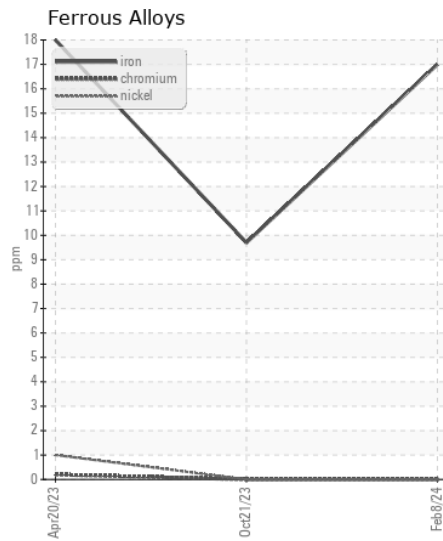
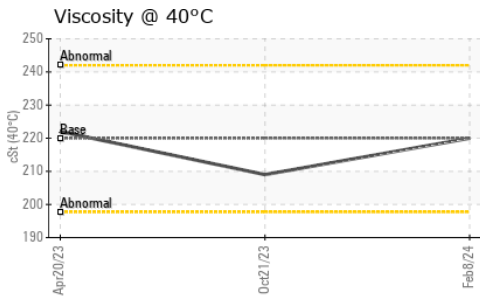
The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0873442</b>	WC0833279	WC0746605
Sample Date		Client Info		<b>08 Feb 2024</b>	21 Oct 2023	20 Apr 2023
Machine Age	hrs	Client Info		<b>11988</b>	11669	11025
Oil Age	hrs	Client Info		<b>0</b>	0	913
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>NORMAL</b>	NORMAL	ATTENTION

Iron	ppm	ASTM D5185m	>150	<b>17</b>	10	18
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>5	<b>0</b>	<1	<1
Lead	ppm	ASTM D5185m	>15	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>80	<b>7</b>	1	1
Tin	ppm	ASTM D5185m		<b>2</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	3	6
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	3
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Silt	scalar	*Visual	NONE	<b>LIGHT</b>	LIGHT	MODER
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	▲ SOLID
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>	0	1
Boron	ppm	ASTM D5185m	50	<b>9</b>	0	1
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>0</b>	0	2
Calcium	ppm	ASTM D5185m	50	<b>0</b>	7	3
Phosphorus	ppm	ASTM D5185m	350	<b>404</b>	439	404
Zinc	ppm	ASTM D5185m	100	<b>18</b>	34	25
Sulfur	ppm	ASTM D5185m	12500	<b>5491</b>	6002	5371
Visc @ 40°C	cSt	ASTM D445	220	<b>220</b>	209	222



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0873442  
**Lab Number** : 06086771  
**Unique Number** : 10874216  
**Test Package** : CONST

**Received** : 12 Feb 2024  
**Tested** : 13 Feb 2024  
**Diagnosed** : 13 Feb 2024 - Wes Davis

**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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