



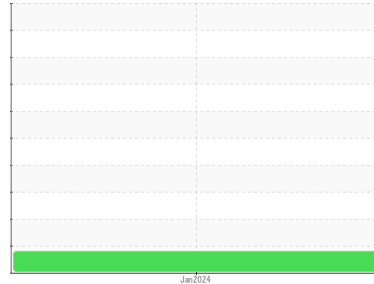
# OIL ANALYSIS REPORT

Sample Rating Trend

**WEAR**



Machine Id  
**LIEBHERR LR-1400 CR-4404 - 4.1**  
Component  
**Winch**  
Fluid  
**GEAR OIL ISO 220 (--- GAL)**



## DIAGNOSIS

- Recommendation**  
No corrective action is recommended at this time. We recommend an early resample to monitor this condition.
- Wear**  
Gear wear is indicated.
- 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.

SAMPLE INFORMATION	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0893058</b>	---	---
Sample Date	Client Info		<b>29 Jan 2024</b>	---	---
Machine Age	hrs	Client Info	<b>0</b>	---	---
Oil Age	hrs	Client Info	<b>0</b>	---	---
Oil Changed	Client Info		<b>N/A</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

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

WEAR METALS	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >150	<b>▲ 460</b>	---	---
Chromium	ppm	ASTM D5185m >10	<b>5</b>	---	---
Nickel	ppm	ASTM D5185m >10	<b>2</b>	---	---
Titanium	ppm	ASTM D5185m	<b>0</b>	---	---
Silver	ppm	ASTM D5185m	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >5	<b>5</b>	---	---
Lead	ppm	ASTM D5185m >15	<b>0</b>	---	---
Copper	ppm	ASTM D5185m >80	<b>3</b>	---	---
Tin	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---

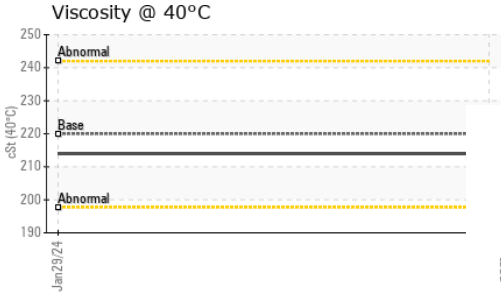
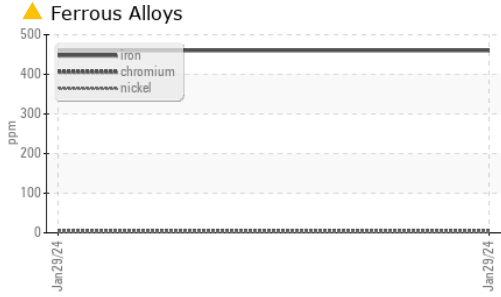
ADDITIVES	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	<b>18</b>	---	---
Barium	ppm	ASTM D5185m 15	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m 15	<b>&lt;1</b>	---	---
Manganese	ppm	ASTM D5185m	<b>4</b>	---	---
Magnesium	ppm	ASTM D5185m 50	<b>1</b>	---	---
Calcium	ppm	ASTM D5185m 50	<b>4</b>	---	---
Phosphorus	ppm	ASTM D5185m 350	<b>1515</b>	---	---
Zinc	ppm	ASTM D5185m 100	<b>7</b>	---	---
Sulfur	ppm	ASTM D5185m 12500	<b>2389</b>	---	---

CONTAMINANTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>10</b>	---	---
Sodium	ppm	ASTM D5185m	<b>10</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>2</b>	---	---

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



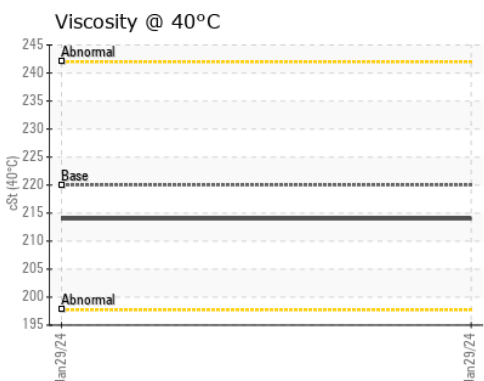
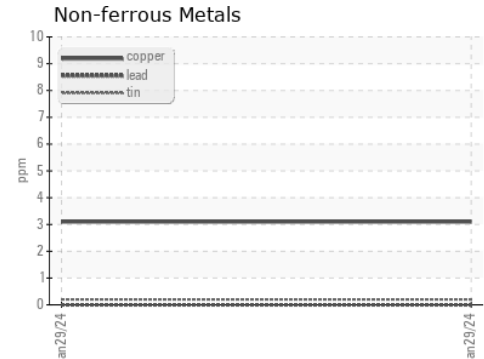
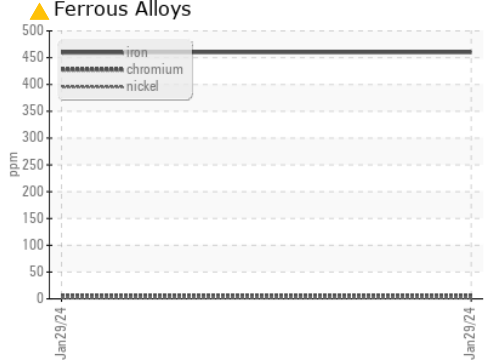
# OIL ANALYSIS REPORT



FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 220	214	---	---

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

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0893058 **Recieved** : 30 Jan 2024  
**Lab Number** : 06075162 **Diagnosed** : 01 Feb 2024  
**Unique Number** : 10857253 **Diagnostician** : Don Baldrige  
**Test Package** : CONST

**BUCKNER - WILLIS**  
 18123 HWY 75 NORTH  
 WILLIS, TX  
 US 77378  
 Contact: JOHN HAWKINS  
 johnh@bucknercompanies.com  
 T:  
 F:

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)