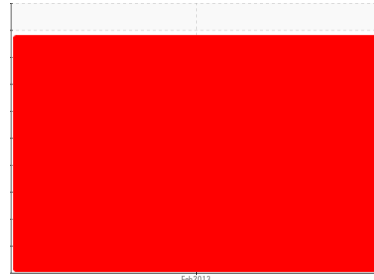




# OIL ANALYSIS REPORT

Sample Rating Trend



VISUAL METAL



Machine Id  
**LIEBHERR LR 1600/2 CR 6604 TRACK 4 (S/N 074564)**  
 Component  
**Planetary**  
 Fluid  
**{not provided} (9 GAL)**

## DIAGNOSIS

### ▲ Recommendation

We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

### ▲ Wear

The copper level is abnormal. Very high concentration of visible metal present.

### Contamination

There is no indication of any contamination in the component.

### 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		WCMC126349	---	---
Sample Date	Client Info		18 Feb 2013	---	---
Machine Age	hrs	Client Info	2050	---	---
Oil Age	hrs	Client Info	2050	---	---
Oil Changed	Client Info		Not Chngd	---	---
Sample Status			SEVERE	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method		NEG	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	28	---	---
Chromium	ppm	ASTM D5185m	<1	---	---
Nickel	ppm	ASTM D5185m	0	---	---
Titanium	ppm	ASTM D5185m	0	---	---
Silver	ppm	ASTM D5185m	0	---	---
Aluminum	ppm	ASTM D5185m	<1	---	---
Lead	ppm	ASTM D5185m	26	---	---
Copper	ppm	ASTM D5185m	▲ 295	---	---
Tin	ppm	ASTM D5185m	<1	---	---
Antimony	ppm	ASTM D5185m	0	---	---
Vanadium	ppm	ASTM D5185m	0	---	---
Cadmium	ppm	ASTM D5185m	0	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	---	---
Barium	ppm	ASTM D5185m	0	---	---
Molybdenum	ppm	ASTM D5185m	<1	---	---
Manganese	ppm	ASTM D5185m	0	---	---
Magnesium	ppm	ASTM D5185m	0	---	---
Calcium	ppm	ASTM D5185m	5	---	---
Phosphorus	ppm	ASTM D5185m	105	---	---
Zinc	ppm	ASTM D5185m	291	---	---
Sulfur	ppm	ASTM D5185m	177	---	---

## CONTAMINANTS

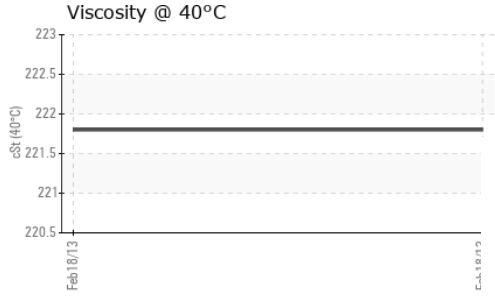
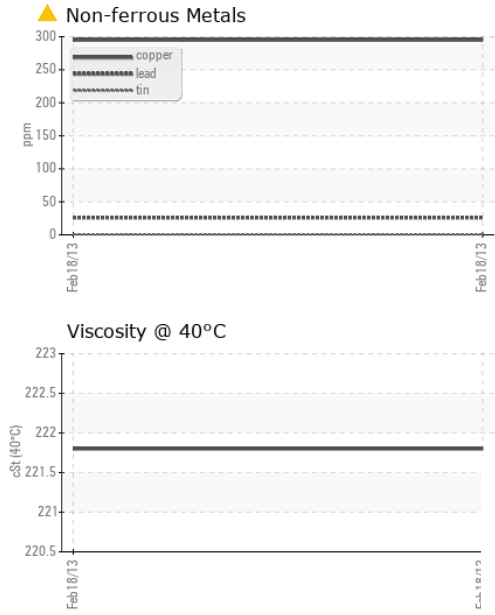
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	2	---	---
Sodium	ppm	ASTM D5185m	0	---	---
Potassium	ppm	ASTM D5185m	0	---	---

## VISUAL

	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	▲ VHEVY	---
Precipitate	scalar	*Visual	NONE	NONE	---
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	NEG	---	---
Free Water	scalar	*Visual	NEG	---	---



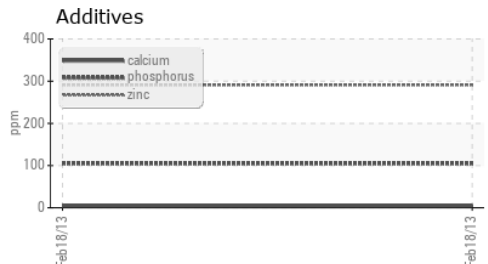
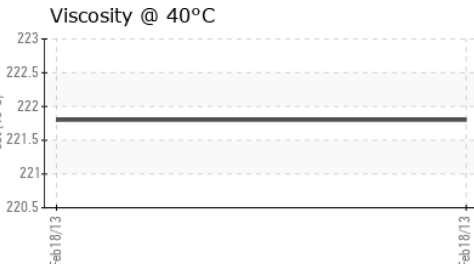
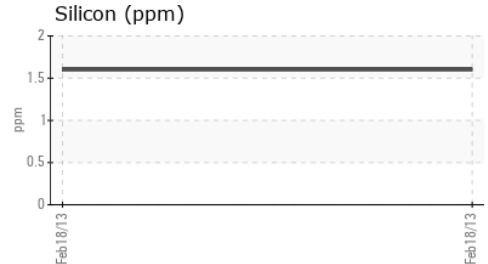
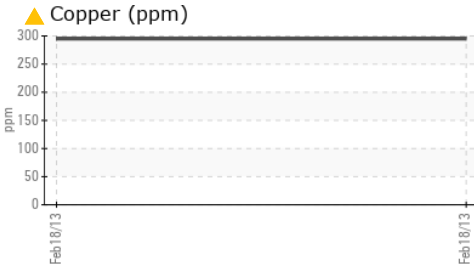
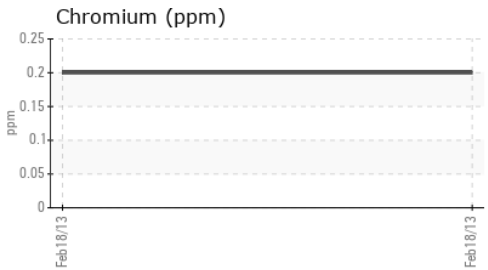
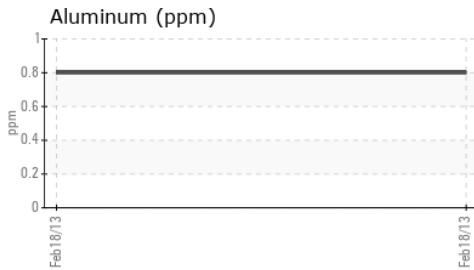
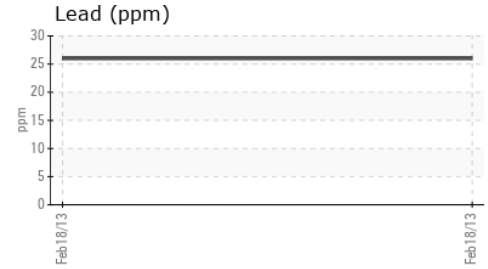
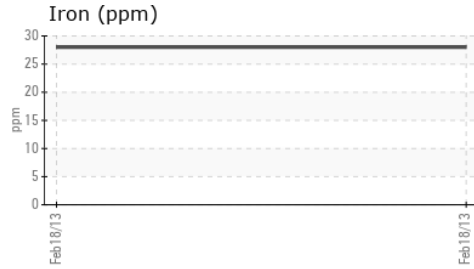
# OIL ANALYSIS REPORT



FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		<b>221.8</b>	---	---
Fluid Type		*In-house		<b>UNKNOWN</b>	---	---

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.** : WCMC126349      **Received** : 27 Feb 2013  
**Lab Number** : **03237394**      **Tested** : 05 Mar 2013  
**Unique Number** : 6184999      **Diagnosed** : 05 Mar 2013 - Jonathan Hester  
**Test Package** : MOB 1 ( Additional Tests: Bottom, FluidDetermination )

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

Contact: MICHAEL LAWSON  
 michael@bucknercompanies.com

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)

T: (336)376-8888

F: (336)376-4090