



# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**142001 - SG4**

Component  
**Gearbox**

Fluid  
**LIEBHERR GEAR HYPOID 90 EP (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### 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.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>LM0000710</b>	---	---
Sample Date	Client Info		<b>11 Jan 2024</b>	---	---
Machine Age	hrs	Client Info	<b>517</b>	---	---
Oil Age	hrs	Client Info	<b>517</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>NORMAL</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 >200	<b>68</b>	---	---
Chromium	ppm	ASTM D5185m >10	<b>1</b>	---	---
Nickel	ppm	ASTM D5185m >10	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185m	<b>0</b>	---	---
Silver	ppm	ASTM D5185m	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >25	<b>0</b>	---	---
Lead	ppm	ASTM D5185m >50	<b>&lt;1</b>	---	---
Copper	ppm	ASTM D5185m >200	<b>&lt;1</b>	---	---
Tin	ppm	ASTM D5185m >10	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Barium	ppm	ASTM D5185m	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m	<b>0</b>	---	---
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m	<b>1</b>	---	---
Calcium	ppm	ASTM D5185m	<b>44</b>	---	---
Phosphorus	ppm	ASTM D5185m	<b>1269</b>	---	---
Zinc	ppm	ASTM D5185m	<b>3</b>	---	---
Sulfur	ppm	ASTM D5185m	<b>27515</b>	---	---

## CONTAMINANTS

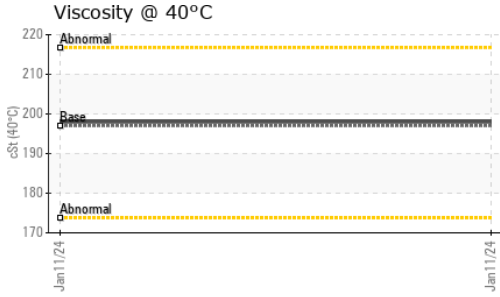
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>2</b>	---	---
Sodium	ppm	ASTM D5185m	<b>2</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>1</b>	---	---

## 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>NONE</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>	---	---



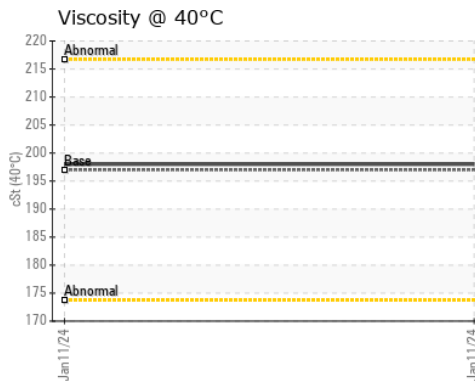
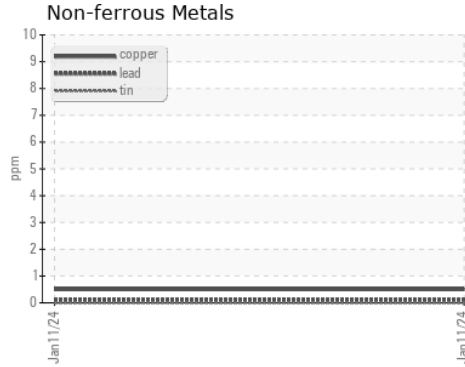
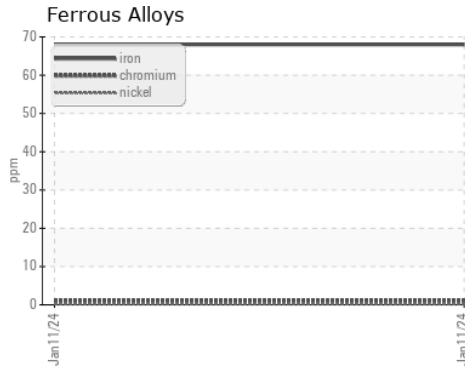
# OIL ANALYSIS REPORT



FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	197	<b>198</b>	---	---

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.** : LM0000710      **Received** : 18 Jan 2024  
**Lab Number** : **06065221**      **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10836603      **Diagnostician** : Wes Davis  
**Test Package** : CONST

**LIEBHERR USA CO - Maritime Cranes**  
 15101 NW 112TH AVE  
 HIALEAH GARDENS, FL  
 US 33018  
 Contact: RONNY FUNK  
 ronny.funk@liebherr.com  
 T: (305)817-7566  
 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)