



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR LH110 155976-1227**  
Component  
**Rear Right Wheel Hub**  
Fluid  
**GEAR OIL SAE 80W90 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0280579</b>	LH0280568	---
Sample Date		Client Info		<b>23 Feb 2024</b>	30 Jan 2024	---
Machine Age	hrs	Client Info		<b>995</b>	534	---
Oil Age	hrs	Client Info		<b>0</b>	0	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	Not Changd	---
Filter Changed		Client Info		<b>N/A</b>	None	---
Sample Status				<b>NORMAL</b>	NORMAL	---

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>650	<b>54</b>	47	---
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	---
Titanium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m		<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	2	---
Lead	ppm	ASTM D5185m	>4	<b>0</b>	0	---
Copper	ppm	ASTM D5185m	>60	<b>16</b>	13	---
Tin	ppm	ASTM D5185m	>4	<b>0</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

### CONTAMINATION

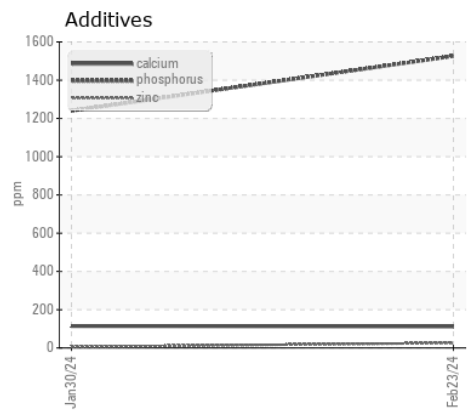
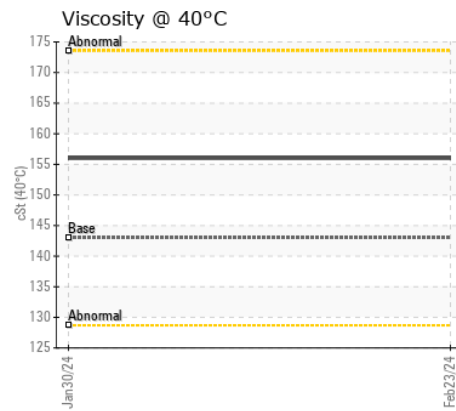
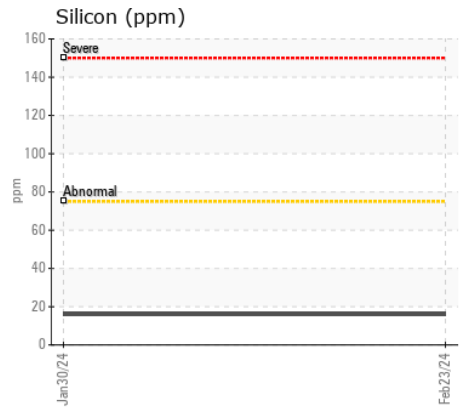
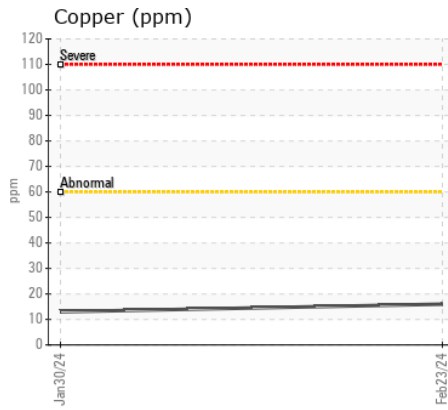
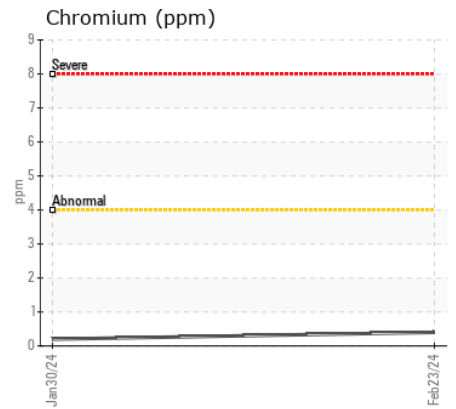
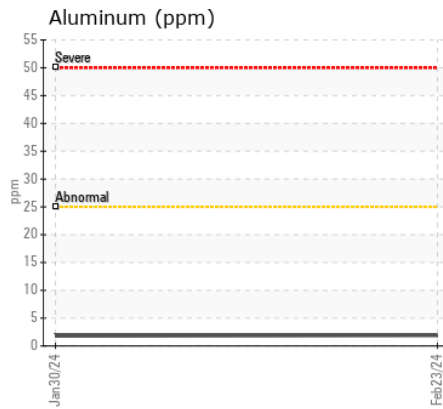
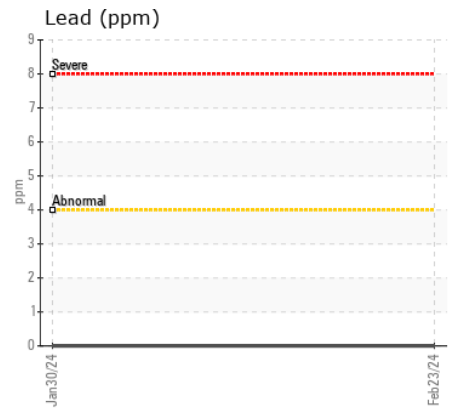
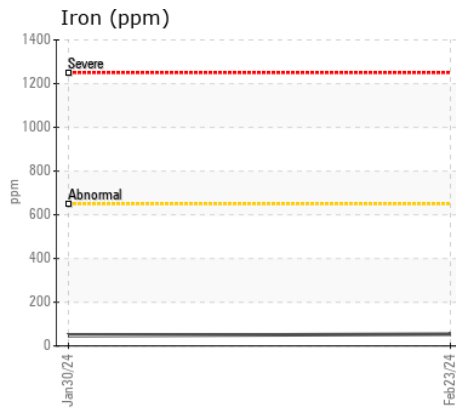
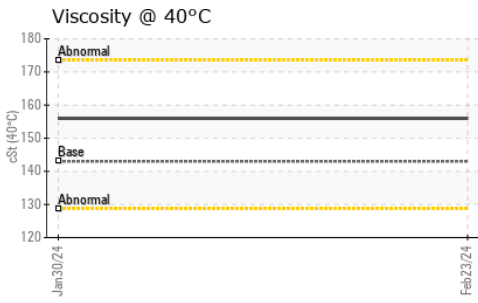
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>75	<b>16</b>	16	---
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	2	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>LIGHT</b>	LIGHT	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	---

### FLUID CONDITION

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

Sodium	ppm	ASTM D5185m	>170	<b>3</b>	0	---
Boron	ppm	ASTM D5185m	400	<b>13</b>	17	---
Barium	ppm	ASTM D5185m	200	<b>0</b>	6	---
Molybdenum	ppm	ASTM D5185m	12	<b>0</b>	0	---
Manganese	ppm	ASTM D5185m		<b>2</b>	<1	---
Magnesium	ppm	ASTM D5185m	12	<b>2</b>	<1	---
Calcium	ppm	ASTM D5185m	150	<b>112</b>	114	---
Phosphorus	ppm	ASTM D5185m	1650	<b>1526</b>	1240	---
Zinc	ppm	ASTM D5185m	125	<b>26</b>	6	---
Sulfur	ppm	ASTM D5185m	22500	<b>18748</b>	19135	---
Visc @ 40°C	cSt	ASTM D445	143	<b>156</b>	156	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : LH0280579

**Lab Number** : 06104664

**Unique Number** : 10902894

**Test Package** : MOBCE

**Received** : 29 Feb 2024

**Tested** : 01 Mar 2024

**Diagnosed** : 01 Mar 2024 - Wes Davis

**KINDER MORGAN**

4301 IVERSON

TRINITY, AL

US 35601

Contact: CHIP OAKES

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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