



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR T60-9 022201-1709**  
Component  
**Front Left Wheel Hub**  
Fluid  
**LIEBHERR GEAR MF 80W (--- GAL)**

### RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0228243</b>	---	---
Sample Date		Client Info		<b>20 Feb 2024</b>	---	---
Machine Age	hrs	Client Info		<b>1045</b>	---	---
Oil Age	hrs	Client Info		<b>0</b>	---	---
Filter Age	hrs	Client Info		<b>0</b>	---	---
Oil Changed		Client Info		<b>Changed</b>	---	---
Filter Changed		Client Info		<b>None</b>	---	---
Sample Status				<b>ABNORMAL</b>	---	---

### WEAR

Copper ppm levels are abnormal. Bearing and/or bushing wear is indicated.

Iron	ppm	ASTM D5185(m)	>500	<b>268</b>	---	---
Chromium	ppm	ASTM D5185(m)	>8	<b>2</b>	---	---
Nickel	ppm	ASTM D5185(m)	>5	<b>0</b>	---	---
Titanium	ppm	ASTM D5185(m)		<b>0</b>	---	---
Silver	ppm	ASTM D5185(m)		<b>0</b>	---	---
Aluminum	ppm	ASTM D5185(m)	>5	<b>1</b>	---	---
Lead	ppm	ASTM D5185(m)	>5	<b>8</b>	---	---
Copper	ppm	ASTM D5185(m)	>50	<b>▲ 328</b>	---	---
Tin	ppm	ASTM D5185(m)		<b>0</b>	---	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	---	---
White Metal	scalar	Visual*	NONE	<b>LIGHT</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

### CONTAMINATION

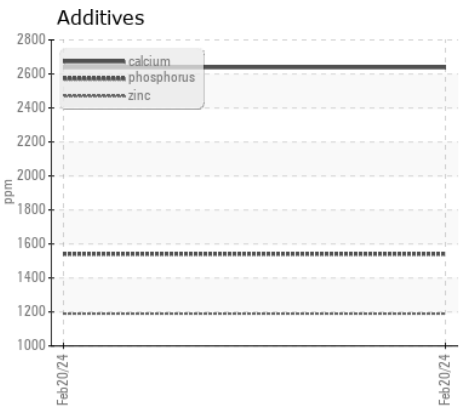
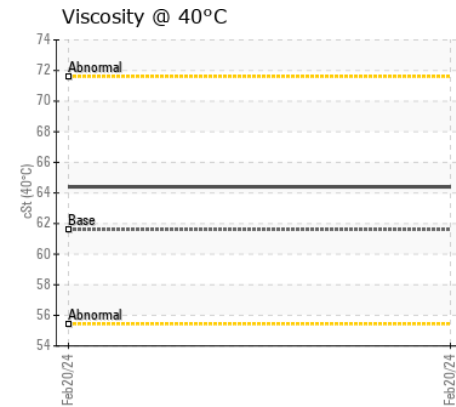
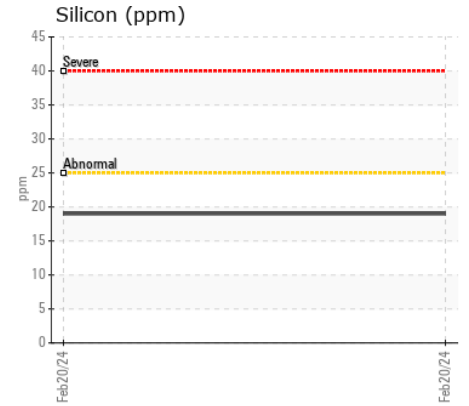
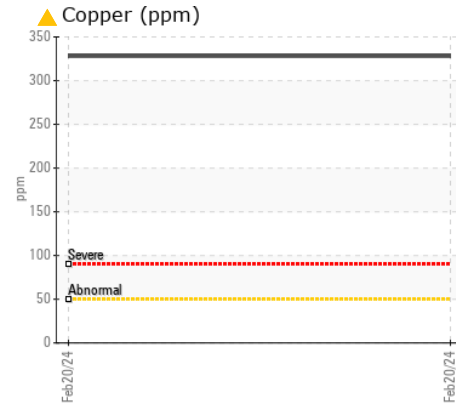
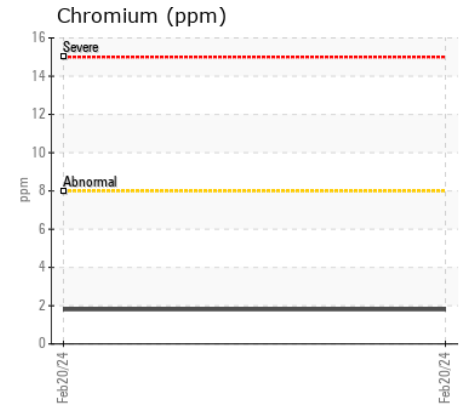
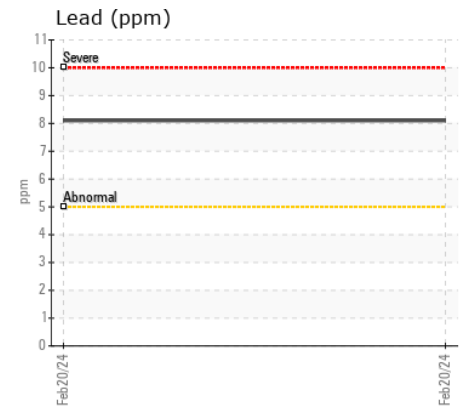
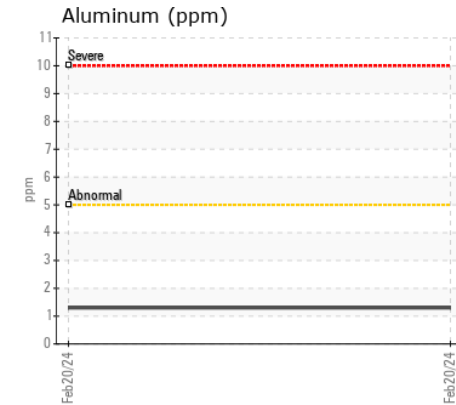
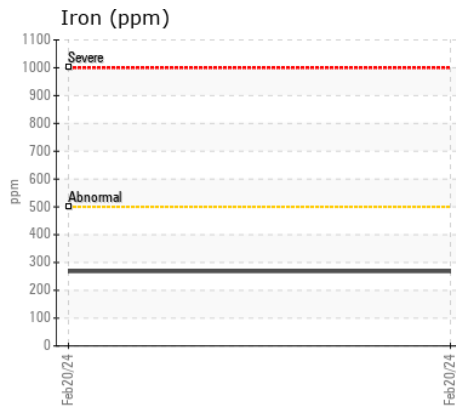
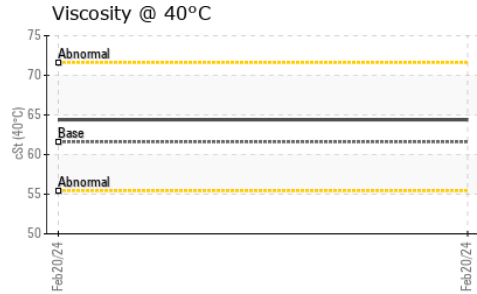
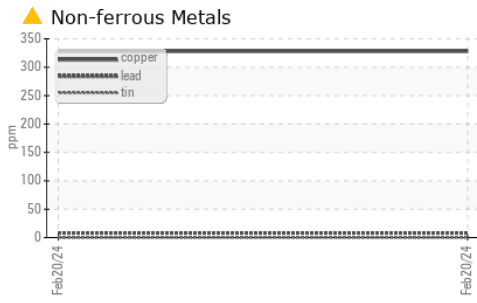
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>19</b>	---	---
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	---	---
Water		WC Method	>0.2	<b>NEG</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>	---	---

### FLUID CONDITION

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		<b>2</b>	---	---
Boron	ppm	ASTM D5185(m)		<b>75</b>	---	---
Barium	ppm	ASTM D5185(m)		<b>&lt;1</b>	---	---
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	---	---
Manganese	ppm	ASTM D5185(m)		<b>3</b>	---	---
Magnesium	ppm	ASTM D5185(m)		<b>13</b>	---	---
Calcium	ppm	ASTM D5185(m)		<b>2638</b>	---	---
Phosphorus	ppm	ASTM D5185(m)		<b>1541</b>	---	---
Zinc	ppm	ASTM D5185(m)		<b>1190</b>	---	---
Sulfur	ppm	ASTM D5185(m)		<b>12119</b>	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	61.6	<b>64.4</b>	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0228243 **Received** : 22 Feb 2024  
**Lab Number** : 02617473 **Tested** : 22 Feb 2024  
**Unique Number** : 5734583 **Diagnosed** : 22 Feb 2024 - Kevin Marson  
**Test Package** : MOBCE ( Additional Tests: Visual )

**ECOWASTE INDUSTRIES**  
 4 SPRUCE ST  
 NEW WESTMINSTER, BC  
 CA V3L 5G6  
 Contact: Service Manager

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

T:  
F: