



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR LH50M 1216-98638**  
Component  
**Swing Drive**  
Fluid  
**LIEBHERR GEAR BASIC 90 LS (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0268263</b>	LH0263936	LH0245052
Sample Date		Client Info		<b>25 Jan 2024</b>	17 Aug 2023	29 Mar 2023
Machine Age	hrs	Client Info		<b>13406</b>	12191	11277
Oil Age	hrs	Client Info		<b>1000</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>1200	<b>329</b>	581	▲ 1334
Chromium	ppm	ASTM D5185m	>15	<b>4</b>	8	▲ 16
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	2	2
Titanium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>5	<b>0</b>	0	3
Lead	ppm	ASTM D5185m	>8	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>325	<b>31</b>	37	78
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

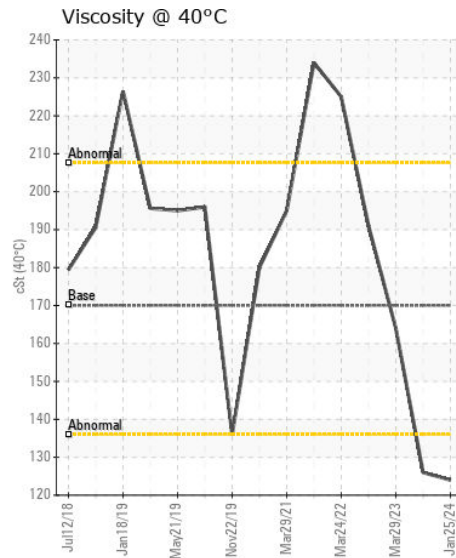
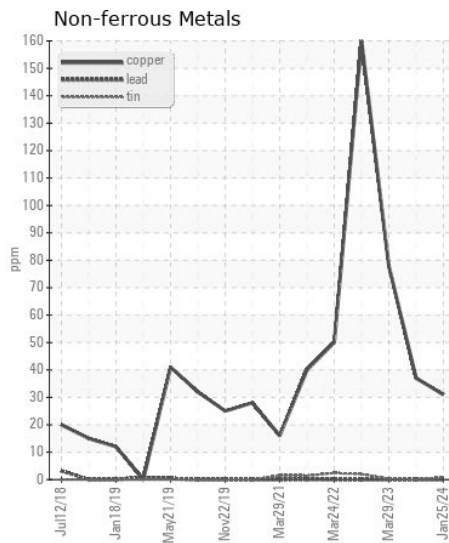
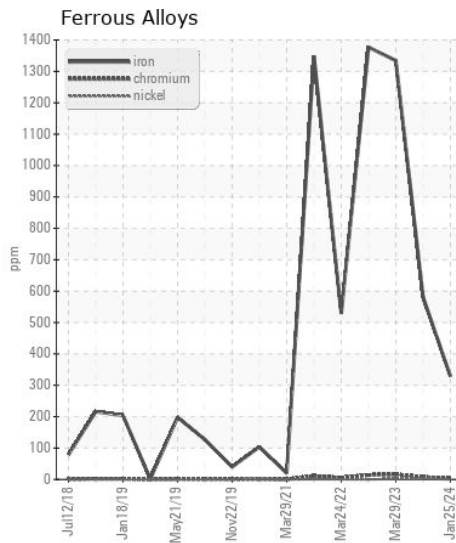
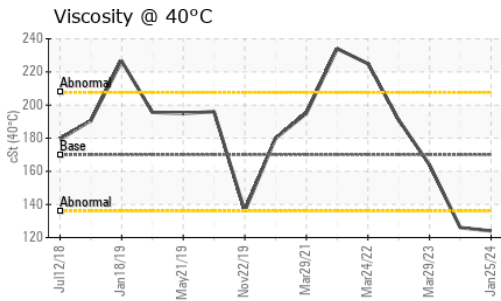
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>10	<b>1</b>	2	4
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	<1	0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		<b>0</b>	0	<1
Boron	ppm	ASTM D5185m	0	<b>4</b>	8	6
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>&lt;1</b>	1	1
Manganese	ppm	ASTM D5185m	0	<b>3</b>	5	9
Magnesium	ppm	ASTM D5185m	<1	<b>0</b>	5	4
Calcium	ppm	ASTM D5185m	<1	<b>32</b>	43	136
Phosphorus	ppm	ASTM D5185m	2143	<b>870</b>	791	1059
Zinc	ppm	ASTM D5185m	<1	<b>21</b>	38	63
Sulfur	ppm	ASTM D5185m	23468	<b>22482</b>	23282	25056
Visc @ 40°C	cSt	ASTM D445	170	<b>124</b>	126	164



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LH0268263 **Received** : 30 Jan 2024  
**Lab Number** : 06075193 **Diagnosed** : 01 Feb 2024  
**Unique Number** : 10857284 **Diagnostician** : Sean Felton  
**Test Package** : CONST

**AMERICAN STATE EQUIPMENT CO.**  
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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)