



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR LH30M 121854-1253**  
Component  
**Hydraulic System**  
Fluid  
**LIEBHERR HYDRAULIC HVI (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0290241</b>	LH0258819	LH0272750
Sample Date		Client Info		<b>17 May 2024</b>	15 Mar 2024	02 Jan 2024
Machine Age	hrs	Client Info		<b>8113</b>	7579	6976
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changed</b>	Not Changed	Not Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>25</b>	25	19
Chromium	ppm	ASTM D5185m	>5	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>2	<b>0</b>	<1	2
Lead	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>10	<b>1</b>	1	2
Tin	ppm	ASTM D5185m	>2	<b>0</b>	<1	<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

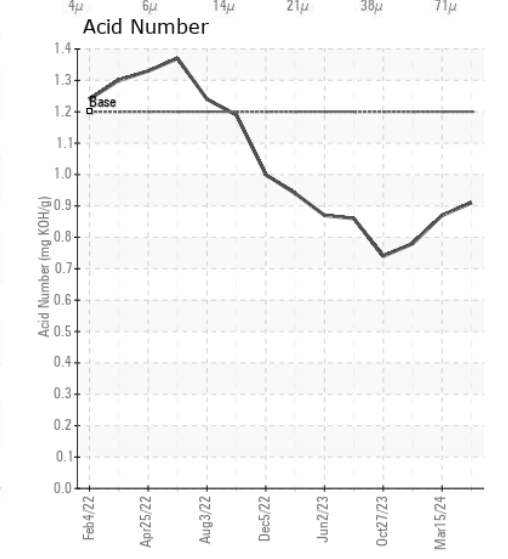
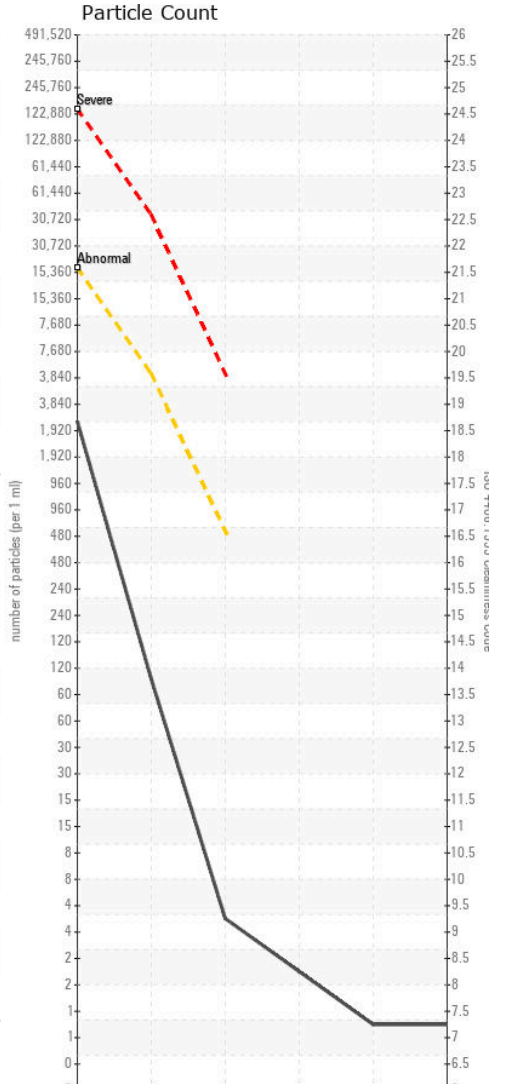
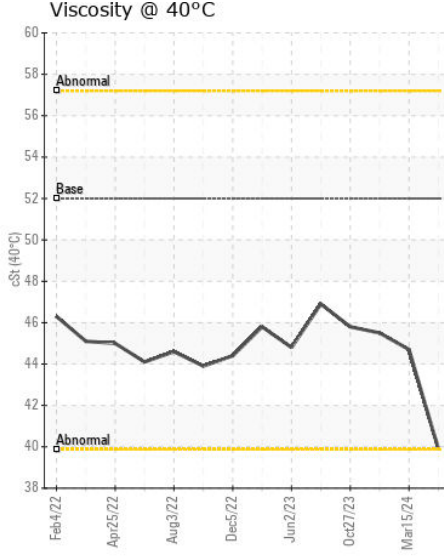
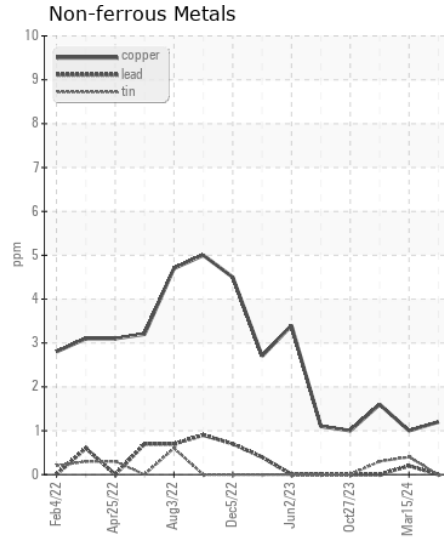
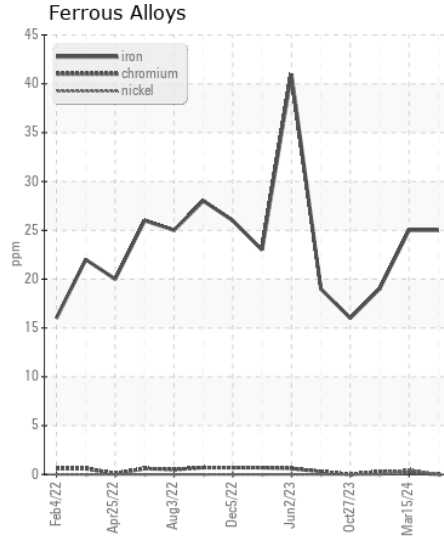
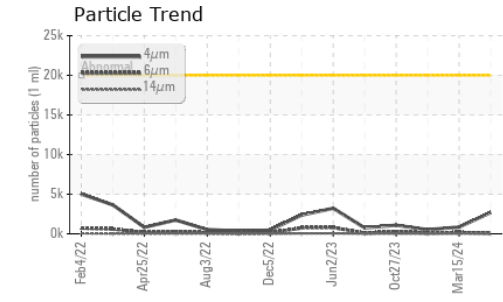
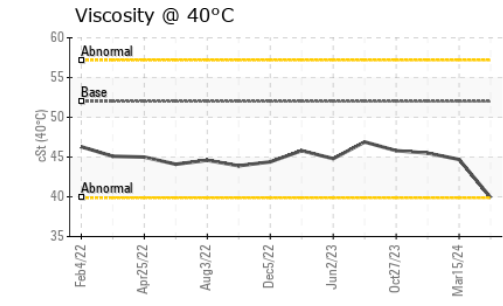
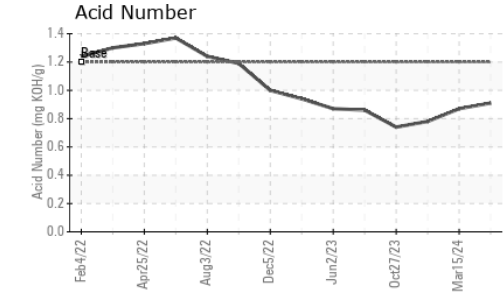
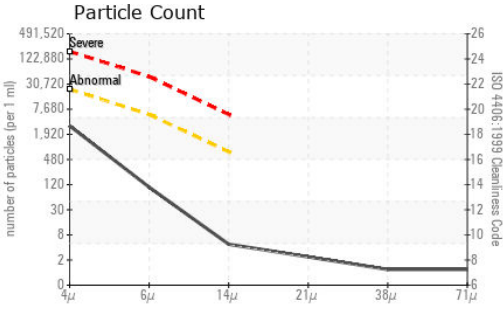
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>17	<b>&lt;1</b>	<1	0
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	1
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>20000	<b>2684</b>	856	519
Particles >6µm		ASTM D7647	>5000	<b>92</b>	161	98
Particles >14µm		ASTM D7647	>640	<b>4</b>	15	13
Particles >21µm		ASTM D7647	>160	<b>2</b>	5	5
Particles >38µm		ASTM D7647	>40	<b>1</b>	0	1
Particles >71µm		ASTM D7647	>10	<b>1</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>19/14/9</b>	17/15/11	16/14/11
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	>0.1	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>1</b>	1	0
Boron	ppm	ASTM D5185m		<b>0</b>	0	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	<1
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	7	<b>6</b>	4	2
Calcium	ppm	ASTM D5185m	1500	<b>211</b>	304	376
Phosphorus	ppm	ASTM D5185m	750	<b>586</b>	545	450
Zinc	ppm	ASTM D5185m	820	<b>693</b>	647	578
Sulfur	ppm	ASTM D5185m	4000	<b>2113</b>	2438	1766
Acid Number (AN)	mg KOH/g	ASTM D8045	1.2	<b>0.91</b>	0.87	0.78
Visc @ 40°C	cSt	ASTM D445	52	<b>39.9</b>	44.7	45.5



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LH0290241  
**Lab Number** : 06190975  
**Unique Number** : 11047727  
**Test Package** : CONST  
**Received** : 24 May 2024  
**Tested** : 30 May 2024  
**Diagnosed** : 30 May 2024 - Don Baldrige

**AMERICAN STATE EQUIPMENT CO.**  
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Certificate L2367  
 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)