



# LIEBHERR

## OIL ANALYSIS REPORT



Area

(341435)

Machine Id

LIEBHERR LH50M 128733-1216

Component

Hydraulic System

Fluid

{not provided} (--- GAL)

WEAR  
CONTAMINATION  
FLUID CONDITION

SEVERE

SEVERE

NORMAL

### RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. The oil change at the time of sampling has been noted. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. Please specify the brand, type, and viscosity of the oil on your next sample.

### WEAR

Iron ppm levels are severe. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

### CONTAMINATION

There is a high amount of particulates (2 to 100 microns in size) present in the oil. There is a moderate concentration of water present in the oil.

### FLUID CONDITION

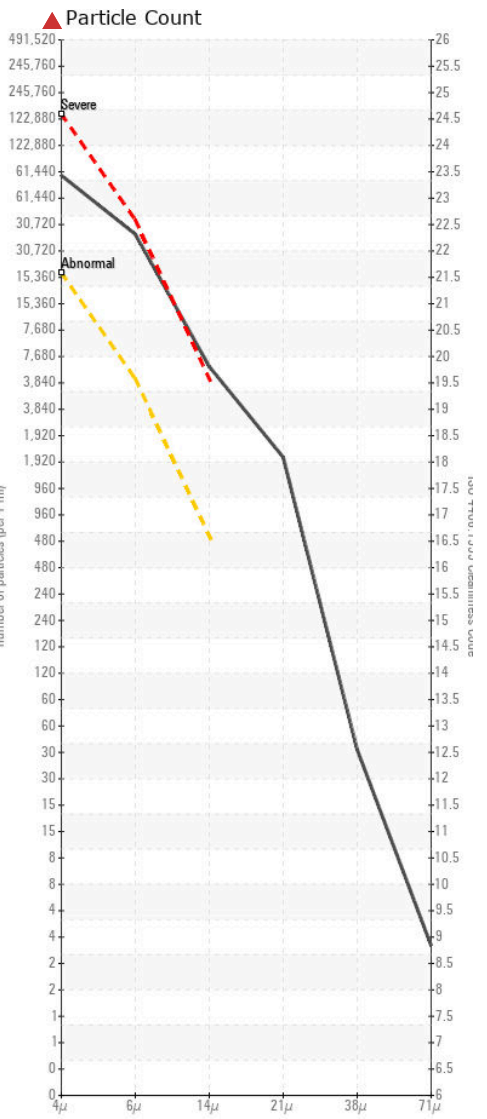
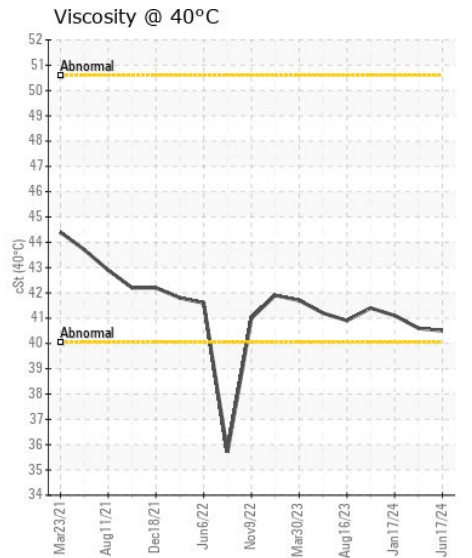
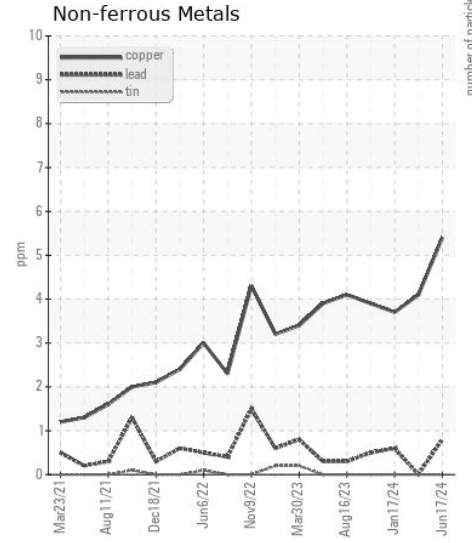
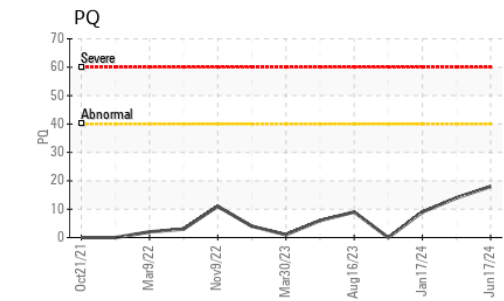
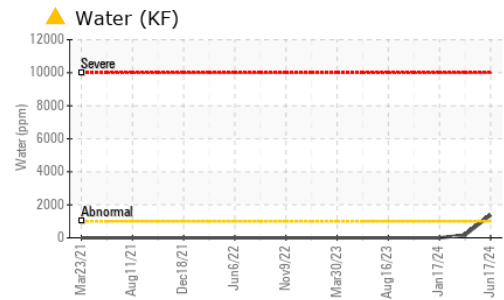
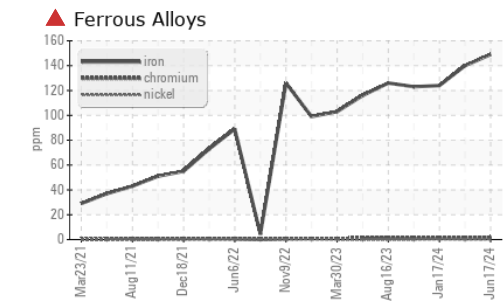
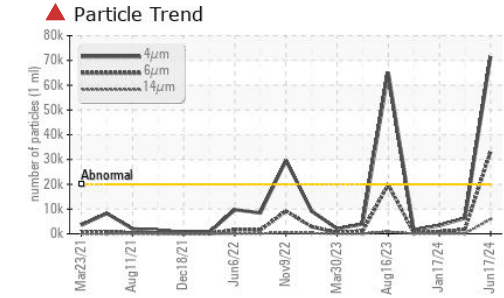
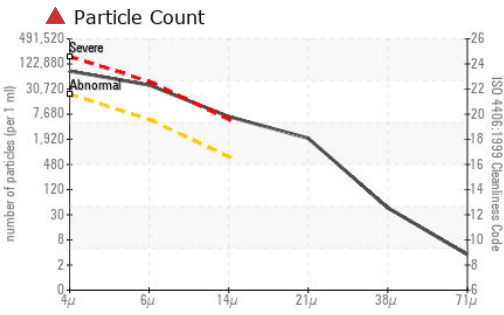
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0289409	LH0286548	LH0278633
Sample Date		Client Info		17 Jun 2024	19 Mar 2024	17 Jan 2024
Machine Age	hrs	Client Info		10161	9241	8647
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	SEVERE	SEVERE

PQ		ASTM D8184*	>40	18	14	9
Iron	ppm	ASTM D5185(m)	>50	▲ 149	▲ 140	▲ 124
Chromium	ppm	ASTM D5185(m)	>5	2	1	1
Nickel	ppm	ASTM D5185(m)	>2	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>2	<1	0	<1
Lead	ppm	ASTM D5185(m)	>4	<1	0	<1
Copper	ppm	ASTM D5185(m)	>10	5	4	4
Tin	ppm	ASTM D5185(m)	>2	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185(m)	>17	2	<1	2
Potassium	ppm	ASTM D5185(m)	>20	7	<1	1
Water	%	ASTM D6304*	>0.1	▲ 0.137	0.016	---
ppm Water	ppm	ASTM D6304*	>1000	▲ 1380	167	---
Particles >4µm		ASTM D7647	>20000	▲ 71540	6312	3341
Particles >6µm		ASTM D7647	>5000	▲ 33140	1698	876
Particles >14µm		ASTM D7647	>640	▲ 5864	110	58
Particles >21µm		ASTM D7647	>160	▲ 1788	22	14
Particles >38µm		ASTM D7647	>40	39	1	1
Particles >71µm		ASTM D7647	>10	3	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 23/22/20	20/18/14	19/17/13
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	▲ WGOIL	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	▲ .2%	.2%	NEG

Sodium	ppm	ASTM D5185(m)		6	2	2
Boron	ppm	ASTM D5185(m)		2	0	0
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		2	1	2
Magnesium	ppm	ASTM D5185(m)		2	2	3
Calcium	ppm	ASTM D5185(m)		387	417	415
Phosphorus	ppm	ASTM D5185(m)		648	632	635
Zinc	ppm	ASTM D5185(m)		792	802	779
Sulfur	ppm	ASTM D5185(m)		2450	2401	2586
Visc @ 40°C	cSt	ASTM D7279(m)		40.5	40.6	41.1



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0289409  
**Lab Number** : 02642631  
**Unique Number** : 5800170  
**Test Package** : MOB 1 ( Additional Tests: KF, PQ, PrtCount )

**COMBINED METAL INDUSTRIES**  
 454 DOBBIE DRIVE  
 CAMBRIDGE, ON  
 CA N1T 1S7  
 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: