



# LIEBHERR

## OIL ANALYSIS REPORT



Machine Id  
**LIEBHERR LH30M 90077**  
Component  
**Hydraulic System**  
Fluid  
**AW HYDRAULIC OIL ISO 46 (--- GAL)**

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

### RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) AW HYDRAULIC OIL ISO 46. Please confirm.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0276293</b>	LH0162789	LH
Sample Date		Client Info		<b>16 Apr 2024</b>	12 Mar 2020	16 Jul 2019
Machine Age	hrs	Client Info		<b>6756</b>	4019	4019
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 Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	ABNORMAL

### WEAR

Chromium ppm levels are abnormal. Iron ppm levels are marginal. Ring wear is indicated. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

PQ		ASTM D8184*	>40	<b>0</b>	---	---
Iron	ppm	ASTM D5185(m)	>50	<b>▲ 50</b>	21	19
Chromium	ppm	ASTM D5185(m)	>5	<b>▲ 6</b>	3	3
Nickel	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	1	1
Copper	ppm	ASTM D5185(m)	>10	<b>6</b>	6	5
Tin	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	<b>▲ VLITE</b>
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

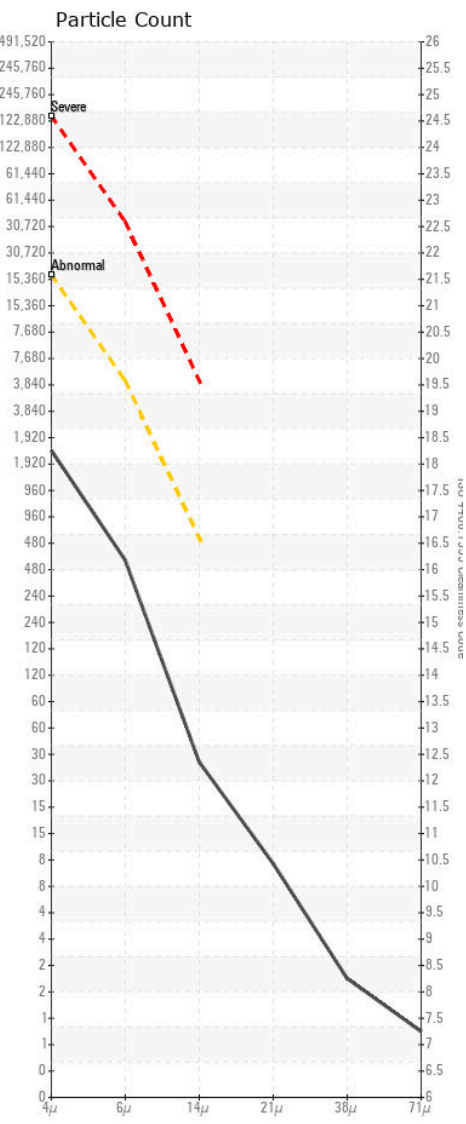
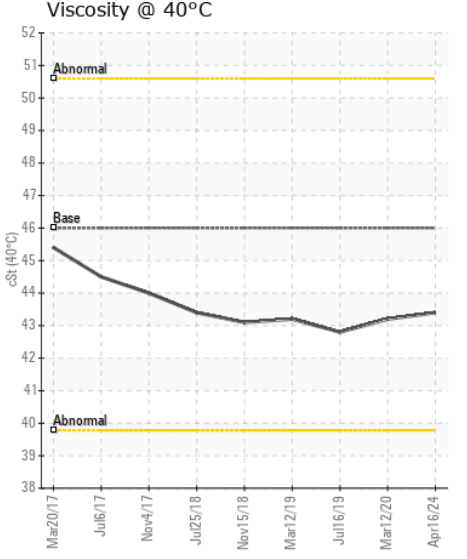
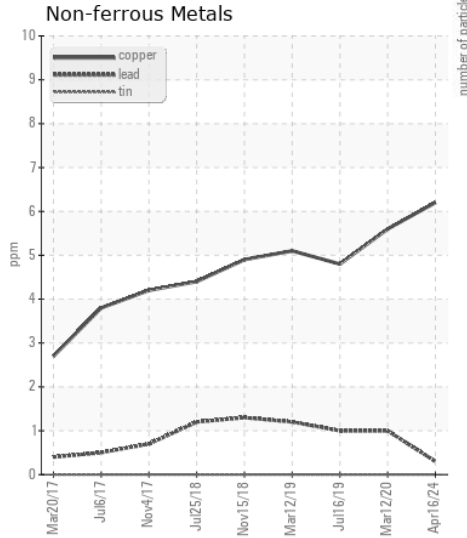
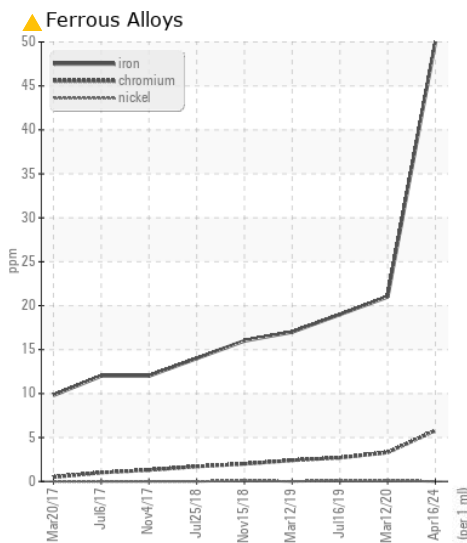
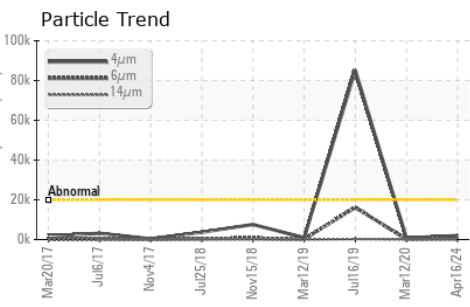
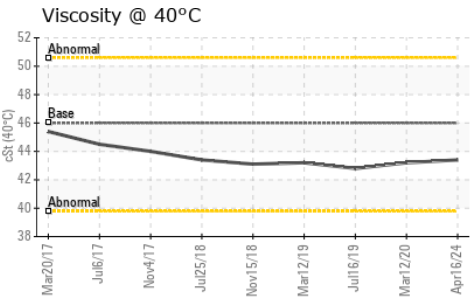
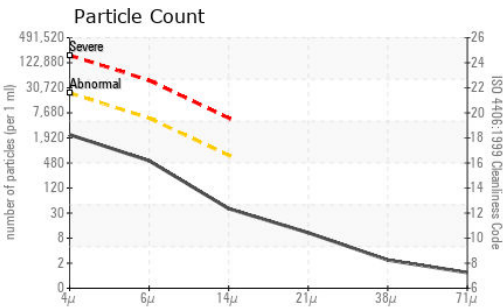
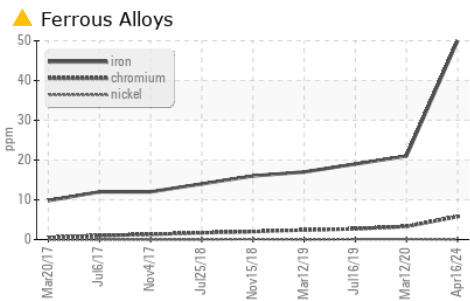
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>17	<b>0</b>	<1	2
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>20000	<b>2009</b>	801	<b>▲ 85179</b>
Particles >6µm		ASTM D7647	>5000	<b>476</b>	156	<b>▲ 16203</b>
Particles >14µm		ASTM D7647	>640	<b>34</b>	9	236
Particles >21µm		ASTM D7647	>160	<b>9</b>	3	29
Particles >38µm		ASTM D7647	>40	<b>2</b>	0	0
Particles >71µm		ASTM D7647	>10	<b>1</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>18/16/12</b>	17/14/10	<b>▲ 24/21/15</b>
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	<b>▲ VLITE</b>
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 oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		<b>2</b>	<1	2
Boron	ppm	ASTM D5185(m)	5	<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185(m)	5	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)	5	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	25	<b>3</b>	4	4
Calcium	ppm	ASTM D5185(m)	200	<b>400</b>	754	719
Phosphorus	ppm	ASTM D5185(m)	300	<b>361</b>	351	355
Zinc	ppm	ASTM D5185(m)	370	<b>459</b>	436	465
Sulfur	ppm	ASTM D5185(m)	2500	<b>2494</b>	3443	3408
Visc @ 40°C	cSt	ASTM D7279(m)	46	<b>43.4</b>	43.2	42.8



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0276293 **Received** : 17 Apr 2024  
**Lab Number** : 02629671 **Tested** : 18 Apr 2024  
**Unique Number** : 5762803 **Diagnosed** : 18 Apr 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: PQ, PrtCount )

**ELG Canada**  
 4375 CORPORATE DRIVE  
 BURLINGTON, ON  
 CA L7L 5P7  
 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.

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