



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR A918 095565-1184**  
Component  
**Hydraulic System**  
Fluid  
**LIEBHERR HYDRAULIC HVI (55 GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0264449</b>	LH0268874	LH0220689
Sample Date		Client Info		<b>12 Jun 2024</b>	24 Jan 2024	23 Sep 2022
Machine Age	hrs	Client Info		<b>17064</b>	15862	9750
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>1000</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	Changed	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	>60	<b>27</b>	16	17
Chromium	ppm	ASTM D5185m	>40	<b>4</b>	3	2
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	1
Aluminum	ppm	ASTM D5185m	>5	<b>1</b>	<1	<1
Lead	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>15	<b>3</b>	3	6
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

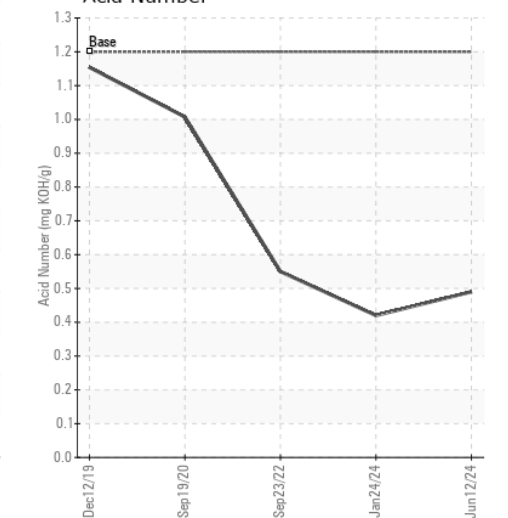
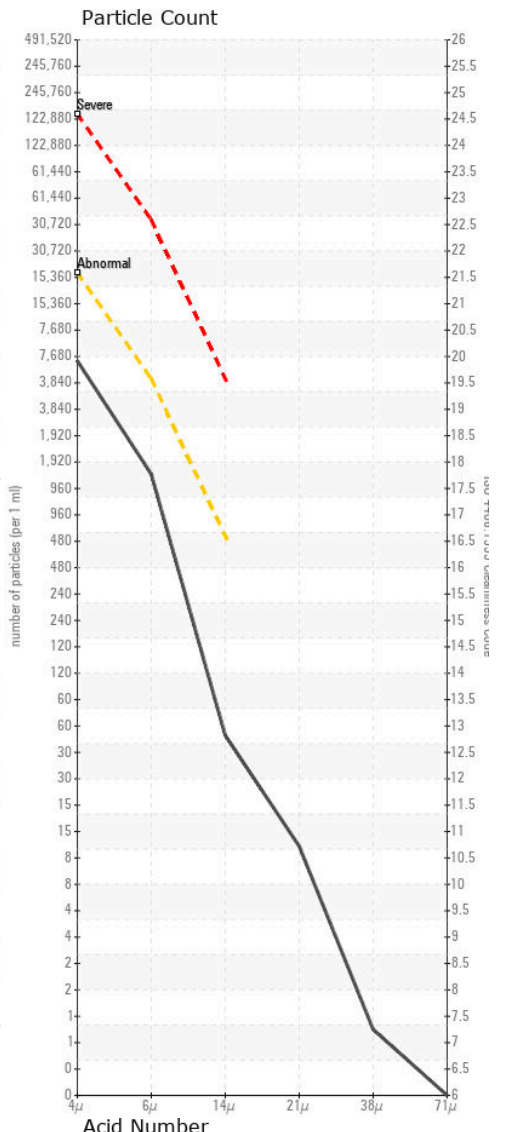
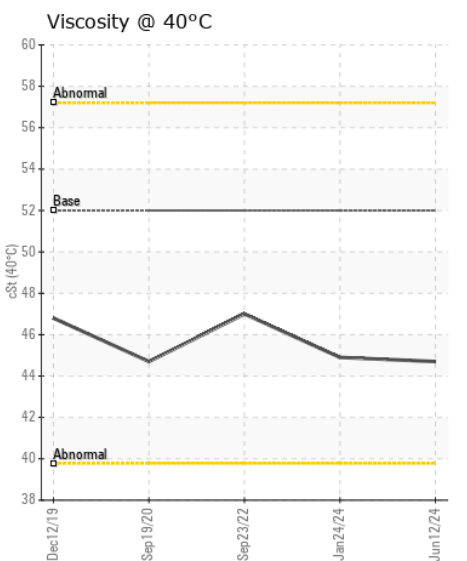
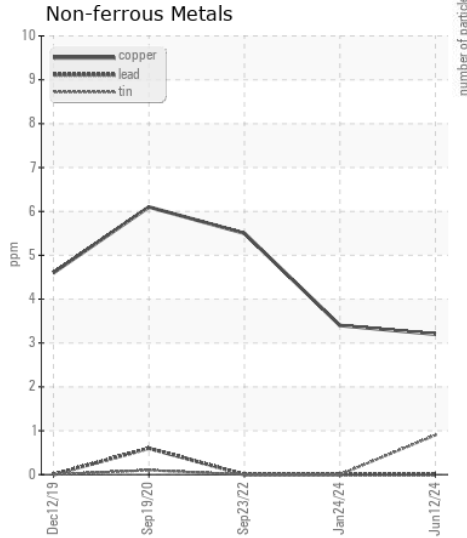
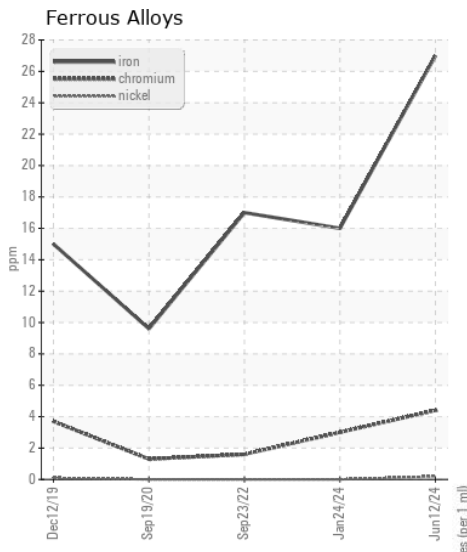
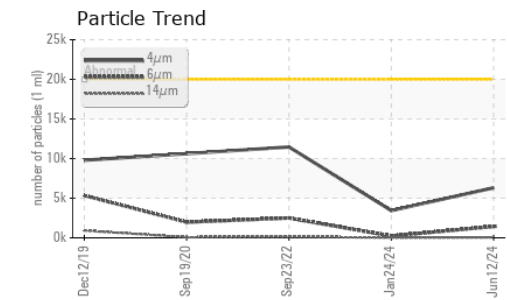
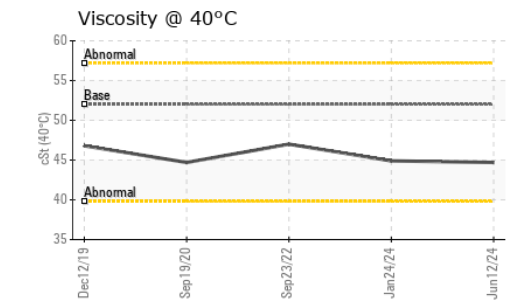
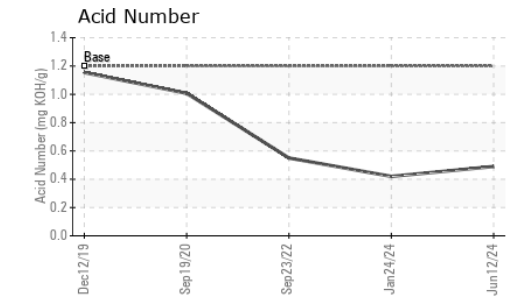
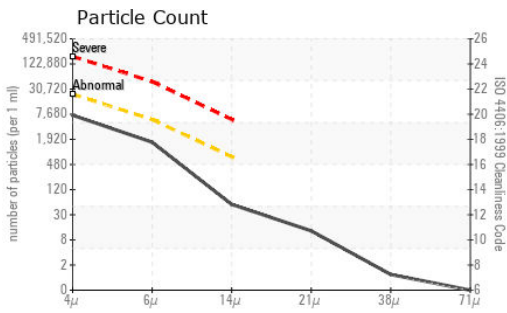
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>15	<b>4</b>	3	2
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>20000	<b>6315</b>	3435	11465
Particles >6µm		ASTM D7647	>5000	<b>1434</b>	230	2502
Particles >14µm		ASTM D7647	>640	<b>47</b>	16	132
Particles >21µm		ASTM D7647	>160	<b>11</b>	3	33
Particles >38µm		ASTM D7647	>40	<b>1</b>	0	2
Particles >71µm		ASTM D7647	>10	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>20/18/13</b>	19/15/11	21/19/14
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>	2	2
Boron	ppm	ASTM D5185m		<b>1</b>	<1	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>&lt;1</b>	<1	4
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	1
Magnesium	ppm	ASTM D5185m	7	<b>8</b>	3	6
Calcium	ppm	ASTM D5185m	1500	<b>177</b>	159	268
Phosphorus	ppm	ASTM D5185m	750	<b>409</b>	365	419
Zinc	ppm	ASTM D5185m	820	<b>530</b>	439	505
Sulfur	ppm	ASTM D5185m	4000	<b>1747</b>	1286	2048
Acid Number (AN)	mg KOH/g	ASTM D8045	1.2	<b>0.49</b>	0.42	0.55
Visc @ 40°C	cSt	ASTM D445	52	<b>44.7</b>	44.9	47.0



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LH0264449  
**Lab Number** : 06224995  
**Unique Number** : 11103192  
**Test Package** : CONST  
**Received** : 01 Jul 2024  
**Tested** : 02 Jul 2024  
**Diagnosed** : 03 Jul 2024 - Don Baldrige

**UNITED SCRAP**  
 1545 S CICERO AVE  
 BURR RIDGE, IL  
 US 60527  
 Contact: Service Manager

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)

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F: