



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR LH30 101514-1253**

Component  
**Hydraulic System**

Fluid  
**AW HYDRAULIC OIL ISO 46 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0272807</b>	LH0235751	LH0217620
Sample Date		Client Info		<b>10 Jan 2024</b>	25 Sep 2023	22 Mar 2023
Machine Age	hrs	Client Info		<b>12010</b>	11543	10552
Oil Age	hrs	Client Info		<b>0</b>	0	2000
Filter Age	hrs	Client Info		<b>0</b>	0	2000
Oil Changed		Client Info		<b>Not Chngd</b>	Changed	Not Chngd
Filter Changed		Client Info		<b>Not Chngd</b>	Not Chngd	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>19</b>	16	14
Chromium	ppm	ASTM D5185m	>5	<b>2</b>	2	2
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>2	<b>1</b>	0	<1
Lead	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>10	<b>5</b>	4	5
Tin	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
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

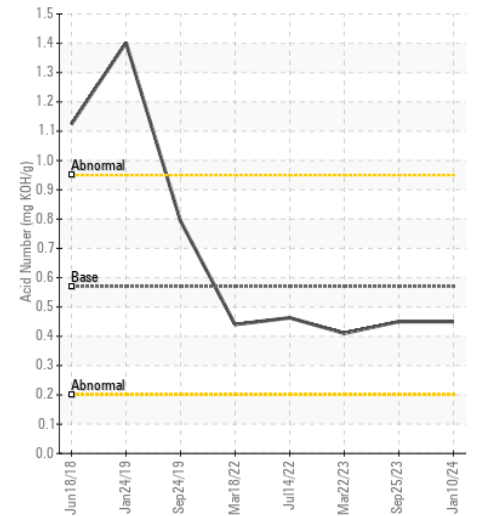
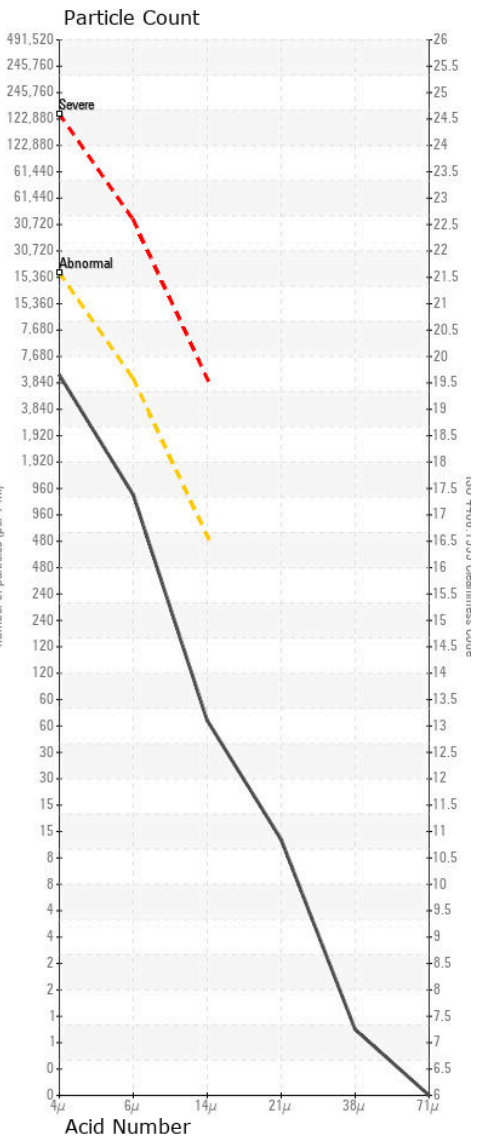
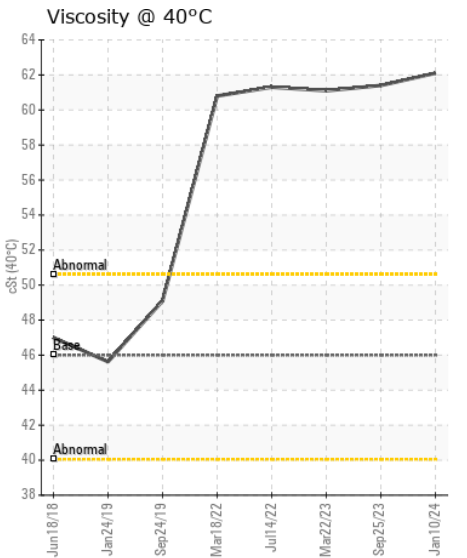
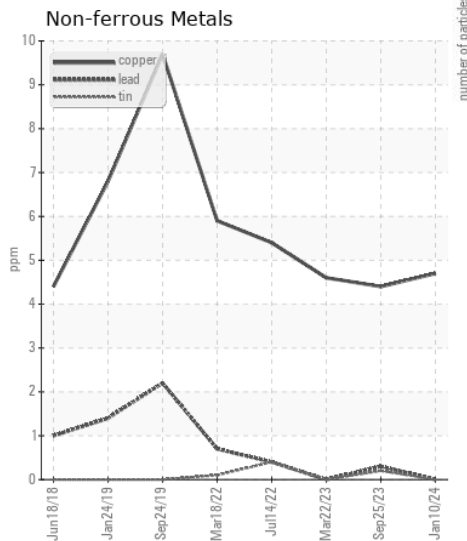
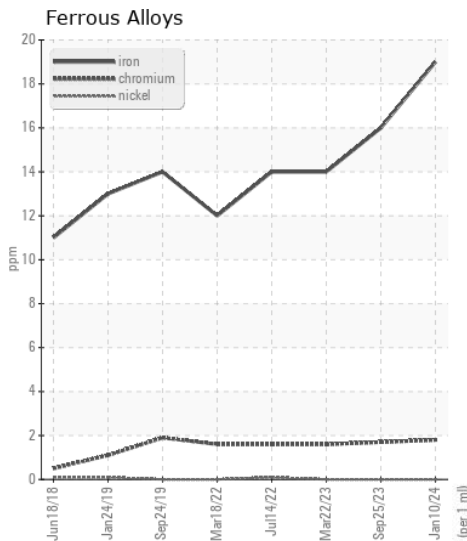
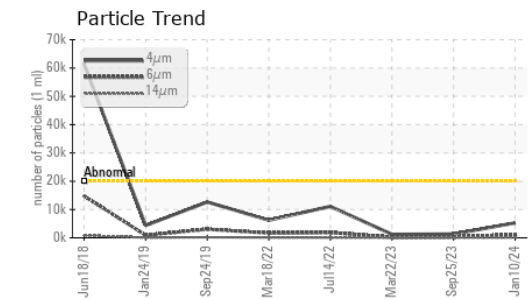
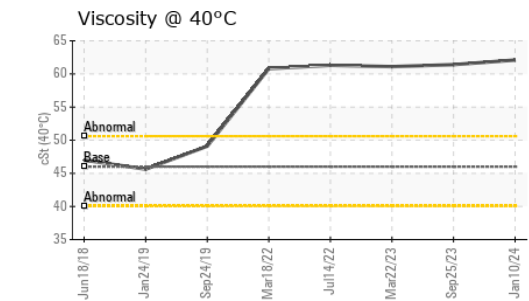
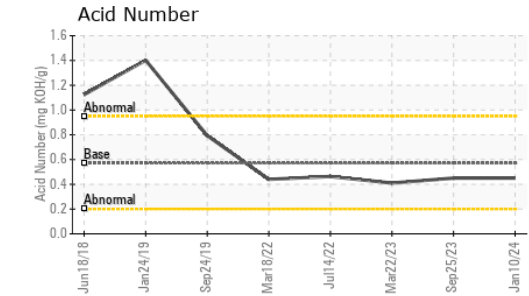
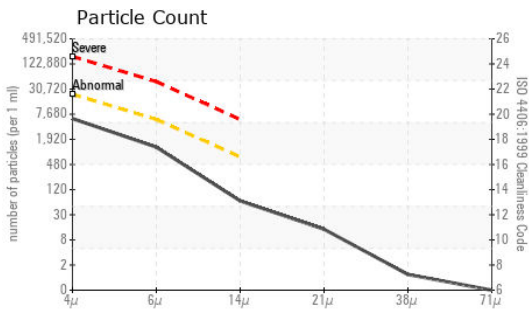
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>17	<b>2</b>	2	<1
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>20000	<b>5257</b>	1344	1231
Particles >6µm		ASTM D7647	>5000	<b>1094</b>	339	201
Particles >14µm		ASTM D7647	>640	<b>57</b>	18	15
Particles >21µm		ASTM D7647	>160	<b>12</b>	4	4
Particles >38µm		ASTM D7647	>40	<b>1</b>	0	0
Particles >71µm		ASTM D7647	>10	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>20/17/13</b>	18/16/11	17/15/11
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>2</b>	<1	2
Boron	ppm	ASTM D5185m	5	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	5	<b>0</b>	<1	<1
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	25	<b>42</b>	41	35
Calcium	ppm	ASTM D5185m	200	<b>87</b>	72	87
Phosphorus	ppm	ASTM D5185m	300	<b>284</b>	264	271
Zinc	ppm	ASTM D5185m	370	<b>341</b>	346	336
Sulfur	ppm	ASTM D5185m	2500	<b>827</b>	908	1019
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	<b>0.45</b>	0.45	0.41
Visc @ 40°C	cSt	ASTM D445	46	<b>62.1</b>	61.4	61.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LH0272807 **Received** : 17 Jan 2024  
**Lab Number** : 06062568 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10833950 **Diagnostician** : Jonathan Hester  
**Test Package** : CONST

**SPARTAN RECYCLING**  
 3071 HOWARD ST  
 SPARTANBURG, SC  
 US 29303  
 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: