



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH50 1216-131051

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		LH0272180	LH0213093	LH0213023
Sample Date		Client Info		18 Dec 2023	30 Aug 2023	25 Apr 2023
Machine Age	hrs	Client Info		10742	9786	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changed	Not Changed	Not Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	1	3	2
Chromium	ppm	ASTM D5185m	>5	<1	0	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>2	2	0	0
Lead	ppm	ASTM D5185m	>4	0	<1	0
Copper	ppm	ASTM D5185m	>10	<1	<1	<1
Tin	ppm	ASTM D5185m	>2	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

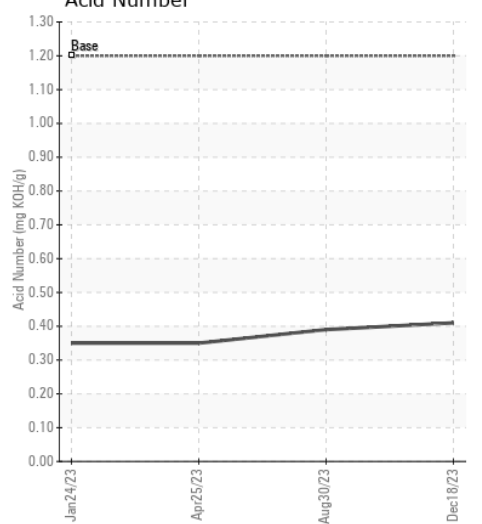
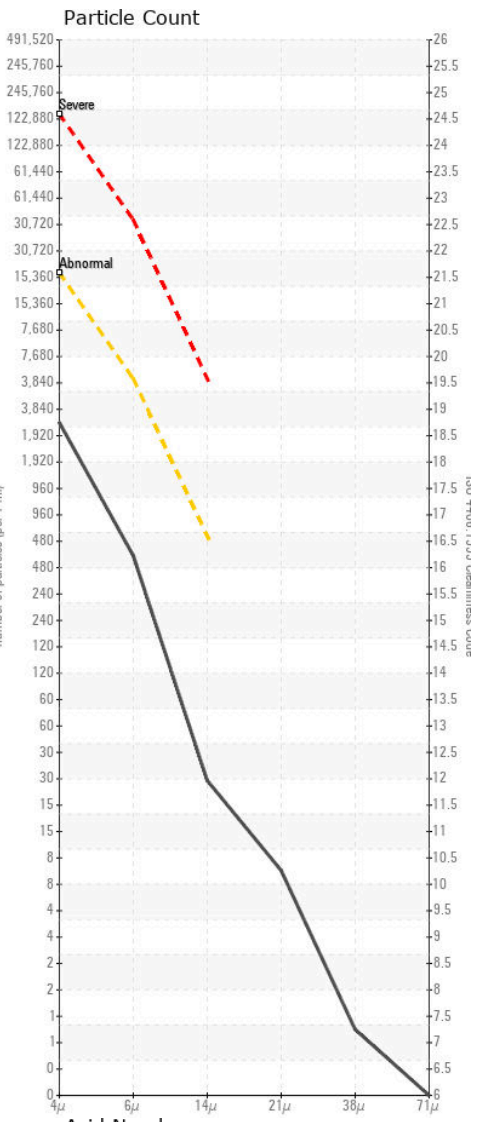
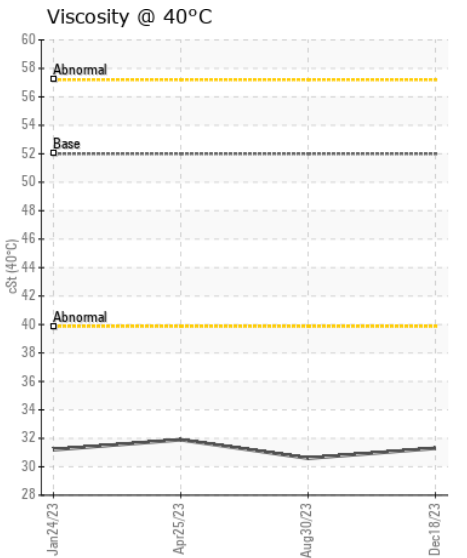
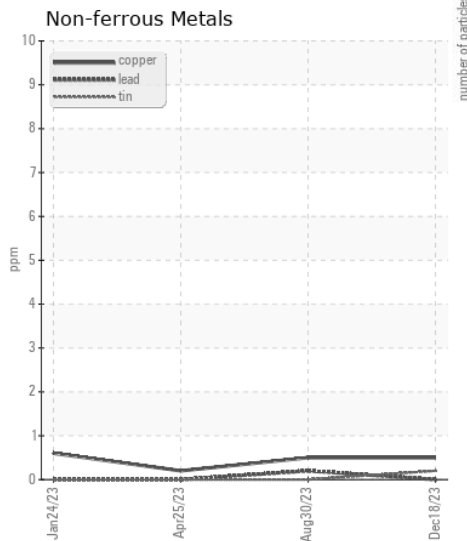
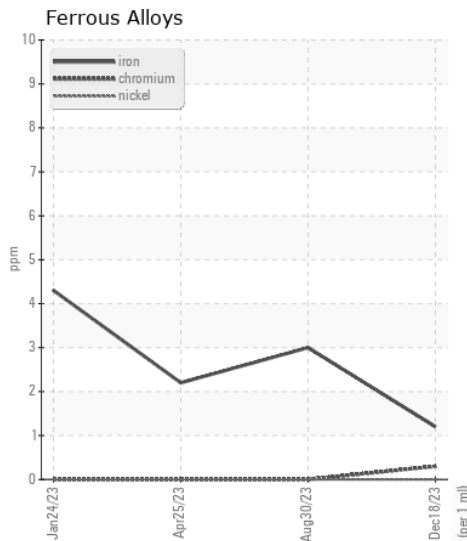
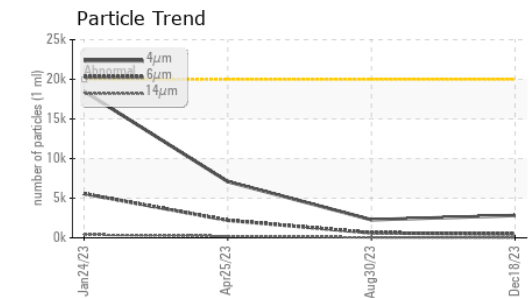
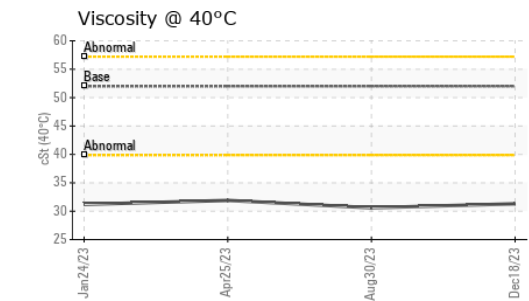
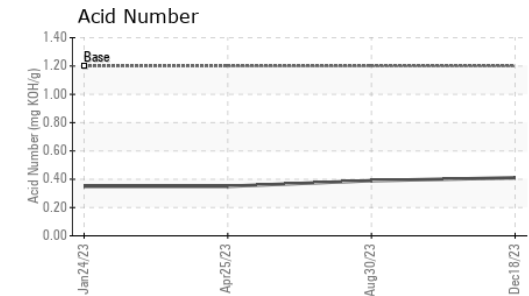
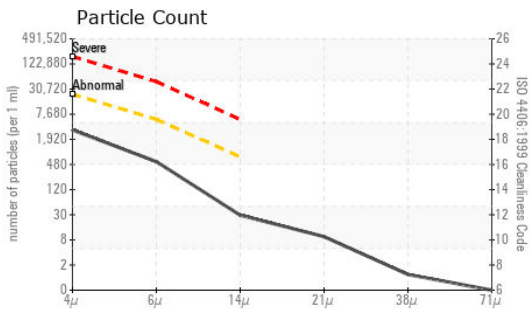
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>17	0	<1	<1
Potassium	ppm	ASTM D5185m	>20	<1	<1	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	2820	2275	7098
Particles >6µm		ASTM D7647	>5000	493	616	2207
Particles >14µm		ASTM D7647	>640	26	43	201
Particles >21µm		ASTM D7647	>160	8	10	46
Particles >38µm		ASTM D7647	>40	1	0	5
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	19/16/12	18/16/13	20/18/15
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	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		0	0	0
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	2	0
Molybdenum	ppm	ASTM D5185m		<1	<1	<1
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m	7	0	4	4
Calcium	ppm	ASTM D5185m	1500	57	61	65
Phosphorus	ppm	ASTM D5185m	750	341	327	327
Zinc	ppm	ASTM D5185m	820	434	434	449
Sulfur	ppm	ASTM D5185m	4000	872	980	879
Acid Number (AN)	mg KOH/g	ASTM D8045	1.2	0.41	0.39	0.35
Visc @ 40°C	cSt	ASTM D445	52	31.3	30.6	31.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0272180 **Received** : 16 Jan 2024
Lab Number : 06061901 **Diagnosed** : 17 Jan 2024
Unique Number : 10833283 **Diagnostician** : Don Baldrige
Test Package : CONST

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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