



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH110CP 134678-1228
Component
Hydraulic System
Fluid
{not provided} (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0244664	LH0243285	LH0244073
Sample Date		Client Info		10 Jan 2024	10 Jul 2023	16 Mar 2023
Machine Age	hrs	Client Info		4973	3458	2952
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Not Changd	N/A
Filter Changed		Client Info		N/A	Changed	N/A
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	5	7	6
Chromium	ppm	ASTM D5185m	>15	1	1	2
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>8	0	0	<1
Lead	ppm	ASTM D5185m	>5	0	0	0
Copper	ppm	ASTM D5185m	>15	1	2	3
Tin	ppm	ASTM D5185m	>5	0	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

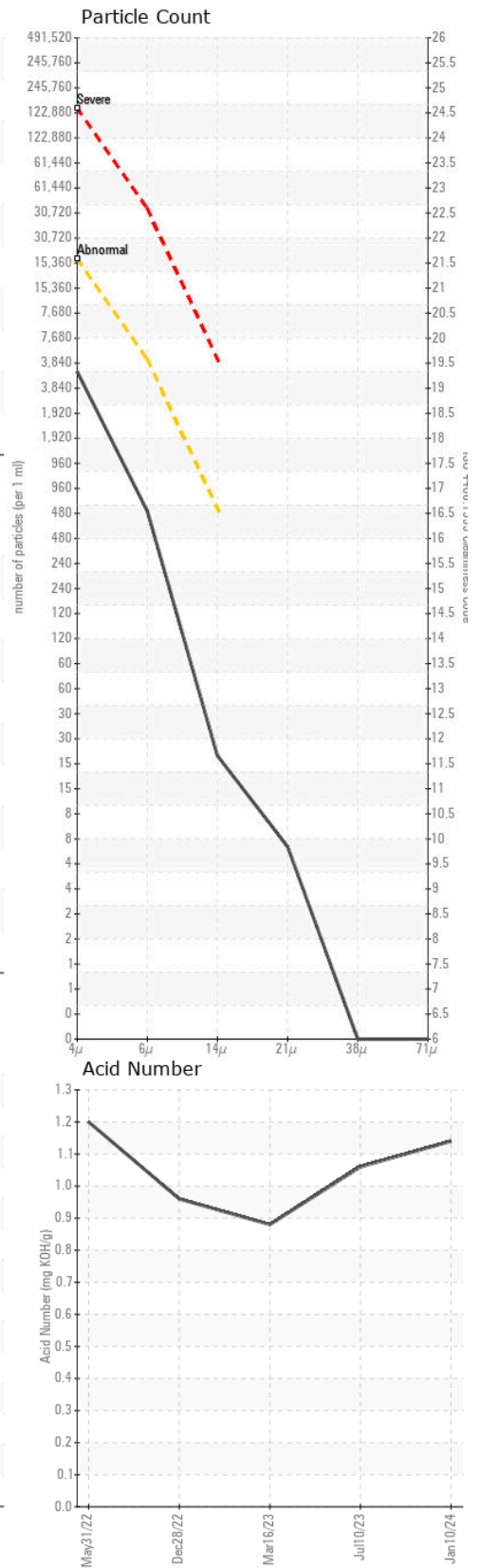
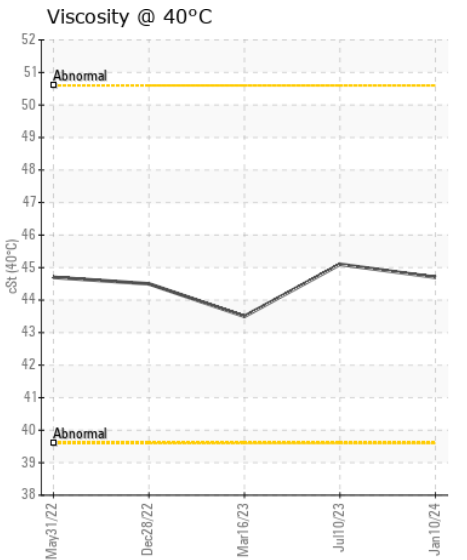
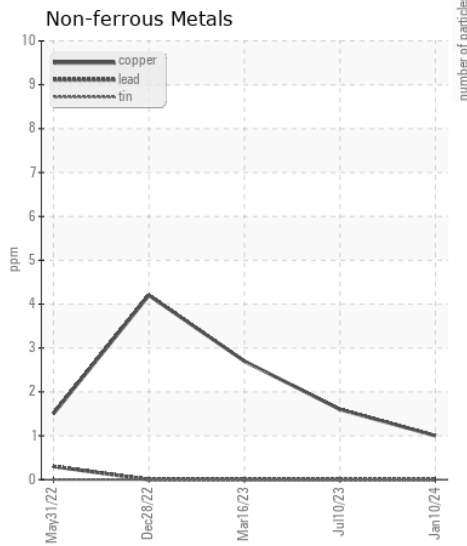
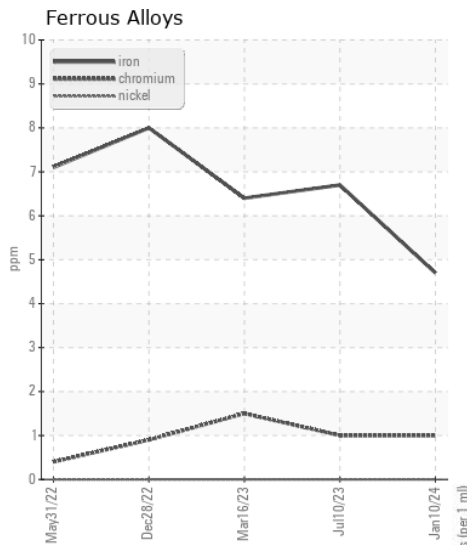
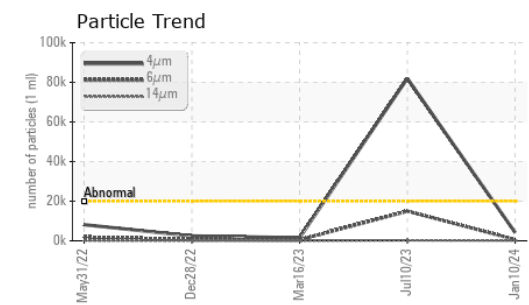
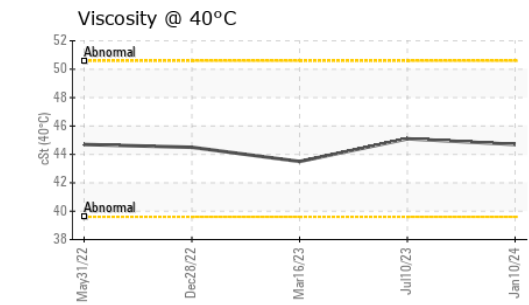
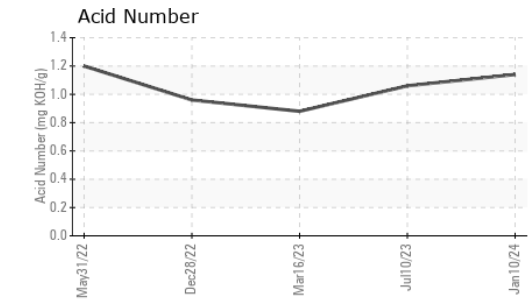
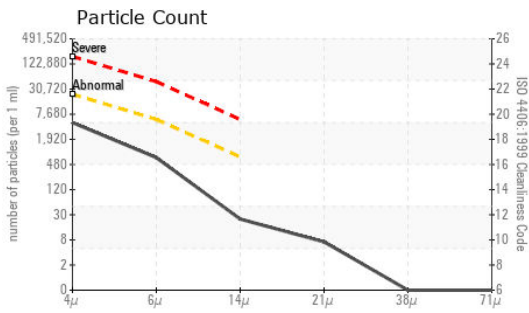
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>25	2	2	5
Potassium	ppm	ASTM D5185m	>20	0	<1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	4217	▲ 81980	1524
Particles >6µm		ASTM D7647	>5000	616	▲ 14988	500
Particles >14µm		ASTM D7647	>640	21	233	43
Particles >21µm		ASTM D7647	>160	6	36	11
Particles >38µm		ASTM D7647	>40	0	2	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	19/16/12	▲ 24/21/15	18/16/13
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	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		2	2	2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	0
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		0	6	3
Calcium	ppm	ASTM D5185m		1282	1416	1254
Phosphorus	ppm	ASTM D5185m		587	617	543
Zinc	ppm	ASTM D5185m		653	658	590
Sulfur	ppm	ASTM D5185m		4017	5256	5356
Acid Number (AN)	mg KOH/g	ASTM D8045		1.14	1.06	0.88
Visc @ 40°C	cSt	ASTM D445		44.7	45.1	43.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0244664 **Received** : 16 Jan 2024
Lab Number : 06060983 **Diagnosed** : 17 Jan 2024
Unique Number : 10832365 **Diagnostician** : Jonathan Hester
Test Package : CONST

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 US 45050
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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)