



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR L580 1414-56018
Component
Hydraulic System
Fluid
FIRE-RESISTANT FLUID ISO 46 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH06224999	LH06027141	LH05835903
Sample Date		Client Info		30 Jun 2024	05 Dec 2023	01 May 2023
Machine Age	hrs	Client Info		17000	0	13020
Oil Age	hrs	Client Info		0	15017	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changed	Not Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	24	20	16
Chromium	ppm	ASTM D5185m	>10	3	4	2
Nickel	ppm	ASTM D5185m	>10	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	1	2	0
Lead	ppm	ASTM D5185m	>10	2	2	1
Copper	ppm	ASTM D5185m	>75	1	1	<1
Tin	ppm	ASTM D5185m	>10	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

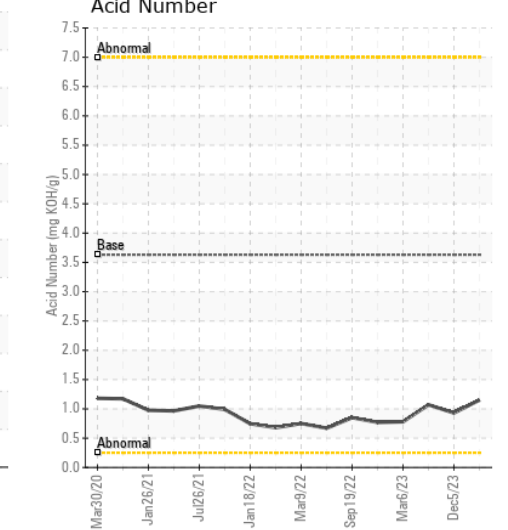
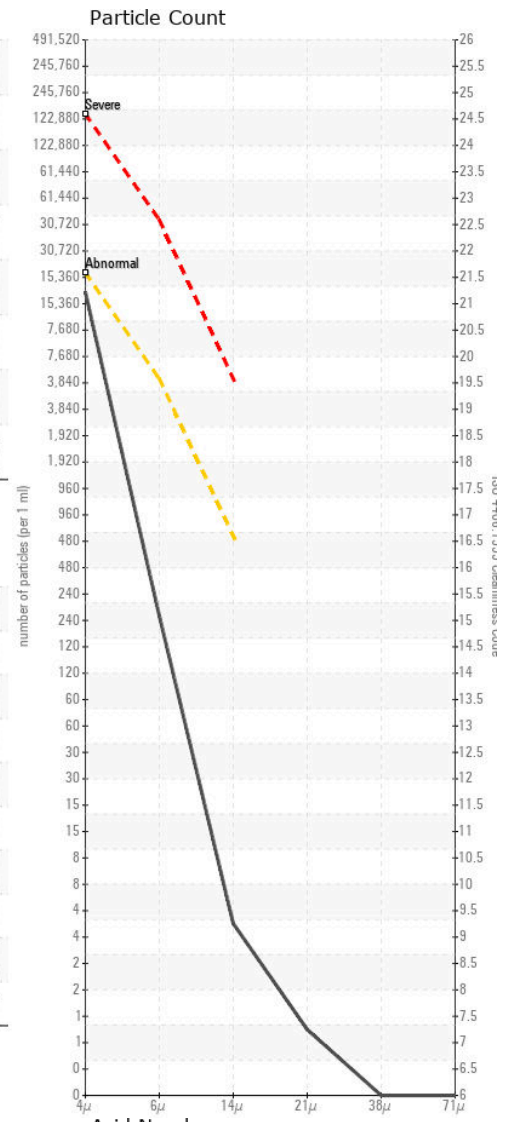
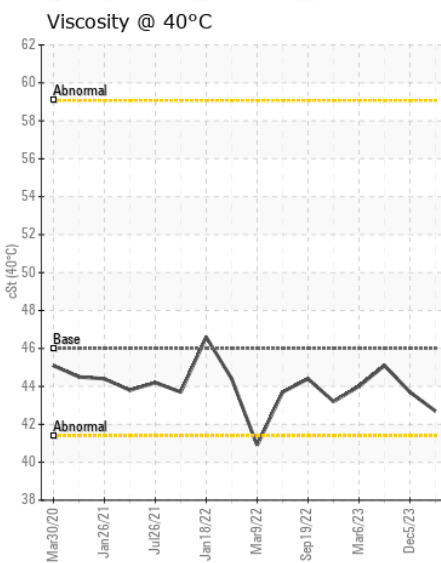
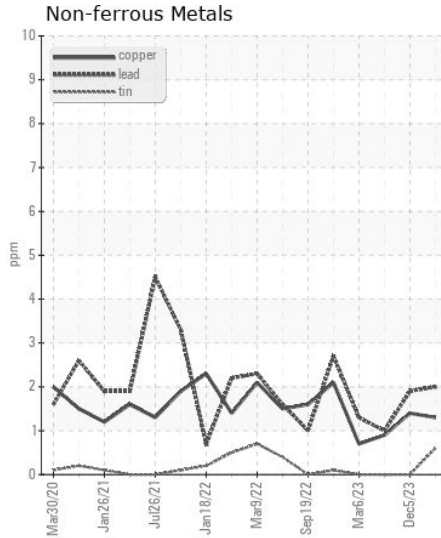
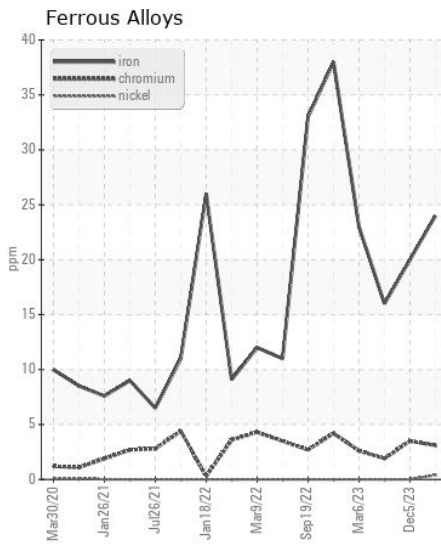
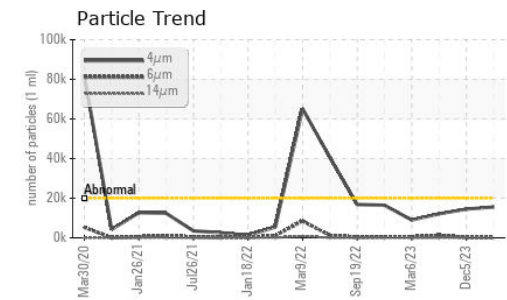
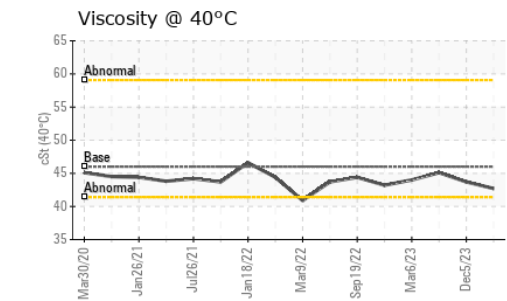
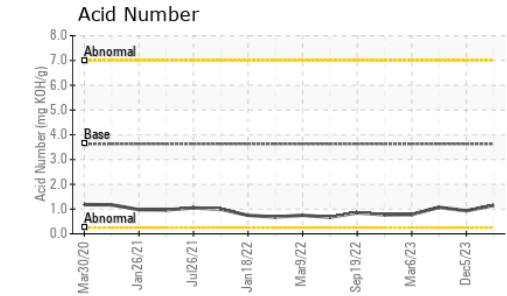
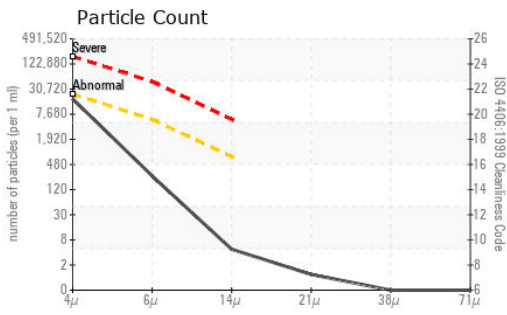
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	2	1	2
Potassium	ppm	ASTM D5185m	>20	2	1	1
Water	%	ASTM D6304	>55	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	15575	14484	12123
Particles >6µm		ASTM D7647	>5000	225	149	1275
Particles >14µm		ASTM D7647	>640	4	7	71
Particles >21µm		ASTM D7647	>160	1	2	15
Particles >38µm		ASTM D7647	>40	0	0	2
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	21/15/9	21/14/10	21/17/13
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	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	>55	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		1	0	0
Boron	ppm	ASTM D5185m	5	<1	0	0
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	5	0	<1	<1
Manganese	ppm	ASTM D5185m		1	0	<1
Magnesium	ppm	ASTM D5185m	5	7	4	4
Calcium	ppm	ASTM D5185m	50	1448	1330	1370
Phosphorus	ppm	ASTM D5185m	175	662	572	596
Zinc	ppm	ASTM D5185m	62	747	663	696
Sulfur	ppm	ASTM D5185m	500	5419	4139	4574
Acid Number (AN)	mg KOH/g	ASTM D8045	3.63	1.15	0.93	1.07
Visc @ 40°C	cSt	ASTM D445	46	42.7	43.7	45.1



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH06224999 **Received** : 01 Jul 2024
Lab Number : 06224999 **Tested** : 03 Jul 2024
Unique Number : 11103196 **Diagnosed** : 03 Jul 2024 - Don Baldridge
Test Package : MOB 2 (Additional Tests: KF, pH, ReserveAlk)

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 US 49876
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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)