



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION



Machine Id
LIEBHERR LH30M 1200-79283
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 68 (114 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0272381	LH0267329	LH0203824
Sample Date		Client Info		10 Jun 2024	14 Mar 2024	22 Dec 2022
Machine Age	hrs	Client Info		21047	20566	17772
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		Not Changed	Changed	Changed
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	28	21	14
Chromium	ppm	ASTM D5185m	>5	5	4	2
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>2	0	0	0
Lead	ppm	ASTM D5185m	>4	0	2	0
Copper	ppm	ASTM D5185m	>10	4	4	5
Tin	ppm	ASTM D5185m	>2	0	3	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

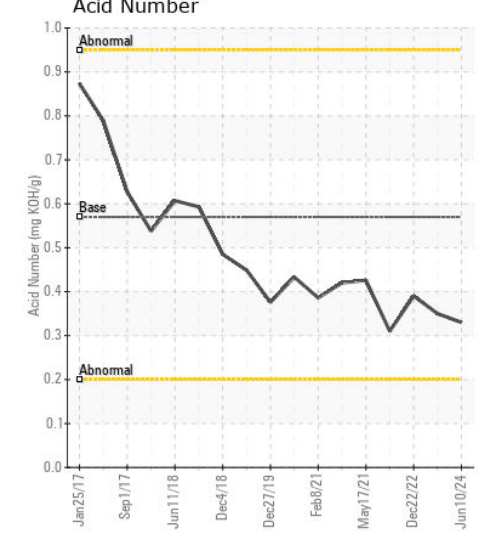
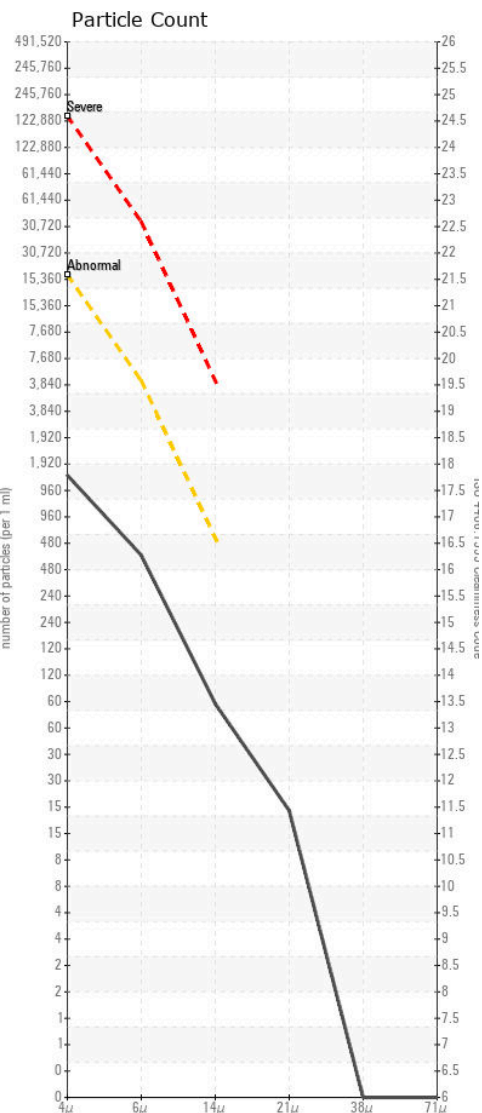
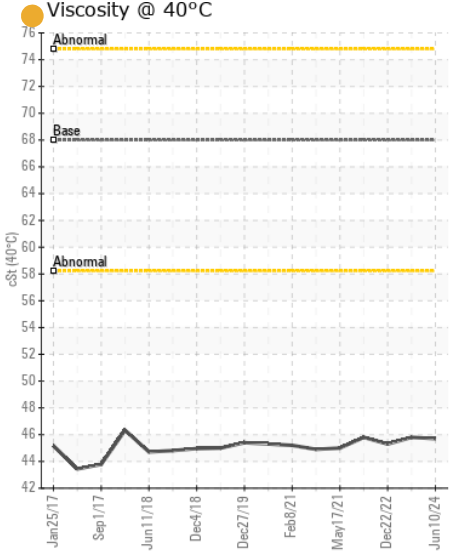
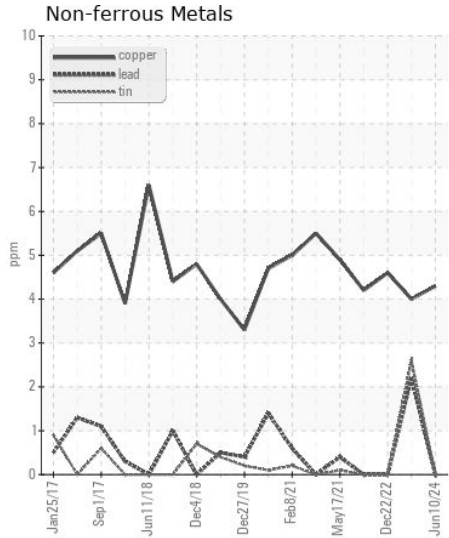
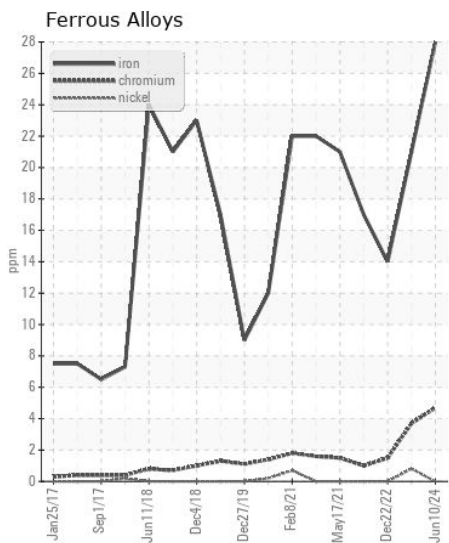
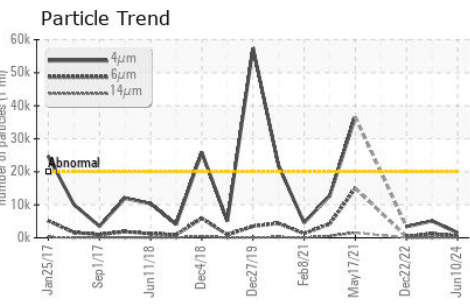
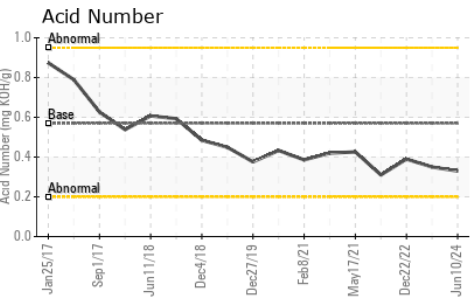
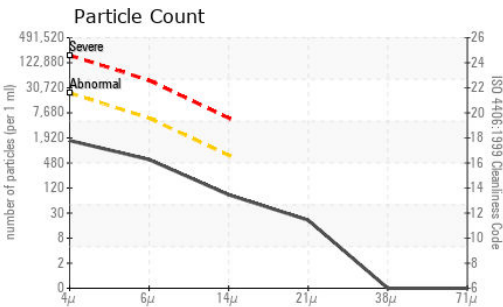
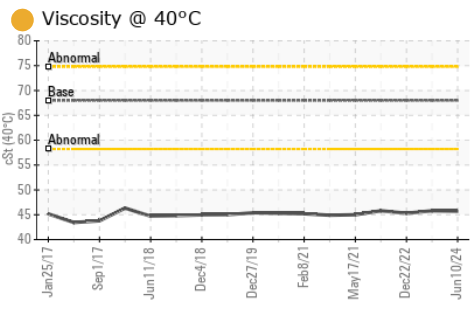
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>17	<1	<1	<1
Potassium	ppm	ASTM D5185m	>20	0	<1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	1451	5100	3398
Particles >6µm		ASTM D7647	>5000	509	1251	369
Particles >14µm		ASTM D7647	>640	73	70	17
Particles >21µm		ASTM D7647	>160	18	17	3
Particles >38µm		ASTM D7647	>40	0	1	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	18/16/13	20/17/13	19/16/11
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	>0.1	NEG	NEG	NEG

FLUID CONDITION

Viscosity of sample indicates oil is within ISO 46 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m		2	2	<1
Boron	ppm	ASTM D5185m	5	0	0	0
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	5	0	<1	0
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m	25	<1	<1	0
Calcium	ppm	ASTM D5185m	200	54	37	38
Phosphorus	ppm	ASTM D5185m	300	330	295	326
Zinc	ppm	ASTM D5185m	370	412	377	392
Sulfur	ppm	ASTM D5185m	2500	939	855	923
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.33	0.35	0.39
Visc @ 40°C	cSt	ASTM D445	68	45.7	45.8	45.3



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0272381 **Received** : 17 Jun 2024
Lab Number : 06212294 **Tested** : 19 Jun 2024
Unique Number : 11085158 **Diagnosed** : 19 Jun 2024 - Don Baldrige
Test Package : CONST

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Certificate L2367
 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)