



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH22M 142190-1250
Component
Hydraulic System
Fluid
{not provided} (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0291305	LH0285130	LH0278909
Sample Date		Client Info		02 May 2024	29 Jan 2024	20 Nov 2023
Machine Age	hrs	Client Info		2979	2241	1772
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>50	6	6	0
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	0
Nickel	ppm	ASTM D5185(m)	>2	0	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	<1
Aluminum	ppm	ASTM D5185(m)	>2	<1	<1	0
Lead	ppm	ASTM D5185(m)	>4	0	<1	0
Copper	ppm	ASTM D5185(m)	>10	3	2	<1
Tin	ppm	ASTM D5185(m)	>2	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

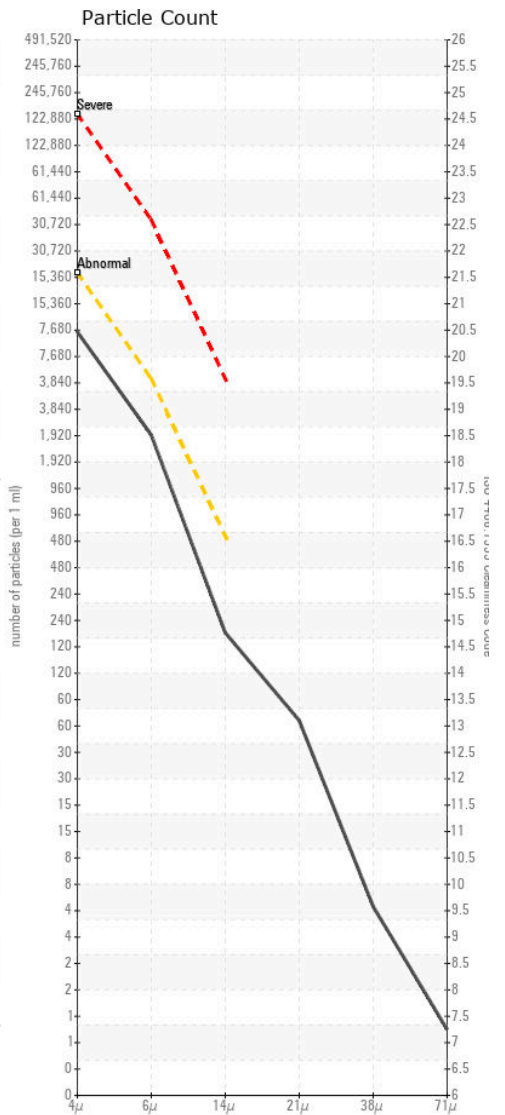
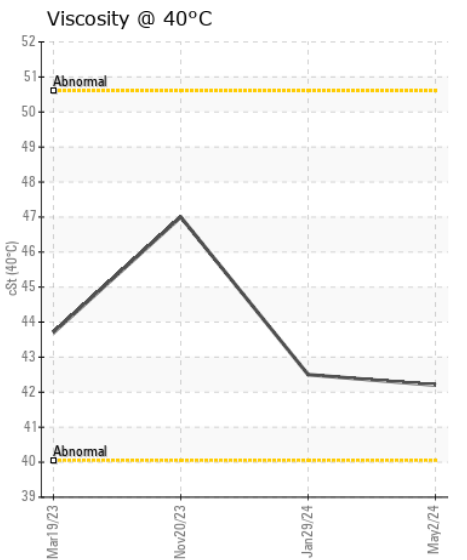
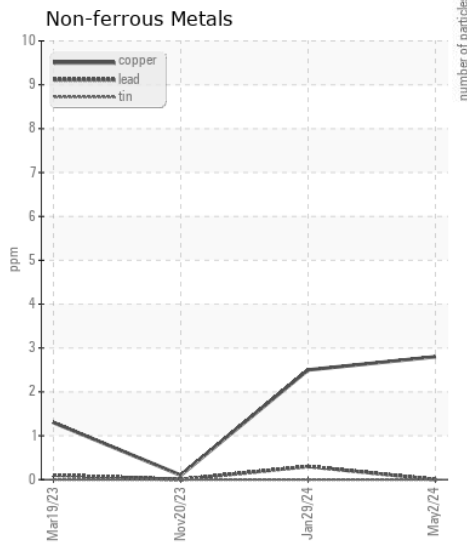
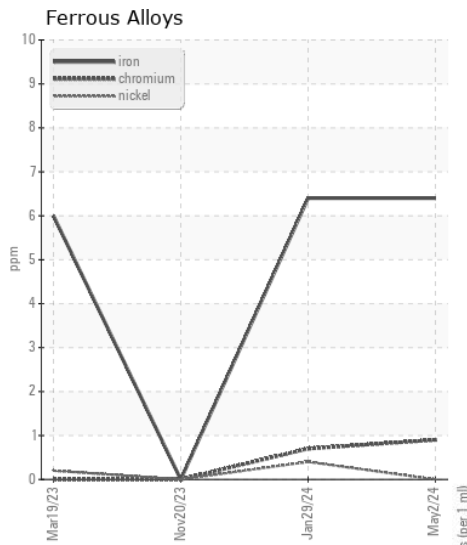
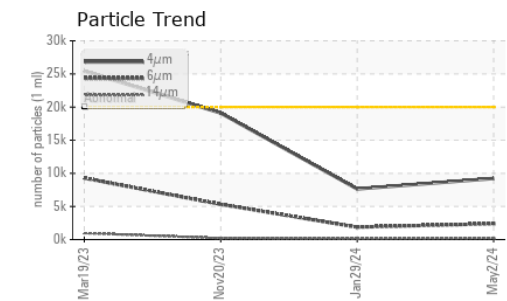
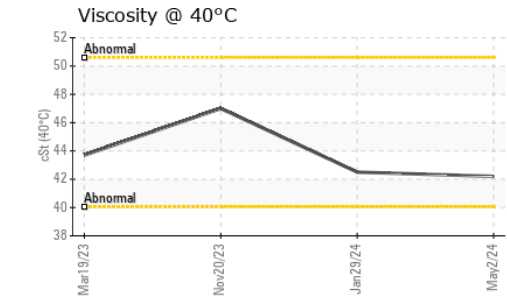
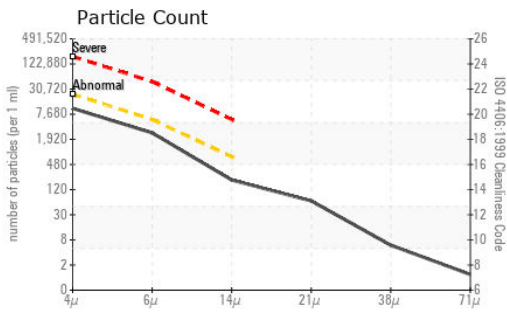
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>17	2	3	<1
Potassium	ppm	ASTM D5185(m)	>20	<1	1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	9226	7644	19097
Particles >6µm		ASTM D7647	>5000	2392	1871	5310
Particles >14µm		ASTM D7647	>640	180	120	199
Particles >21µm		ASTM D7647	>160	57	32	30
Particles >38µm		ASTM D7647	>40	5	3	2
Particles >71µm		ASTM D7647	>10	1	1	1
Oil Cleanliness		ISO 4406 (c)	>21/19/16	20/18/15	20/18/14	21/20/15
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	VLITE
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 condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		2	2	<1
Boron	ppm	ASTM D5185(m)		<1	<1	<1
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		4	4	<1
Calcium	ppm	ASTM D5185(m)		1059	1104	100
Phosphorus	ppm	ASTM D5185(m)		610	600	642
Zinc	ppm	ASTM D5185(m)		723	710	841
Sulfur	ppm	ASTM D5185(m)		2934	3265	1483
Visc @ 40°C	cSt	ASTM D7279(m)		42.2	42.5	47.0



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0291305 **Received** : 03 May 2024
Lab Number : 02633178 **Tested** : 06 May 2024
Unique Number : 5774331 **Diagnosed** : 06 May 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: PrtCount)

Combined Metals Industries
 8470 Keele Street
 Concord, ON
 CA L4K 2S1
 Contact: Service Manager

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

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F: