



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL



Machine Id
LIEBHERR LH40M 156305-1215
Component
Hydraulic System
Fluid
{not provided} (--- GAL)

RECOMMENDATION

We advise that you check for the source of water entry. We recommend that you change the oil. The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. 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		LH0278470	---	---
Sample Date		Client Info		20 Feb 2024	---	---
Machine Age	hrs	Client Info		536	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Not Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>60	7	---	---
Chromium	ppm	ASTM D5185(m)	>40	0	---	---
Nickel	ppm	ASTM D5185(m)	>10	0	---	---
Titanium	ppm	ASTM D5185(m)		0	---	---
Silver	ppm	ASTM D5185(m)		0	---	---
Aluminum	ppm	ASTM D5185(m)	>5	<1	---	---
Lead	ppm	ASTM D5185(m)	>5	<1	---	---
Copper	ppm	ASTM D5185(m)	>15	2	---	---
Tin	ppm	ASTM D5185(m)	>5	0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

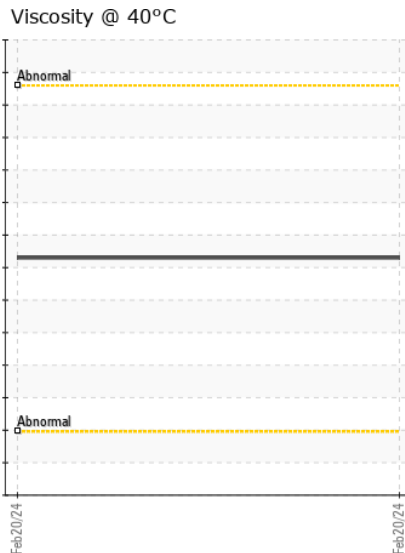
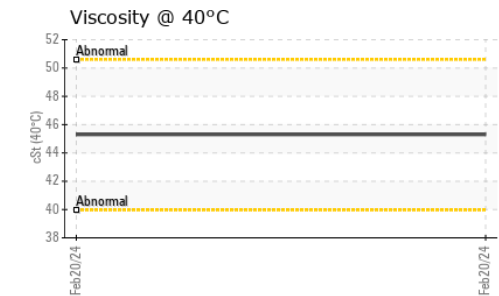
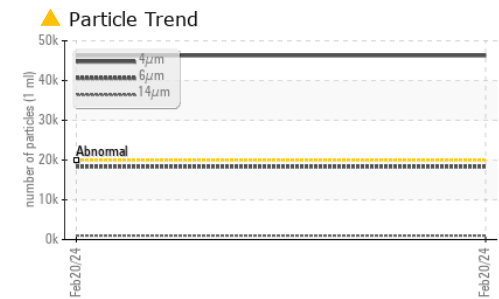
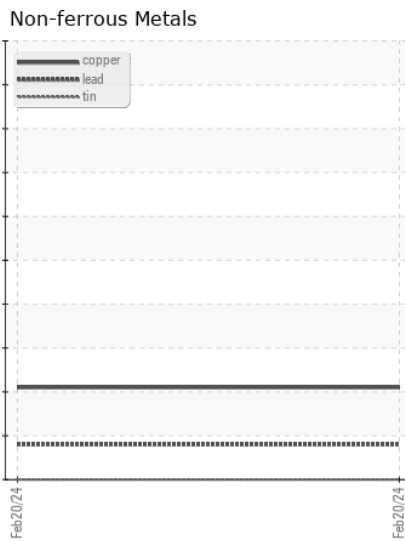
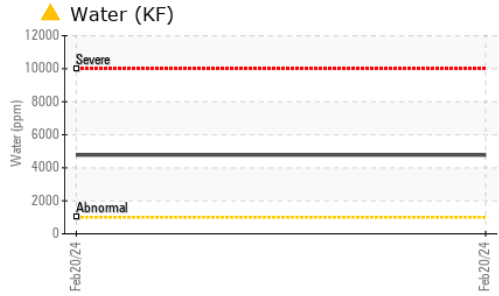
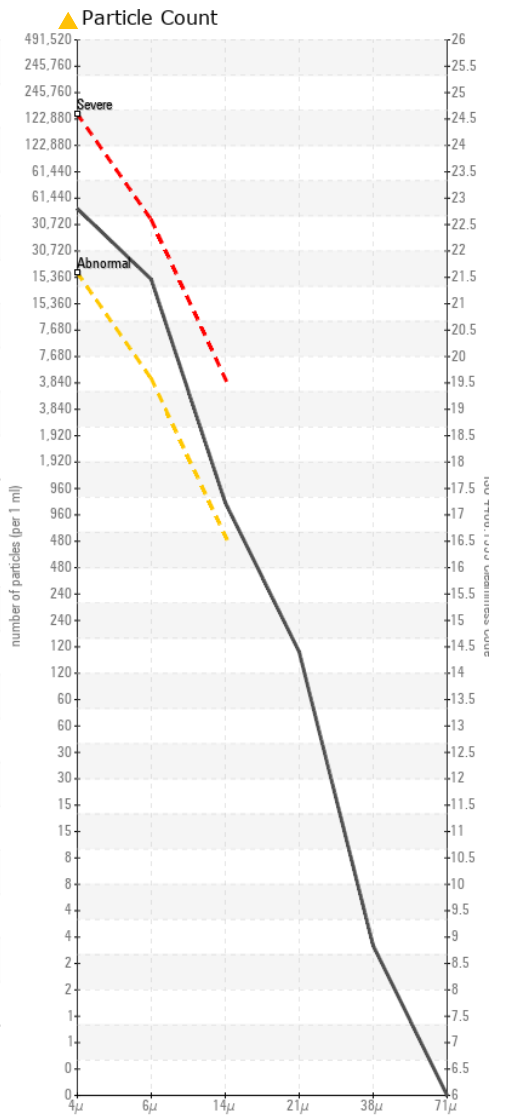
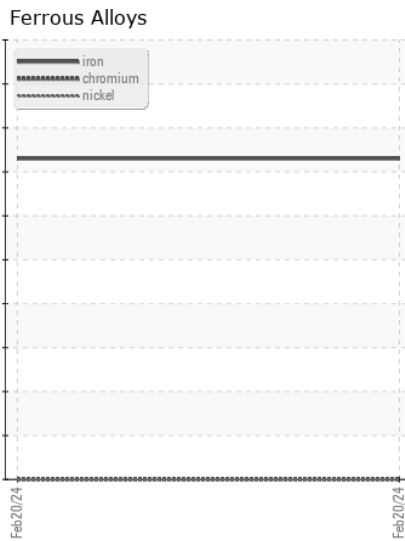
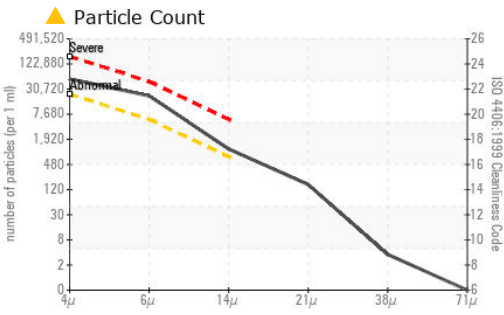
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. There is a moderate concentration of water present in the oil.

Silicon	ppm	ASTM D5185(m)	>15	2	---	---
Potassium	ppm	ASTM D5185(m)	>20	1	---	---
Water	%	ASTM D6304*	>0.1	▲ 0.476	---	---
ppm Water	ppm	ASTM D6304*	>1000	▲ 4768	---	---
Particles >4µm		ASTM D7647	>20000	▲ 46278	---	---
Particles >6µm		ASTM D7647	>5000	▲ 18346	---	---
Particles >14µm		ASTM D7647	>640	▲ 991	---	---
Particles >21µm		ASTM D7647	>160	140	---	---
Particles >38µm		ASTM D7647	>40	3	---	---
Particles >71µm		ASTM D7647	>10	0	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 23/21/17	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	▲ HAZY	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>0.1	▲ .5%	---	---

FLUID CONDITION

The white residue present in the sample is oil additive precipitate. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185(m)		<1	---	---
Boron	ppm	ASTM D5185(m)		<1	---	---
Barium	ppm	ASTM D5185(m)		0	---	---
Molybdenum	ppm	ASTM D5185(m)		0	---	---
Manganese	ppm	ASTM D5185(m)		0	---	---
Magnesium	ppm	ASTM D5185(m)		7	---	---
Calcium	ppm	ASTM D5185(m)		1243	---	---
Phosphorus	ppm	ASTM D5185(m)		655	---	---
Zinc	ppm	ASTM D5185(m)		700	---	---
Sulfur	ppm	ASTM D5185(m)		3978	---	---
Visc @ 40°C	cSt	ASTM D7279(m)		45.3	---	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0278470 **Received** : 22 Feb 2024
Lab Number : 02617429 **Tested** : 23 Feb 2024
Unique Number : 5734539 **Diagnosed** : 23 Feb 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: Bottom, KF, PrtCount)

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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