



LIEBHERR

OIL ANALYSIS REPORT



Machine Id
LIEBHERR LH40M 156305-1215
Component
Hydraulic System
Fluid
NOT GIVEN (--- GAL)

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

RECOMMENDATION

Check seals and/or filters for points of contaminant entry. We advise that you check for the source of water entry. The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH	LH0278470	---
Sample Date		Client Info		09 May 2024	20 Feb 2024	---
Machine Age	hrs	Client Info		1010	536	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Not Chngd	Not Chngd	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>60	12	7	---
Chromium	ppm	ASTM D5185(m)	>40	0	0	---
Nickel	ppm	ASTM D5185(m)	>10	0	0	---
Titanium	ppm	ASTM D5185(m)		0	0	---
Silver	ppm	ASTM D5185(m)		0	0	---
Aluminum	ppm	ASTM D5185(m)	>5	<1	<1	---
Lead	ppm	ASTM D5185(m)	>5	<1	<1	---
Copper	ppm	ASTM D5185(m)	>15	6	2	---
Tin	ppm	ASTM D5185(m)	>5	0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

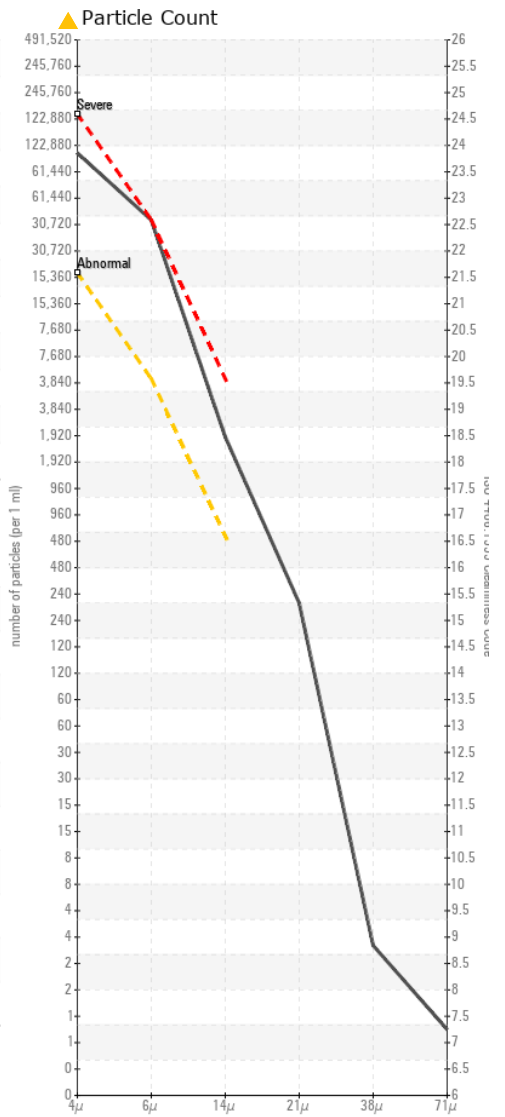
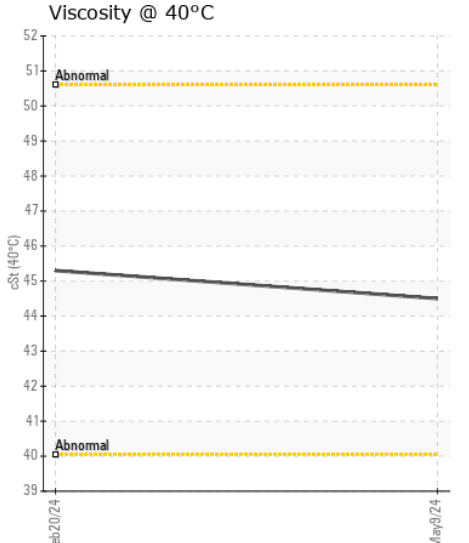
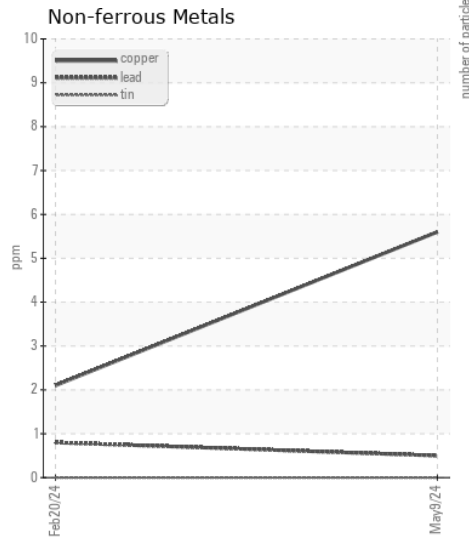
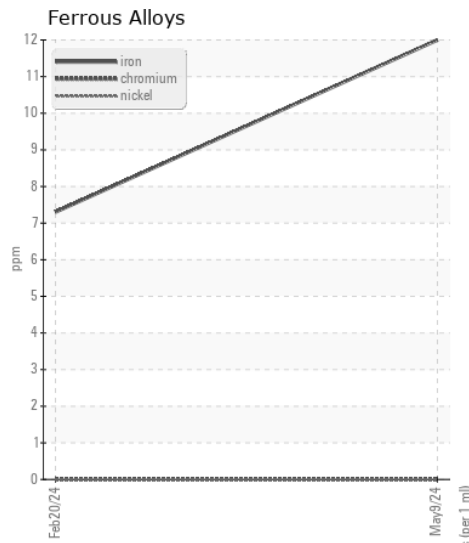
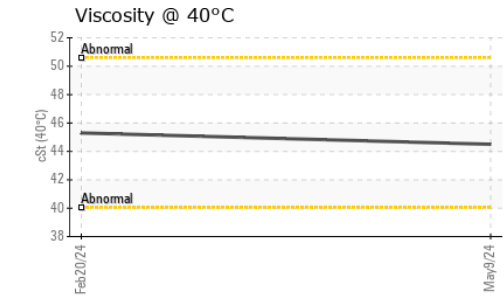
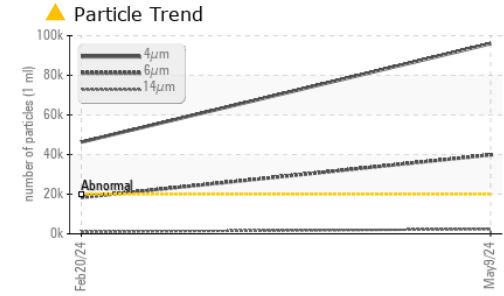
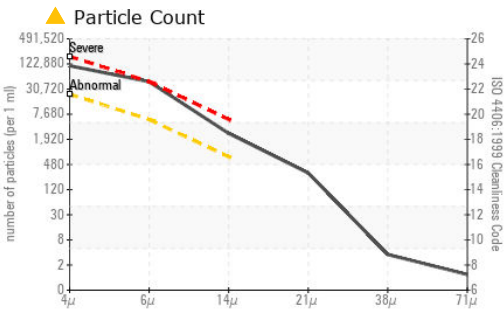
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. Free water present.

Silicon	ppm	ASTM D5185(m)	>15	1	2	---
Potassium	ppm	ASTM D5185(m)	>20	2	1	---
Water		WC Method	>0.1	NEG	NEG	---
Particles >4µm		ASTM D7647	>20000	▲ 95986	▲ 46278	---
Particles >6µm		ASTM D7647	>5000	▲ 39840	▲ 18346	---
Particles >14µm		ASTM D7647	>640	▲ 2336	● 991	---
Particles >21µm		ASTM D7647	>160	● 265	140	---
Particles >38µm		ASTM D7647	>40	3	3	---
Particles >71µm		ASTM D7647	>10	1	0	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 24/22/18	▲ 23/21/17	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	▲ WGOIL	▲ HAZY	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.1	.5%	▲ .5%	---

FLUID CONDITION

The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185(m)		1	<1	---
Boron	ppm	ASTM D5185(m)		<1	<1	---
Barium	ppm	ASTM D5185(m)		0	0	---
Molybdenum	ppm	ASTM D5185(m)		0	0	---
Manganese	ppm	ASTM D5185(m)		0	0	---
Magnesium	ppm	ASTM D5185(m)		8	7	---
Calcium	ppm	ASTM D5185(m)		1114	1243	---
Phosphorus	ppm	ASTM D5185(m)		597	655	---
Zinc	ppm	ASTM D5185(m)		685	700	---
Sulfur	ppm	ASTM D5185(m)		3488	3978	---
Visc @ 40°C	cSt	ASTM D7279(m)		44.5	45.3	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH **Received** : 14 May 2024
Lab Number : **02635318** **Tested** : 15 May 2024
Unique Number : 5776471 **Diagnosed** : 15 May 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: 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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