



LIEBHERR

OIL ANALYSIS REPORT



Area

(361220)

Machine Id

LIEBHERR LH50M 134706-1216

Component

Hydraulic System

Fluid

NOT GIVEN (--- GAL)

WEAR

NORMAL

CONTAMINATION

ABNORMAL

FLUID CONDITION

NORMAL

RECOMMENDATION

We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH	LH	LH
Sample Date		Client Info		07 May 2024	15 Feb 2024	12 Sep 2023
Machine Age	hrs	Client Info		0	5100	4000
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Not Chngd	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>50	30	30	34
Chromium	ppm	ASTM D5185(m)	>5	2	2	2
Nickel	ppm	ASTM D5185(m)	>2	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	<1
Aluminum	ppm	ASTM D5185(m)	>2	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>4	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>10	4	3	3
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

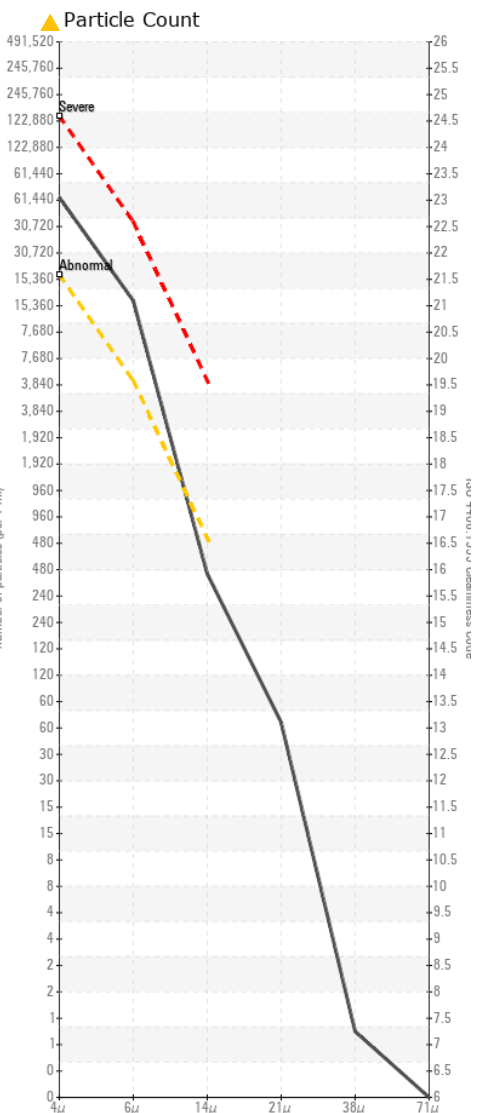
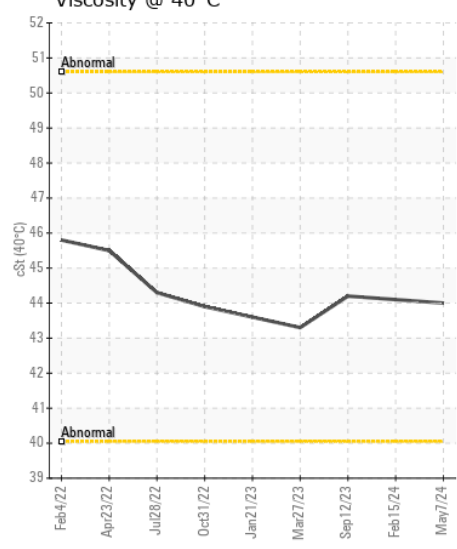
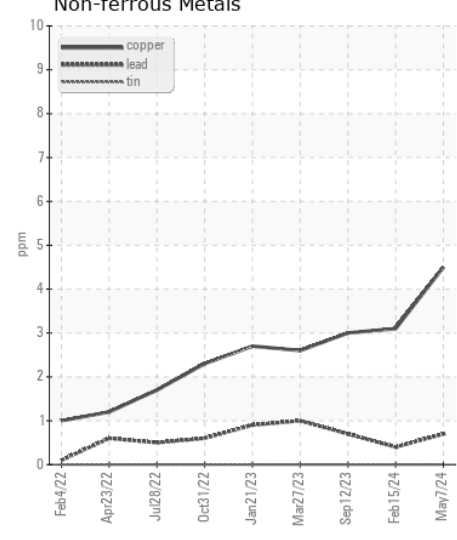
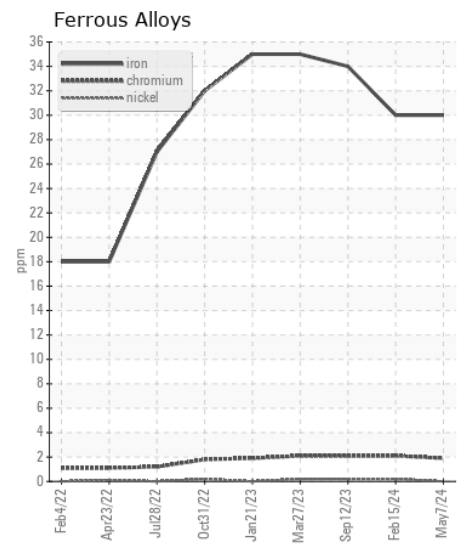
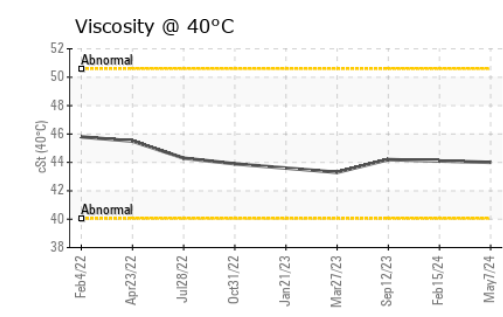
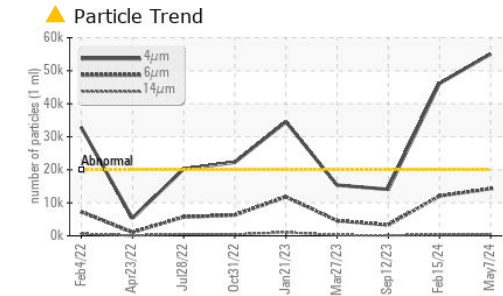
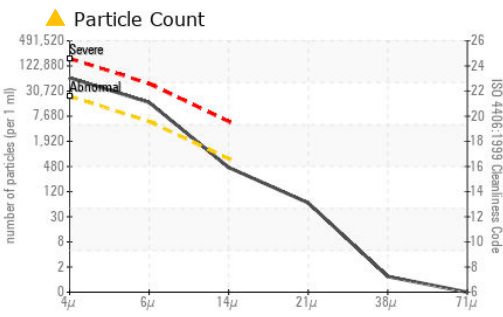
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. Free water present.

Silicon	ppm	ASTM D5185(m)	>17	<1	2	2
Potassium	ppm	ASTM D5185(m)	>20	<1	1	1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	▲ 55078	▲ 46130	14043
Particles >6µm		ASTM D7647	>5000	▲ 14257	▲ 12037	3274
Particles >14µm		ASTM D7647	>640	400	332	98
Particles >21µm		ASTM D7647	>160	57	58	18
Particles >38µm		ASTM D7647	>40	1	6	1
Particles >71µm		ASTM D7647	>10	0	1	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 23/21/16	▲ 23/21/16	21/19/14
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	VLITE	NONE
Appearance	scalar	Visual*	NORML	▲ WGOIL	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	.5%	NEG	NEG

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	<1
Boron	ppm	ASTM D5185(m)		4	5	7
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		<1	0	<1
Magnesium	ppm	ASTM D5185(m)		2	2	2
Calcium	ppm	ASTM D5185(m)		431	495	590
Phosphorus	ppm	ASTM D5185(m)		648	668	724
Zinc	ppm	ASTM D5185(m)		783	769	767
Sulfur	ppm	ASTM D5185(m)		2492	2834	2997
Visc @ 40°C	cSt	ASTM D7279(m)		44.0	44.1	44.2



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH **Received** : 10 May 2024
Lab Number : 02634580 **Tested** : 13 May 2024
Unique Number : 5775733 **Diagnosed** : 13 May 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: PrtCount)

Industrial Metals
 550 Messier St.
 Winnipeg, MB
 CA R2J 0G5
 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: