



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH50 1216-139058
Component
Hydraulic System
Fluid
MOBIL DTE 10 EXCEL 46 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LHMC50273	LHMC82154	LHMC85450
Sample Date		Client Info		19 Jan 2024	30 Nov 2023	11 Oct 2023
Machine Age	hrs	Client Info		5606	5101	4598
Oil Age	hrs	Client Info		2000	1000	500
Filter Age	hrs	Client Info		2000	1000	500
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	9	5	5
Chromium	ppm	ASTM D5185m	>5	<1	0	0
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>2	<1	0	<1
Lead	ppm	ASTM D5185m	>4	<1	0	0
Copper	ppm	ASTM D5185m	>10	2	<1	<1
Tin	ppm	ASTM D5185m	>2	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

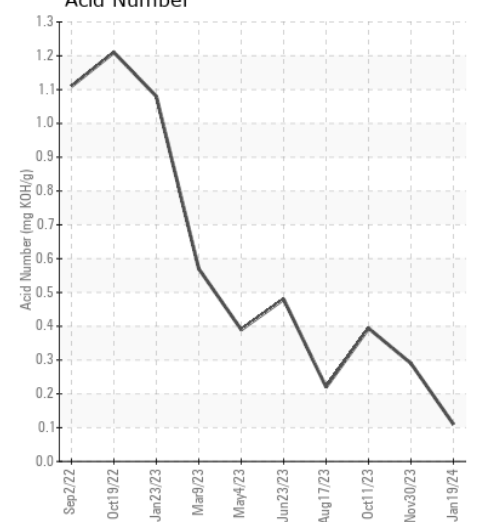
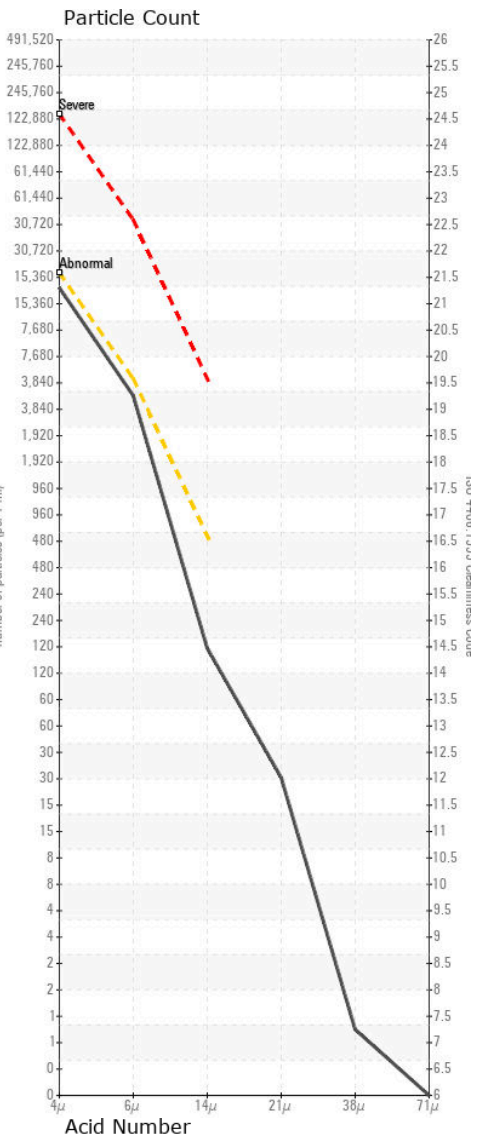
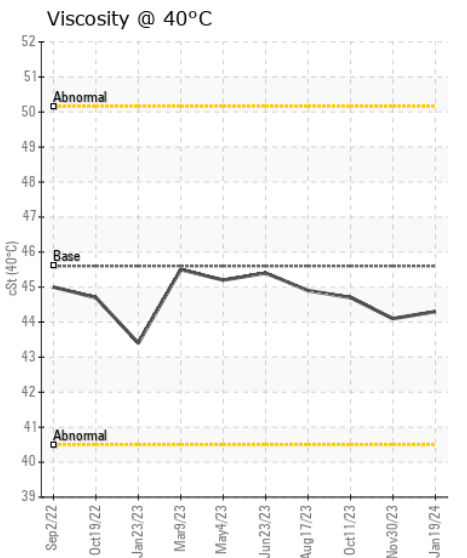
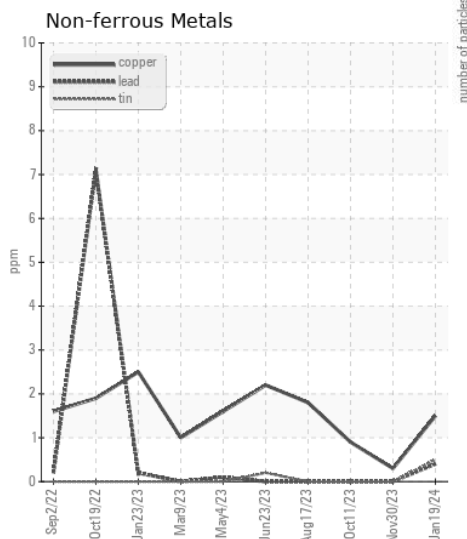
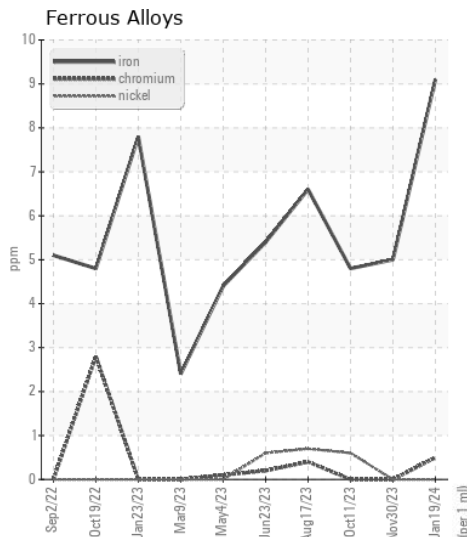
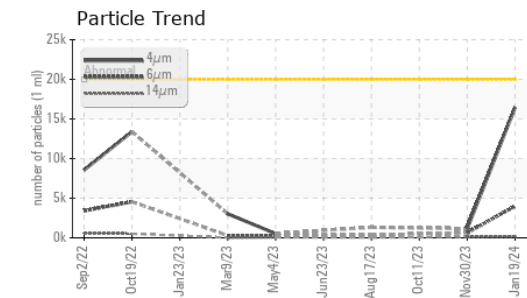
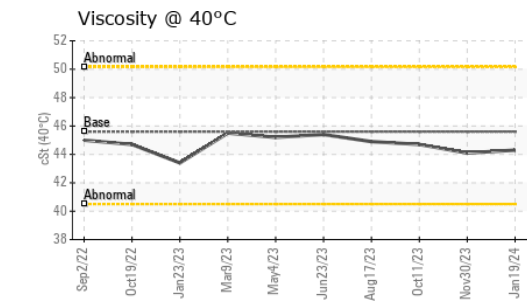
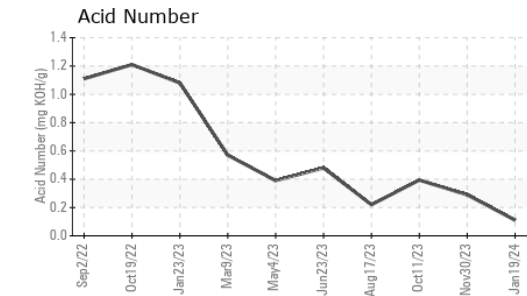
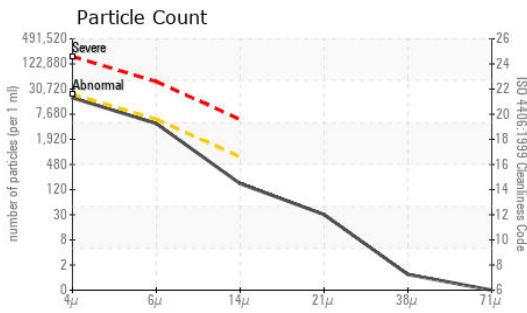
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185m	>17	1	<1	1
Potassium	ppm	ASTM D5185m	>20	3	0	1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	16462	1149	---
Particles >6µm		ASTM D7647	>5000	4001	626	---
Particles >14µm		ASTM D7647	>640	147	106	---
Particles >21µm		ASTM D7647	>160	27	36	---
Particles >38µm		ASTM D7647	>40	1	6	---
Particles >71µm		ASTM D7647	>10	0	1	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	21/19/14	17/16/14	---
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE	▲ MODER
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	0.2%	0.2%

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<1	0	0
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m		3	4	4
Calcium	ppm	ASTM D5185m		293	312	361
Phosphorus	ppm	ASTM D5185m		206	216	257
Zinc	ppm	ASTM D5185m		118	131	176
Sulfur	ppm	ASTM D5185m		1014	1065	1253
Acid Number (AN)	mg KOH/g	ASTM D8045		0.11	0.29	0.394
Visc @ 40°C	cSt	ASTM D445	45.6	44.3	44.1	44.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LHMC50273 **Received** : 31 Jan 2024
Lab Number : 06076356 **Diagnosed** : 01 Feb 2024
Unique Number : 10858447 **Diagnostician** : Wes Davis
Test Package : MOB 2

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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)