



LIEBHERR

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR LH40 ML13
Component
Swing Drive
Fluid
GEAR OIL SAE 80W90 (--- GAL)

RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

WEAR

Bearing and/or gear wear is indicated.

CONTAMINATION

There is no indication of any contamination in the oil.

FLUID CONDITION

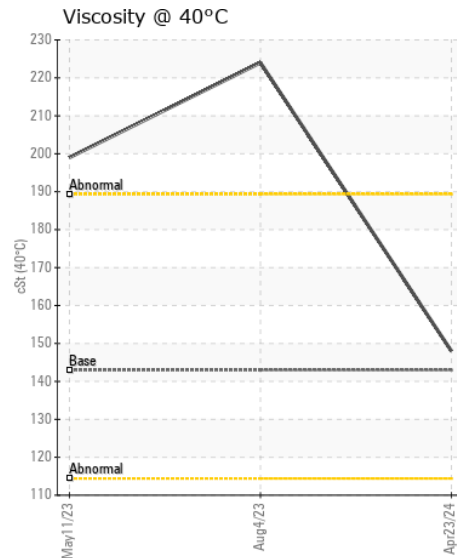
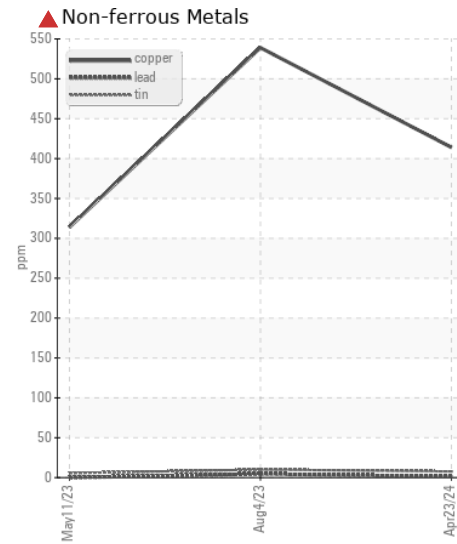
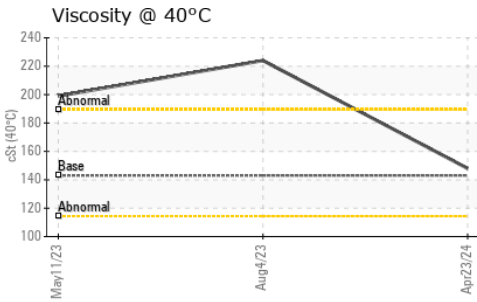
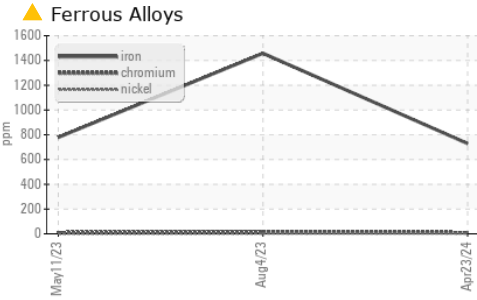
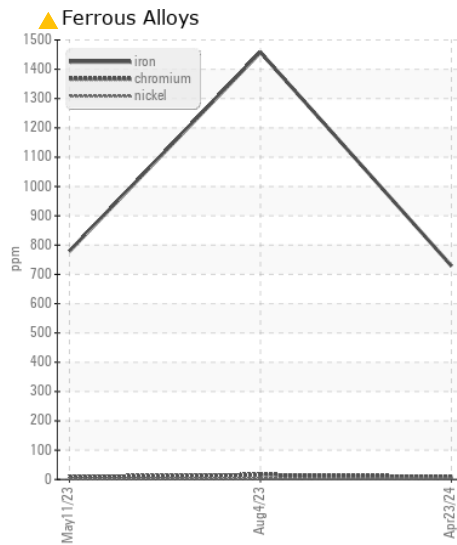
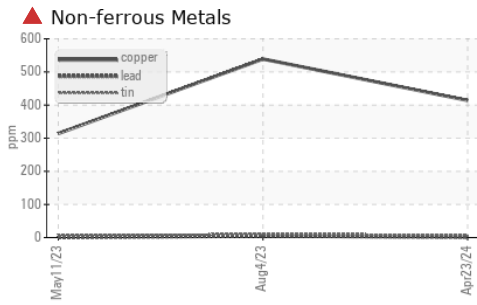
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0244829	LHMC122781	LHMC103210
Sample Date		Client Info		23 Apr 2024	04 Aug 2023	11 May 2023
Machine Age	hrs	Client Info		13598	12105	11583
Oil Age	hrs	Client Info		1500	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	SEVERE	ABNORMAL

Iron	ppm	ASTM D5185m	>400	▲ 729	▲ 1458	▲ 779
Chromium	ppm	ASTM D5185m	>10	9	▲ 16	9
Nickel	ppm	ASTM D5185m	>10	2	2	1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>25	2	2	0
Lead	ppm	ASTM D5185m	>50	1	5	0
Copper	ppm	ASTM D5185m	>200	▲ 414	▲ 539	▲ 314
Tin	ppm	ASTM D5185m	>10	8	▲ 10	6
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	MODER	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	MODER	NONE	NONE

Silicon	ppm	ASTM D5185m	>50	5	4	3
Potassium	ppm	ASTM D5185m	>20	2	1	<1
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
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	>0.2	NEG	0.2%	0.2%

Sodium	ppm	ASTM D5185m	>170	0	4	1
Boron	ppm	ASTM D5185m	400	<1	<1	3
Barium	ppm	ASTM D5185m	200	0	0	0
Molybdenum	ppm	ASTM D5185m	12	2	2	2
Manganese	ppm	ASTM D5185m		6	12	7
Magnesium	ppm	ASTM D5185m	12	5	21	15
Calcium	ppm	ASTM D5185m	150	26	37	35
Phosphorus	ppm	ASTM D5185m	1650	749	2150	1846
Zinc	ppm	ASTM D5185m	125	30	82	83
Sulfur	ppm	ASTM D5185m	22500	24723	25056	26183
Visc @ 40°C	cSt	ASTM D445	143	148	224	199



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0244829
Lab Number : 06159921
Unique Number : 10995344
Test Package : CONST
Received : 24 Apr 2024
Tested : 25 Apr 2024
Diagnosed : 26 Apr 2024 - Sean Felton

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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)