



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH50M 1216-108671
Component
Swing Drive
Fluid
GEAR OIL LS 80W90 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0268411	LH0258759	LH0263997
Sample Date		Client Info		14 Jun 2024	23 Feb 2024	14 Dec 2023
Machine Age	hrs	Client Info		21235	20036	19125
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				MARGINAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>1200	142	160	368
Chromium	ppm	ASTM D5185m	>15	1	1	4
Nickel	ppm	ASTM D5185m	>5	<1	<1	<1
Titanium	ppm	ASTM D5185m	>5	0	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>5	1	<1	0
Lead	ppm	ASTM D5185m	>8	0	0	0
Copper	ppm	ASTM D5185m	>325	12	5	13
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

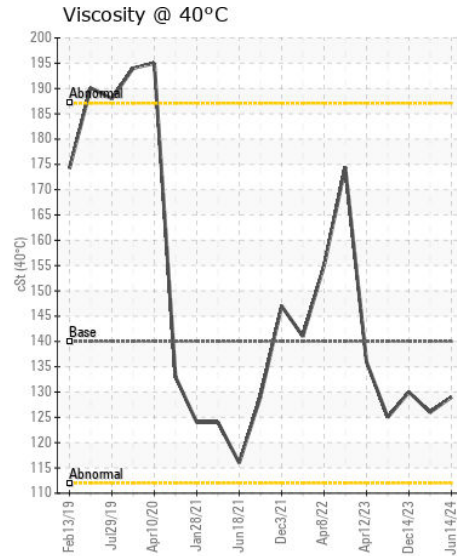
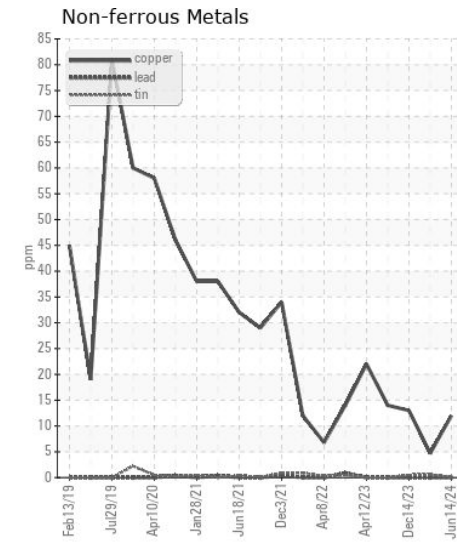
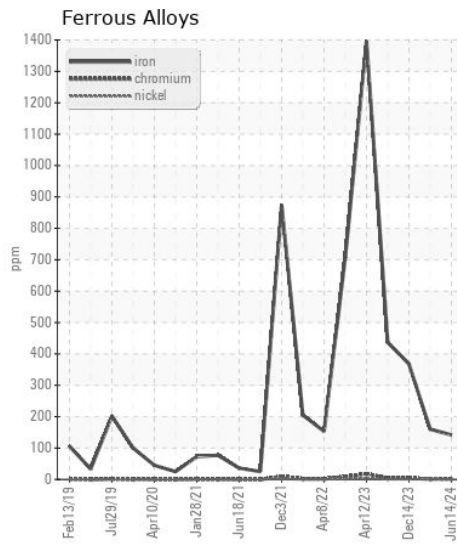
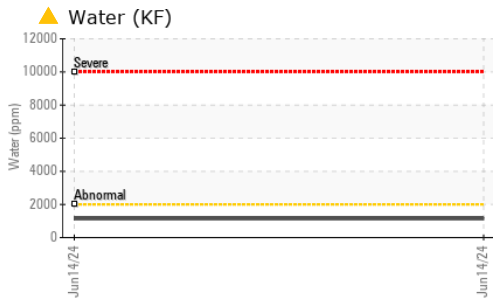
There is a light concentration of water present in the oil.

Silicon	ppm	ASTM D5185m	>10	4	1	2
Potassium	ppm	ASTM D5185m	>20	2	2	0
Water	%	ASTM D6304	>0.2	▲ 0.114	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ 1140	---	---
Silt	scalar	*Visual	NONE	MODER	MODER	MODER
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	0.2%	NEG	NEG

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		1	2	<1
Boron	ppm	ASTM D5185m	150	11	0	1
Barium	ppm	ASTM D5185m		0	1	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		2	2	3
Magnesium	ppm	ASTM D5185m	10	5	6	3
Calcium	ppm	ASTM D5185m	70	45	32	23
Phosphorus	ppm	ASTM D5185m	2000	994	869	965
Zinc	ppm	ASTM D5185m	50	22	18	16
Sulfur	ppm	ASTM D5185m	20000	25410	20155	20618



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0268411 **Received** : 24 Jun 2024
Lab Number : 06218972 **Tested** : 26 Jun 2024
Unique Number : 11097169 **Diagnosed** : 26 Jun 2024 - Don Baldrige
Test Package : CONST (Additional Tests: KF)

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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)