



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH40M 124711-1215
Component
Swing Drive
Fluid
HARTLAND 80W90 LS (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LHMC154851	LH0253935	LH0236479
Sample Date		Client Info		20 Dec 2023	26 Sep 2023	21 Apr 2023
Machine Age	hrs	Client Info		4494	4000	3125
Oil Age	hrs	Client Info		500	0	500
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changed	Changed	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>350	53	135	97
Chromium	ppm	ASTM D5185m	>15	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>5	<1	0	0
Lead	ppm	ASTM D5185m	>10	0	0	<1
Copper	ppm	ASTM D5185m	>300	17	38	20
Tin	ppm	ASTM D5185m	>15	2	5	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

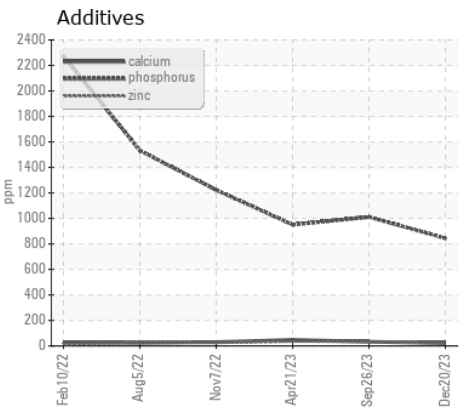
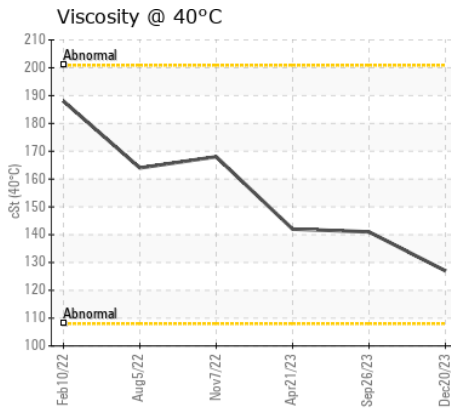
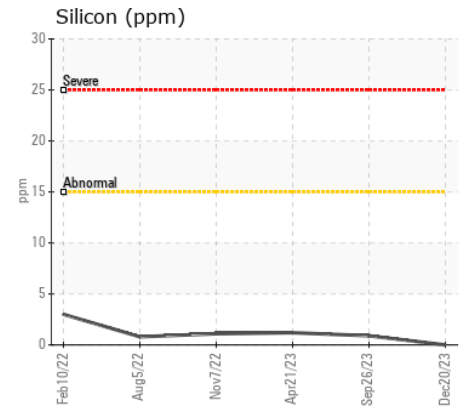
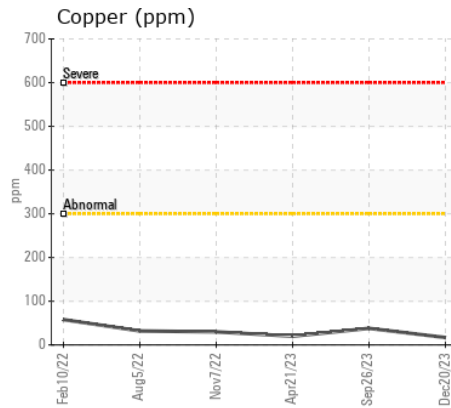
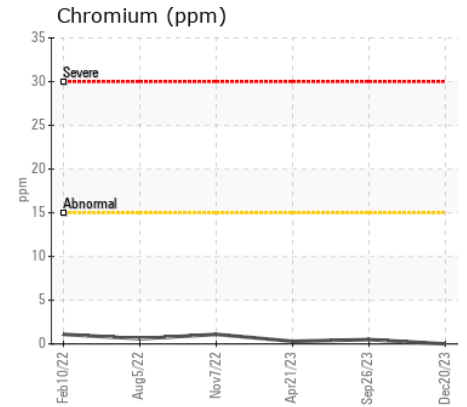
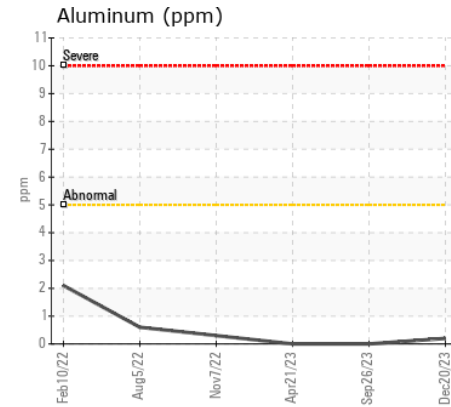
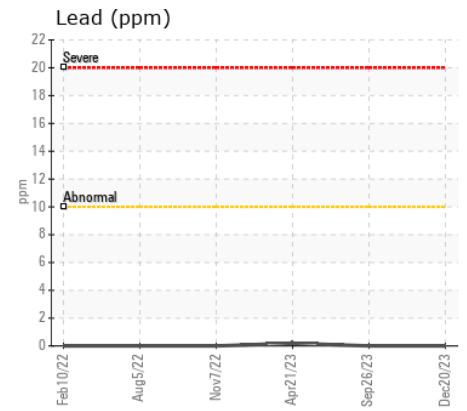
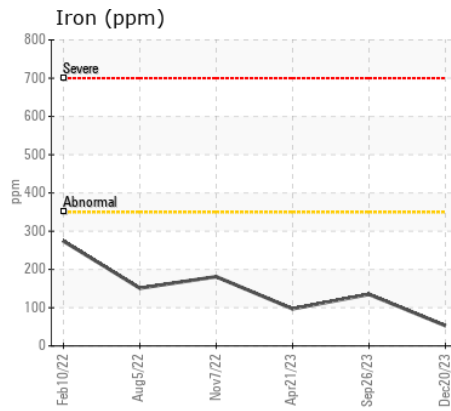
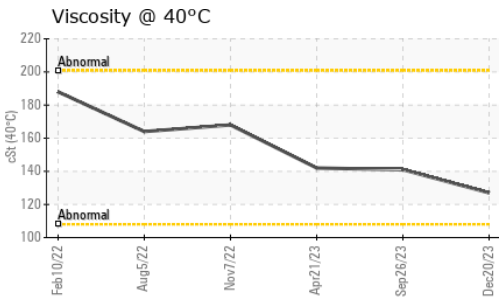
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>15	0	<1	1
Potassium	ppm	ASTM D5185m	>20	0	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	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		0	1	0
Boron	ppm	ASTM D5185m		0	2	7
Barium	ppm	ASTM D5185m		0	1	0
Molybdenum	ppm	ASTM D5185m		0	<1	3
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m		6	12	10
Calcium	ppm	ASTM D5185m		22	33	48
Phosphorus	ppm	ASTM D5185m		844	1011	951
Zinc	ppm	ASTM D5185m		22	32	35
Sulfur	ppm	ASTM D5185m		21959	25249	26285
Visc @ 40°C	cSt	ASTM D445		127	141	142



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LHMC154851 **Received** : 16 Jan 2024
Lab Number : 06062222 **Diagnosed** : 18 Jan 2024
Unique Number : 10833604 **Diagnostician** : Wes Davis
Test Package : MOB 1

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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)