



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH50M 121164-1216
Component
Front Right Wheel Hub
Fluid
LIEBHERR GEAR BASIC 90 LS (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill.
Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0289785	LH0274289	LH0235223
Sample Date		Client Info		22 May 2024	02 Oct 2023	08 Nov 2022
Machine Age	hrs	Client Info		5000	4259	3298
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				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>325	46	42	58
Chromium	ppm	ASTM D5185(m)	>3	0	0	<1
Nickel	ppm	ASTM D5185(m)	>2	0	<1	<1
Titanium	ppm	ASTM D5185(m)	>4	0	0	<1
Silver	ppm	ASTM D5185(m)	>2	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>10	0	<1	1
Lead	ppm	ASTM D5185(m)	>3	0	<1	<1
Copper	ppm	ASTM D5185(m)	>70	3	6	8
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

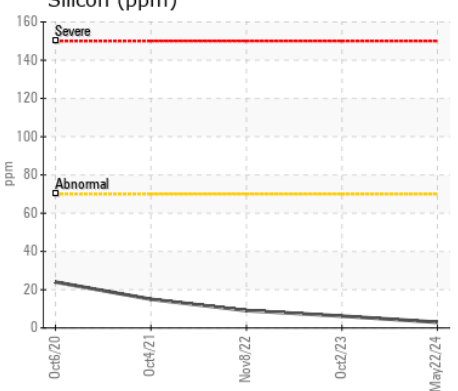
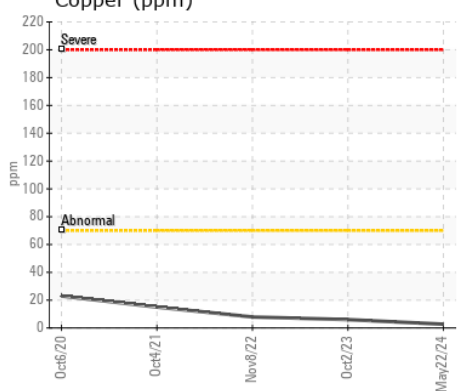
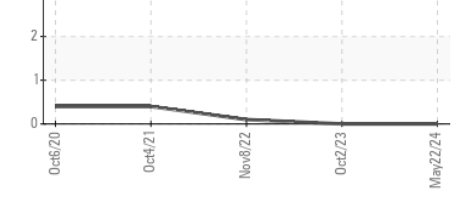
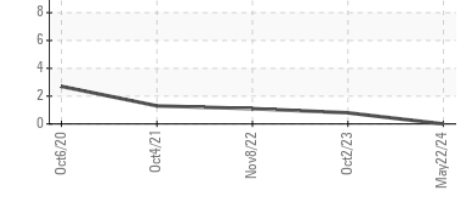
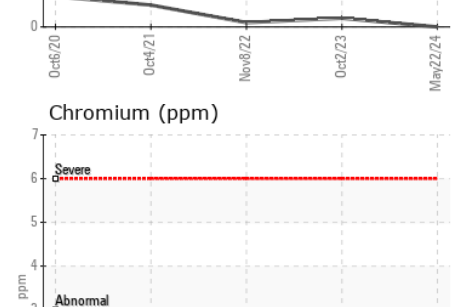
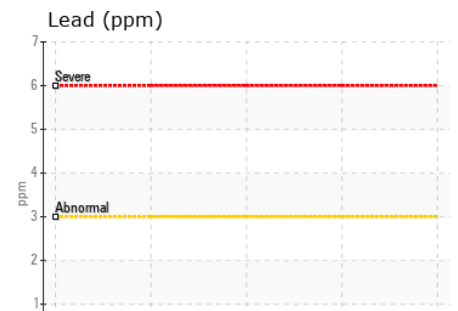
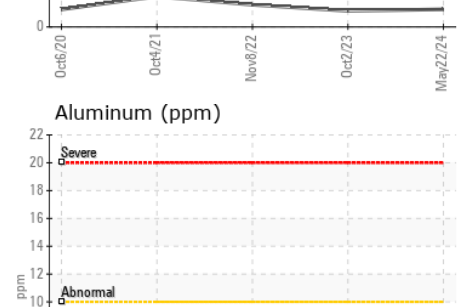
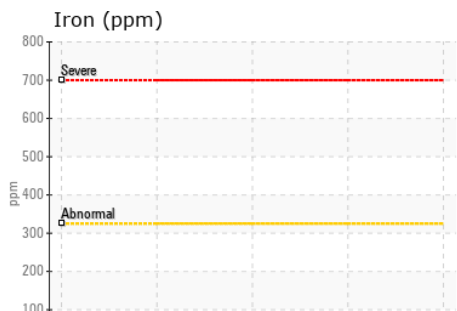
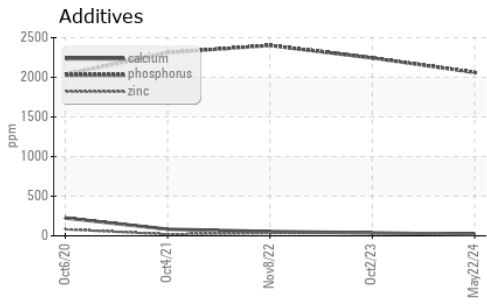
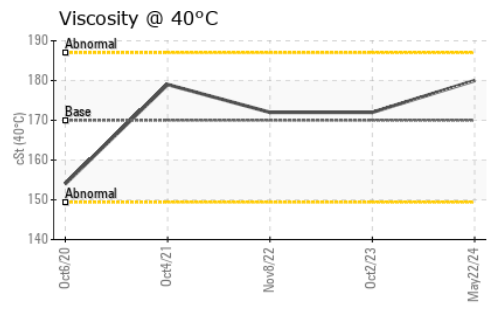
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>70	3	6	9
Potassium	ppm	ASTM D5185(m)	>20	<1	0	1
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	VLITE	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

Additive levels indicate the addition of a different brand, or type of oil.
The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		8	13	15
Boron	ppm	ASTM D5185(m)	0	1	2	2
Barium	ppm	ASTM D5185(m)	0	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	<1	<1	1
Magnesium	ppm	ASTM D5185(m)	<1	<1	<1	1
Calcium	ppm	ASTM D5185(m)	<1	19	38	54
Phosphorus	ppm	ASTM D5185(m)	2143	2062	2245	2403
Zinc	ppm	ASTM D5185(m)	<1	18	34	35
Sulfur	ppm	ASTM D5185(m)	23468	24510	27540	31985
Visc @ 40°C	cSt	ASTM D7279(m)	170	180	172	172



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0289785
Lab Number : 02637248
Unique Number : 5786410
Test Package : MOB 1
Received : 23 May 2024
Tested : 23 May 2024
Diagnosed : 23 May 2024 - Wes Davis

ACIER CENTURY INC
 600 BERGE DU CANAL
 LACHINE, QC
 CA H8R 1H4
 Contact: SERVICE

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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