

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50 1216-116574 - Front Right Wheel Hub

Sample No: LH0272161

Oil Type: GEAR OIL SAE 80W90



SAMPLE INFORMATION

Sample Number	LH0272161	LH0171124	LH0171115	LH0171110
Sample Date	28 Dec 2023	29 Aug 2023	27 Apr 2023	27 Jan 2023
Machine Hours	19776	17910	16762	14930
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	SEVERE	SEVERE	ABNORMAL	ABNORMAL

BOISE WHITE PAPER

3RD AVE AND HWY 11, 400 2ND ST
INTERNATIONAL FALLS, MN
US 56649
Contact: GARY MANN
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T:
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OIL CONDITION

Visc @ 40°C	cSt	135	186	148	152



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	43	63	25	14
Sodium	ppm	5	9	7	5
Potassium	ppm	3	4	3	<1



WEAR METALS

Iron	ppm	1716	1546	698	805
Copper	ppm	115	123	52	57
Lead	ppm	<1	1	0	2
Tin	ppm	0	0	0	<1
Aluminum	ppm	6	14	8	3
Chromium	ppm	7	4	4	5
Molybdenum	ppm	2	<1	<1	<1
Nickel	ppm	2	1	<1	1
Titanium	ppm	<1	<1	0	<1
Silver	ppm	0	0	0	0
Manganese	ppm	15	17	9	8
Vanadium	ppm	0	<1	<1	<1



ADDITIVES

Calcium	ppm	77	10	14	11
Magnesium	ppm	12	<1	<1	2
Zinc	ppm	130	101	73	67
Phosphorus	ppm	668	397	1829	1554
Barium	ppm	0	0	0	0
Boron	ppm	11	1	87	121

Diagnosis

The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. High concentration of visible metal present. Gear wear is indicated. Bearing and/or bushing wear is indicated. There is no indication of any contamination in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: BOIINT
Unique No: 10845858
Signed: Don Baldrige
Report Date: 25 Jan 2024

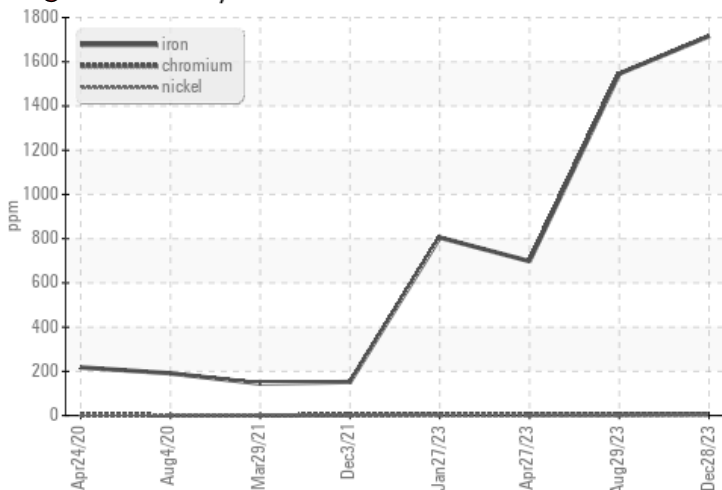
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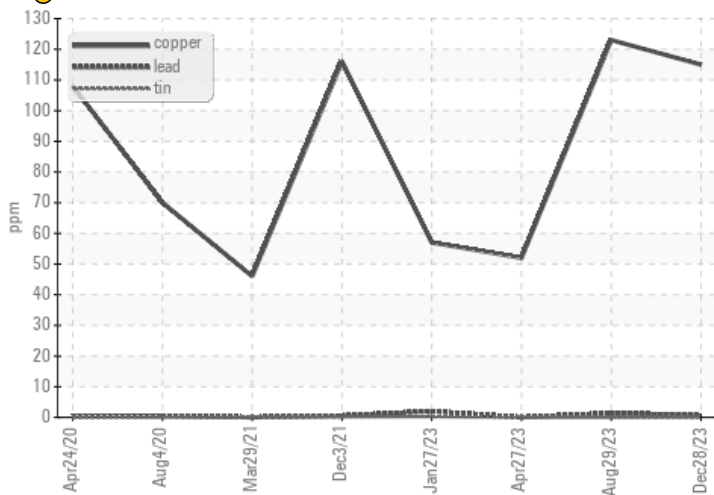


GRAPHS

● Ferrous Alloys



● Non-ferrous Metals



Viscosity @ 40°C

