

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50 1216-116574 - Front Left Wheel Hub

Sample No: LH0171137

Oil Type: GEAR OIL SAE 80W90



SAMPLE INFORMATION

Sample Number	LH0171137	LH0171123	LH0171109	LH0171179
Sample Date	29 Aug 2023	27 Apr 2023	27 Jan 2023	03 Dec 2021
Machine Hours	17910	16762	14930	8820
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	ABNORMAL	ABNORMAL	NORMAL

BOISE WHITE PAPER

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

Visc @ 40°C	cSt	143	163	156	168



CONTAMINATION

Element	ppm	16	21	8	8
Silicon	ppm	16	21	8	8
Sodium	ppm	8	6	2	2
Potassium	ppm	1	3	<1	<1



WEAR METALS

Element	ppm	596	608	508	269
Iron	ppm	596	608	508	269
Copper	ppm	43	36	31	71
Lead	ppm	0	0	<1	<1
Tin	ppm	0	0	0	<1
Aluminum	ppm	6	7	2	3
Chromium	ppm	3	3	2	<1
Molybdenum	ppm	1	<1	<1	<1
Nickel	ppm	<1	<1	1	<1
Titanium	ppm	<1	0	0	0
Silver	ppm	0	0	0	<1
Manganese	ppm	9	8	6	4
Vanadium	ppm	<1	0	0	0



ADDITIVES

Element	ppm	25	14	13	12
Calcium	ppm	25	14	13	12
Magnesium	ppm	2	4	2	2
Zinc	ppm	56	54	53	52
Phosphorus	ppm	1367	2041	1488	1723
Barium	ppm	0	0	0	0
Boron	ppm	37	81	126	260

Diagnosis

The oil change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. Gear wear is indicated. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

Depot: BOIINT
Unique No: 10633792
Signed: Sean Felton
Report Date: 08 Sep 2023

