

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50 11551-1216 - Rear Left Wheel Hub

Sample No: LHMC163222

Oil Type: HARTLAND 80W90 LS



SAMPLE INFORMATION

Sample Number	LHMC163222	LH0156599	LHMC163243	LHMC163197
Sample Date	29 Aug 2023	25 Apr 2023	26 Jan 2023	03 Dec 2021
Machine Hours	17705	15697	14047	10215
Oil Hours	0	0	0	1882
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	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	148	137	174	183
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CONTAMINATION

Silicon	ppm	4	5	12	13
Sodium	ppm	6	1	2	2
Potassium	ppm	<1	2	0	<1



WEAR METALS

Iron	ppm	83	80	136	145
Copper	ppm	45	23	67	80
Lead	ppm	<1	0	3	<1
Tin	ppm	0	0	<1	0
Aluminum	ppm	2	1	2	4
Chromium	ppm	0	<1	1	1
Molybdenum	ppm	2	3	<1	<1
Nickel	ppm	0	0	1	1
Titanium	ppm	<1	0	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	3	2	3	4
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	94	69	12	12
Magnesium	ppm	5	9	2	1
Zinc	ppm	31	23	44	41
Phosphorus	ppm	1354	917	1589	1586
Barium	ppm	0	0	2	2
Boron	ppm	11	21	245	252

Diagnosis

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. 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: 10633752
Signed: Doug Bogart
Report Date: 08 Sep 2023



GRAPHS

