

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50 11551-1216 - Rear Right Wheel Hub

Sample No: LHMC163244

Oil Type: HARTLAND 80W90 LS



SAMPLE INFORMATION

Sample Number	LHMC163244	LH0156605	LHMC163219	LHMC163198
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	NORMAL

BOISE WHITE PAPER

3RD AVE AND HWY 11, 400 2ND ST
INTERNATIONAL FALLS, MN
US 56649
Contact: GARY MANN
garymann@packagingcorp.com
T:
F: (218)285-5860



OIL CONDITION

Visc @ 40°C	cSt	148	137	177	182
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CONTAMINATION

Silicon	ppm	3	5	11	11
Sodium	ppm	6	2	2	0
Potassium	ppm	<1	1	0	<1



WEAR METALS

Iron	ppm	82	83	137	116
Copper	ppm	49	26	68	81
Lead	ppm	<1	0	3	<1
Tin	ppm	0	0	0	0
Aluminum	ppm	2	1	2	2
Chromium	ppm	0	0	1	1
Molybdenum	ppm	2	3	<1	0
Nickel	ppm	0	0	<1	<1
Titanium	ppm	<1	<1	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	3	2	3	3
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	93	75	12	8
Magnesium	ppm	5	13	2	0
Zinc	ppm	31	32	43	28
Phosphorus	ppm	1342	994	1611	1679
Barium	ppm	0	0	2	1
Boron	ppm	10	20	248	255

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: 10633753
Signed: Doug Bogart
Report Date: 08 Sep 2023



GRAPHS

