

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50 11551-1216 - Rear Differential

Sample No: LHMC163210

Oil Type: HARTLAND 80W90 LS



SAMPLE INFORMATION

Sample Number	LHMC163210	LH0156602	LHMC163605	LHMC163212
Sample Date	29 Aug 2023	25 Apr 2023	26 Jan 2023	06 May 2020
Machine Hours	17705	15697	14047	4977
Oil Hours	0	0	0	1720
Oil Changed	Changed	Changed	Changed	N/A
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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OIL CONDITION

Visc @ 40°C	cSt	147	137	177	160
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CONTAMINATION

Silicon	ppm	3	5	10	12
Sodium	ppm	6	1	2	4
Potassium	ppm	<1	1	0	<1



WEAR METALS

Iron	ppm	79	72	129	161
Copper	ppm	44	24	67	62
Lead	ppm	<1	0	3	<1
Tin	ppm	0	0	0	<1
Aluminum	ppm	2	1	2	2
Chromium	ppm	0	0	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	3
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	93	69	11	131
Magnesium	ppm	5	9	2	1
Zinc	ppm	30	26	41	53
Phosphorus	ppm	1314	943	1577	1716
Barium	ppm	0	0	2	1
Boron	ppm	8	18	246	42

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: 10633750
Signed: Doug Bogart
Report Date: 08 Sep 2023



GRAPHS

