

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH50 11551-1216 - Transmission

Sample No: LHMC163200  
 Oil Type: HARTLAND 5W40



**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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#### SAMPLE INFORMATION

Sample Number	LHMC163200	LH0156607	LHMC163607	LHMC163194
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	ABNORMAL	NORMAL	NORMAL



#### OIL CONDITION

Visc @ 40°C	cSt	43.8	44.7	49.0	49.5
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#### CONTAMINATION

Silicon	ppm	6	5	6	4
Sodium	ppm	4	4	4	7
Potassium	ppm	<1	2	0	<1



#### WEAR METALS

Iron	ppm	48	62	52	67
Copper	ppm	11	9	11	21
Lead	ppm	0	0	<1	0
Tin	ppm	<1	0	<1	<1
Aluminum	ppm	6	7	6	7
Chromium	ppm	0	0	<1	<1
Molybdenum	ppm	3	2	<1	1
Nickel	ppm	0	0	0	0
Titanium	ppm	72	44	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	3	5	4	11
Vanadium	ppm	<1	<1	0	0



#### ADDITIVES

Calcium	ppm	1385	1430	1248	1400
Magnesium	ppm	750	876	759	678
Zinc	ppm	1088	1122	820	859
Phosphorus	ppm	945	960	718	836
Barium	ppm	0	0	0	0
Boron	ppm	168	141	91	100

#### Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the fluid. The condition of the fluid is acceptable for the time in service.

Depot: BOIINT  
 Unique No: 10633816  
 Signed: Don Baldrige  
 Report Date: 08 Sep 2023



### GRAPHS

