CONSTRUCTION EQUIPMENT

LIEBHERR LH50 111551-1216 - 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
OIL CONDITION				
Visc @ 40°C cSt	0 147	137	0 177	0 160
iii				

	TAMINATI	ON				
Silicon	ppm	03	○ 5	0 10	0 12	
Sodium	ppm	06	01	02	0 4	
Potassium	ppm	○ <1	01	0	◯ <1	

0					
WEA	R METALS				
Iron	ppm	0 79	0 72	0 129	0 161
Copper	ppm	0 44	0 24	67	62
Lead	ppm	○ <1	0	3	◯ <1
Tin	ppm	0	0	0	◯ <1
Aluminum	ppm	02	01	2	2
Chromium	ppm	0 🔘	0	01	0 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 93 ppm 69 0 11 0 131 5 Magnesium ppm 09 02 \bigcirc 1 Zinc 30 26 0 41 53 ppm Phosphorus 1314 0 943 0 1577 0 1716 ppm Barium ppm 0 0 02 01 Boron 8 246 ppm 18 0 42





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

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

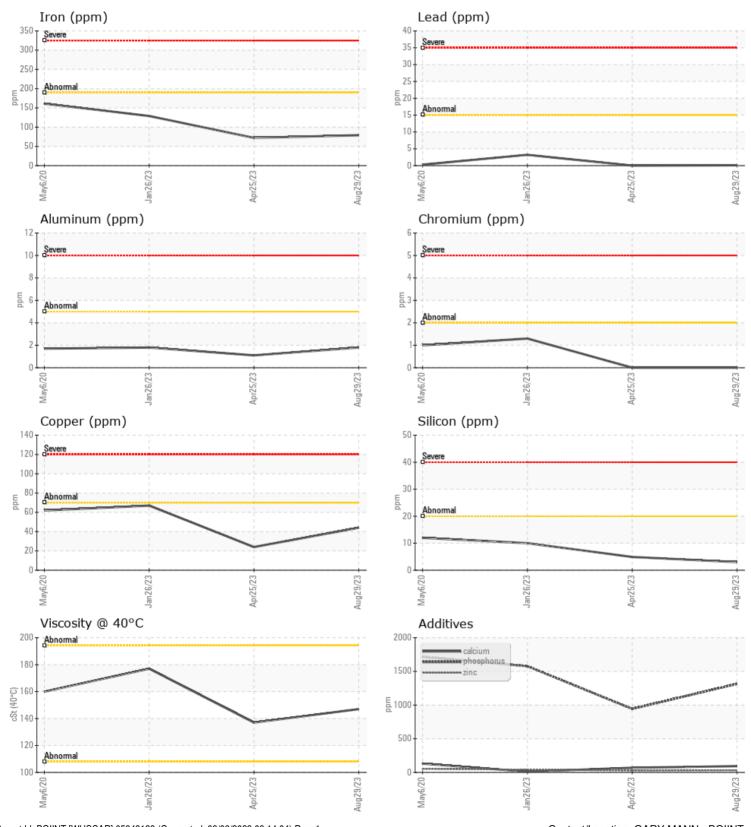
Contact/Location: GARY MANN - BOIINT





GRAPHS

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