

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50 1216-131051 - Front Left Wheel Hub

Sample No: LH0213097

Oil Type: GEAR OIL SAE 80W90



BOISE WHITE PAPER
 3RD AVE AND HWY 11, 400 2ND ST
 INTERNATIONAL FALLS, MN
 US 56649
 Contact: GARY MANN
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SAMPLE INFORMATION

Sample Number	LH0213097	LH0213027	LH0213111	LH0213013
Sample Date	30 Aug 2023	25 Apr 2023	24 Jan 2023	03 Dec 2021
Machine Hours	9736	0	7995	1664
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



OIL CONDITION

Visc @ 40°C	cSt	138	143	164	102
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CONTAMINATION

Element	ppm	6	6	8	5
Silicon	ppm	6	6	8	5
Sodium	ppm	8	4	6	2
Potassium	ppm	2	3	2	14



WEAR METALS

Element	ppm	273	184	310	25
Iron	ppm	273	184	310	25
Copper	ppm	49	22	39	1
Lead	ppm	0	0	0	1
Tin	ppm	0	0	0	<1
Aluminum	ppm	3	2	2	10
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	2	2	1	4
Nickel	ppm	0	0	1	2
Titanium	ppm	<1	0	0	<1
Silver	ppm	0	0	0	<1
Manganese	ppm	4	3	4	<1
Vanadium	ppm	<1	<1	<1	<1



ADDITIVES

Element	ppm	60	81	99	2302
Calcium	ppm	60	81	99	2302
Magnesium	ppm	7	8	5	24
Zinc	ppm	32	35	58	1106
Phosphorus	ppm	1030	1253	1531	899
Barium	ppm	0	0	0	0
Boron	ppm	44	101	145	<1

Diagnosis

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: 10633789
 Signed: Sean Felton
 Report Date: 08 Sep 2023



GRAPHS

