

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH50 1216-131051 - Front Differential

Sample No: LH0213090

Oil Type: GEAR OIL SAE 80W90



#### SAMPLE INFORMATION

Sample Number	LH0213090	LH0213020	LH0213104	---
Sample Date	30 Aug 2023	25 Apr 2023	24 Jan 2023	---
Machine Hours	9756	0	7995	---
Oil Hours	0	0	0	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	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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T:  
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#### OIL CONDITION

Visc @ 40°C	cSt	136	141	185	---



#### CONTAMINATION

Element	ppm	<1	1	7	---
Silicon	ppm	<1	1	7	---
Sodium	ppm	1	<1	4	---
Potassium	ppm	0	<1	0	---

#### 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.



#### WEAR METALS

Element	ppm	10	5	60	---
Iron	ppm	10	5	60	---
Copper	ppm	7	3	73	---
Lead	ppm	0	0	2	---
Tin	ppm	0	0	0	---
Aluminum	ppm	<1	<1	<1	---
Chromium	ppm	0	0	<1	---
Molybdenum	ppm	2	3	<1	---
Nickel	ppm	0	0	<1	---
Titanium	ppm	<1	0	0	---
Silver	ppm	0	0	0	---
Manganese	ppm	<1	<1	3	---
Vanadium	ppm	0	0	0	---



#### ADDITIVES

Element	ppm	42	42	4	---
Calcium	ppm	42	42	4	---
Magnesium	ppm	9	12	<1	---
Zinc	ppm	12	15	42	---
Phosphorus	ppm	847	812	1125	---
Barium	ppm	0	0	387	---
Boron	ppm	8	5	0	---

Depot: BOIINT  
Unique No: 10633791  
Signed: Sean Felton  
Report Date: 08 Sep 2023



### GRAPHS

