

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH50 1216-116574 - Front Differential

Sample No: LH0272159

Oil Type: GEAR OIL SAE 80W90



#### SAMPLE INFORMATION

Sample Number	LH0272159	LH0171172	LH0171116	LH0171102
Sample Date	20 Dec 2023	29 Aug 2023	27 Apr 2023	27 Jan 2023
Machine Hours	19776	17910	16726	14930
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
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  
garymann@packagingcorp.com  
T:  
F: (218)285-5860



#### OIL CONDITION

Visc @ 40°C	cSt	124	138	190	186
		●	●	●	●



#### CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	● 1	● <1	● <1	● 9
Sodium	ppm	● 1	● 1	● 2	● 3
Potassium	ppm	● 0	● 0	● 2	● 0



#### WEAR METALS

Iron	ppm	● 7	● 23	● 17	● 211
Copper	ppm	● 3	● 7	● 1	● 35
Lead	ppm	● 0	● 0	● 0	● <1
Tin	ppm	● <1	● 0	● 0	● <1
Aluminum	ppm	● 0	● <1	● <1	● 1
Chromium	ppm	● 0	● 0	● 0	● 2
Molybdenum	ppm	● 3	● 2	● 0	● <1
Nickel	ppm	● 0	● 0	● 0	● 2
Titanium	ppm	● <1	● <1	● 0	● <1
Silver	ppm	● 0	● 0	● 0	● 0
Manganese	ppm	● 0	● <1	● 1	● 5
Vanadium	ppm	● 0	● <1	● 0	● 0



#### ADDITIVES

Calcium	ppm	● 99	● 45	● 3	● 7
Magnesium	ppm	● 20	● 8	● 0	● 2
Zinc	ppm	● 38	● 11	● 0	● 23
Phosphorus	ppm	● 723	● 927	● 2119	● 1158
Barium	ppm	● 0	● 0	● 0	● 393
Boron	ppm	● 26	● 5	● 2	● <1

#### Diagnosis

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) GEAR OIL SAE 80W90. Please confirm.

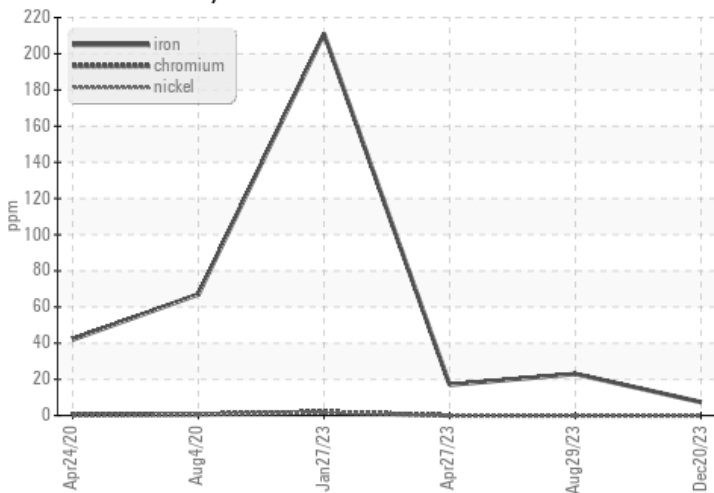
All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

Depot: BOIINT  
Unique No: 10844586  
Signed: Wes Davis  
Report Date: 23 Jan 2024

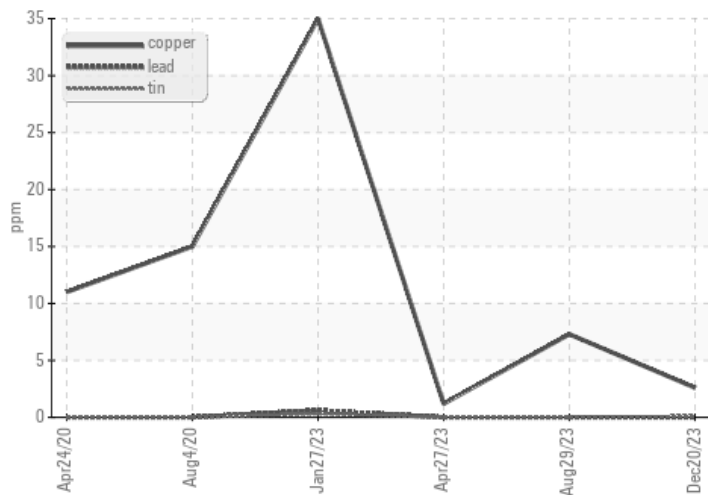


### GRAPHS

#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C

