

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50 1216-131051 - Front Differential

Sample No: LH0272177

Oil Type: GEAR OIL SAE 80W90



SAMPLE INFORMATION

Sample Number	LH0272177	LH0213090	LH0213020	LH0213104
Sample Date	18 Dec 2023	30 Aug 2023	25 Apr 2023	24 Jan 2023
Machine Hours	10742	9756	0	7995
Oil Hours	1000	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	126	136	141	185
		●	●	●	●



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	● 2	● <1	● 1	● 7
Sodium	ppm	● 2	● 1	● <1	● 4
Potassium	ppm	● 0	● 0	● <1	● 0



WEAR METALS

Iron	ppm	● 11	● 10	● 5	● 60
Copper	ppm	● 4	● 7	● 3	● 73
Lead	ppm	● 0	● 0	● 0	● 2
Tin	ppm	● <1	● 0	● 0	● 0
Aluminum	ppm	● 0	● <1	● <1	● <1
Chromium	ppm	● 0	● 0	● 0	● <1
Molybdenum	ppm	● 3	● 2	● 3	● <1
Nickel	ppm	● 0	● 0	● 0	● <1
Titanium	ppm	<1	<1	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	● 0	● <1	● <1	● 3
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	● 100	● 42	● 42	● 4
Magnesium	ppm	● 20	● 9	● 12	● <1
Zinc	ppm	● 40	● 12	● 15	● 42
Phosphorus	ppm	● 719	● 847	● 812	● 1125
Barium	ppm	● <1	● 0	● 0	387
Boron	ppm	● 23	● 8	● 5	0

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.

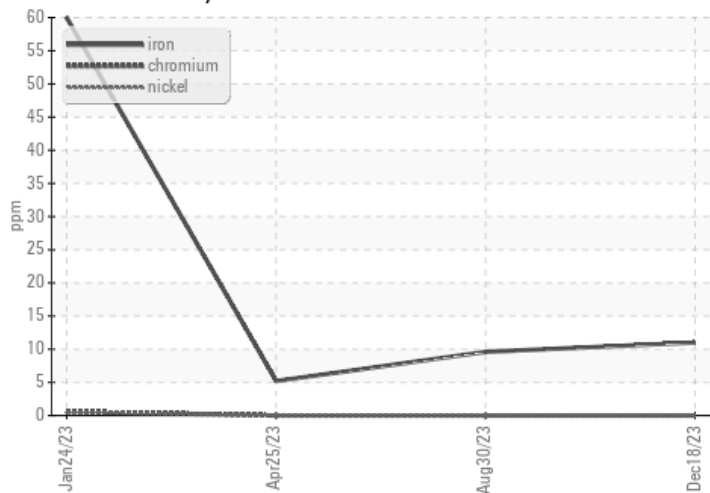
All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

Depot: BOIINT
Unique No: 10844578
Signed: Wes Davis
Report Date: 23 Jan 2024

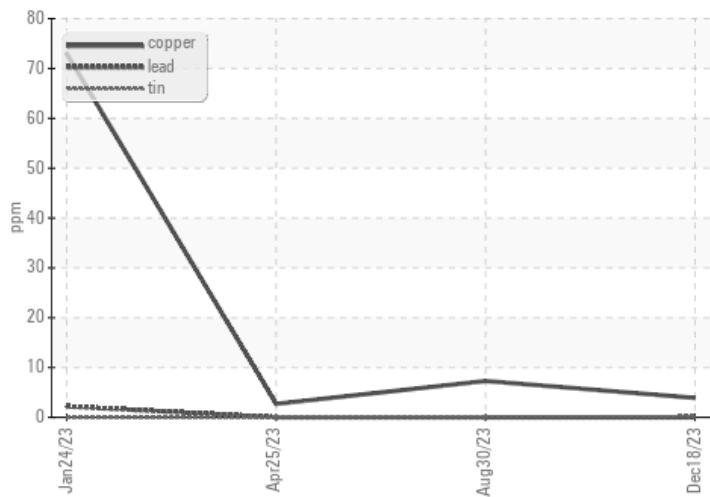


GRAPHS

Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C

