

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR R946 035496-1150 - Left Final Drive

Sample No: LH0254594

Oil Type: LIEBHERR GEAR BASIC 90 LS



#### SAMPLE INFORMATION

Sample Number	LH0254594	LH0243560	LHMC72771	---
Sample Date	08 Aug 2023	24 Apr 2023	20 Nov 2017	---
Machine Hours	1809	13412	500	---
Oil Hours	0	1000	0	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	ABNORMAL	ABNORMAL	NORMAL	---

**FINKBINER EQUIPMENT CO.**  
 15 W 400 N FRONTAGE RD  
 BURR RIDGE, IL  
 US 60527  
 Contact: DON FITZGERALD  
 dfitzgerald@finkbiner.com  
 T: (815)546-8991  
 F: (630)654-3792



#### OIL CONDITION

Visc @ 40°C	cSt	● 186	● 313	● 140.9	---
-------------	-----	-------	-------	---------	-----



#### CONTAMINATION

Water	%	---	● 0.089	---	---
Silicon	ppm	● 258	● 84	● 34	---
Sodium	ppm	● 6	● 4	● 6	---
Potassium	ppm	● 24	● 3	● 12	---



#### WEAR METALS

Iron	ppm	● 880	● 562	● 162	---
Copper	ppm	● 2	● 29	● <1	---
Lead	ppm	● <1	● 0	● 0	---
Tin	ppm	● 0	● <1	● 0	---
Aluminum	ppm	● 54	● 21	● 8	---
Chromium	ppm	● 8	● 22	● 2	---
Molybdenum	ppm	● <1	● 2	0	---
Nickel	ppm	● 4	● 2	1	---
Titanium	ppm	3	<1	<1	---
Silver	ppm	0	0	0	---
Manganese	ppm	● 10	● 9	5	---
Vanadium	ppm	<1	0	0	---



#### ADDITIVES

Calcium	ppm	● 127	● 96	72	---
Magnesium	ppm	50	● 30	13	---
Zinc	ppm	● 41	● 31	178	---
Phosphorus	ppm	● 2225	● 281	1338	---
Barium	ppm	● 0	● 0	5	---
Boron	ppm	● <1	● 18	1	---

#### Diagnosis

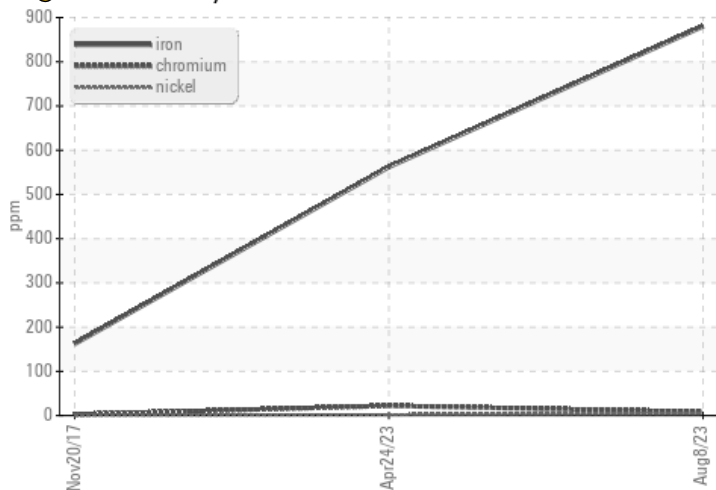
We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. Gear wear is indicated. All other component wear rates are normal. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The condition of the oil is acceptable for the time in service.

Depot: LEC0033  
 Unique No: 10616955  
 Signed: Don Baldrige  
 Report Date: 24 Aug 2023

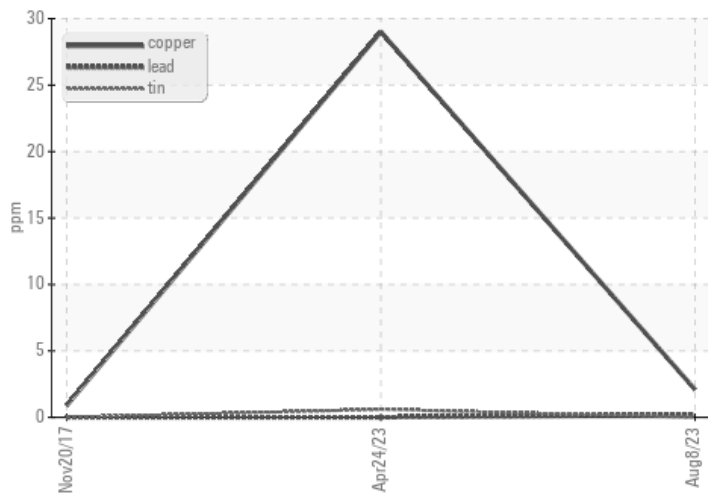


### GRAPHS

#### ● Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C

