# LIEBHERR
## CONSTRUCTION EQUIPMENT

# LIEBHERR L586 032994-461 - Hydraulic System

**Sample No:** LH0268488

**Oil Type:** CONOCO AW 68


**TT & E IRON**
1529 WEST GARNER RD
GARNER, NC
US 27529
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## SAMPLE INFORMATION

| | | | | | |
|---|---|---|---|---|---|
| Sample Number | | **LH0268488** | LH0264103 | LH0220138 | LH0217509 |
| Sample Date | | **20 Dec 2023** | 06 Jul 2023 | 28 Feb 2023 | 20 Mar 2022 |
| Machine Hours | | **5377** | 10350 | 9819 | 8007 |
| Oil Hours | | **0** | 0 | 0 | 0 |
| Oil Changed | | **N/A** | Not Changd | Not Changd | Not Changd |
| Sample Status | | **ATTENTION** | ABNORMAL | ABNORMAL | ABNORMAL |

## OIL CONDITION

| | | | | | |
|---|---|---|---|---|---|
| Visc @ 40°C | cSt | **50.8** | 54.1 | 55.1 | 62.4 |
| Acid Number (AN) | mg KOH/g | **0.53** | 0.55 | 0.55 | 0.46 |

## CONTAMINATION

| | | | | | |
|---|---|---|---|---|---|
| Water | % | **NEG** | NEG | NEG | NEG |
| Particles >4µm | | **31649** | --- | 10197 | 5156 |
| Particles >6µm | | **2804** | --- | 601 | 399 |
| Particles >14µm | | **20** | --- | 8 | 8 |
| ISO 4406:1999 (c) | | **22/19/11** | --- | 21/16/10 | 20/16/10 |
| Silicon | ppm | **4** | 5 | 6 | 4 |
| Sodium | ppm | **0** | 2 | 2 | 3 |
| Potassium | ppm | **1** | <1 | 0 | 0 |

## WEAR METALS

| | | | | | |
|---|---|---|---|---|---|
| Iron | ppm | **38** | 53 | 63 | 72 |
| Copper | ppm | **6** | 7 | 8 | 10 |
| Lead | ppm | **4** | 3 | 4 | 8 |
| Tin | ppm | **<1** | 0 | 0 | <1 |
| Aluminum | ppm | **2** | 4 | 3 | 4 |
| Chromium | ppm | **2** | 2 | 2 | 2 |
| Molybdenum | ppm | **1** | <1 | <1 | <1 |
| Nickel | ppm | **<1** | 0 | 0 | <1 |
| Titanium | ppm | **<1** | <1 | 0 | <1 |
| Silver | ppm | **0** | <1 | 0 | <1 |
| Manganese | ppm | **<1** | 1 | 1 | 1 |
| Vanadium | ppm | **<1** | 0 | 0 | <1 |

## ADDITIVES

| | | | | | |
|---|---|---|---|---|---|
| Calcium | ppm | **442** | 691 | 658 | 1052 |
| Magnesium | ppm | **7** | 7 | 4 | 6 |
| Zinc | ppm | **395** | 432 | 339 | 453 |
| Phosphorus | ppm | **348** | 339 | 289 | 373 |
| Barium | ppm | **10** | 0 | 0 | 0 |
| Boron | ppm | **0** | <1 | <1 | 2 |

## Diagnosis

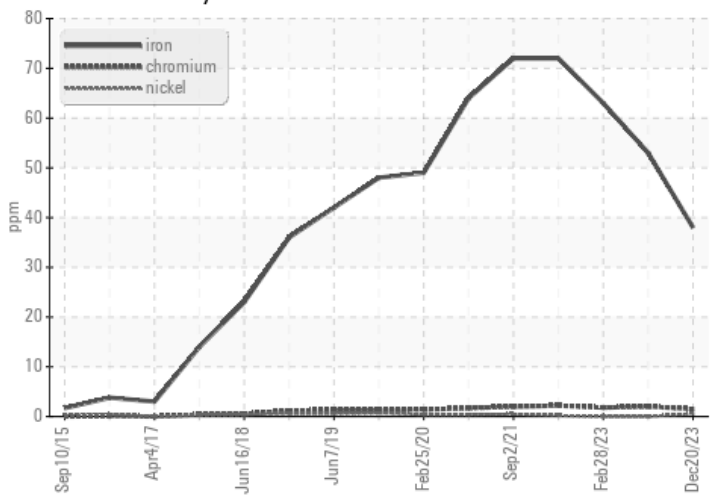
The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

**Depot:** TTENEW
**Unique No:** 10816743
**Signed:** Wes Davis
**Report Date:** 05 Jan 2024

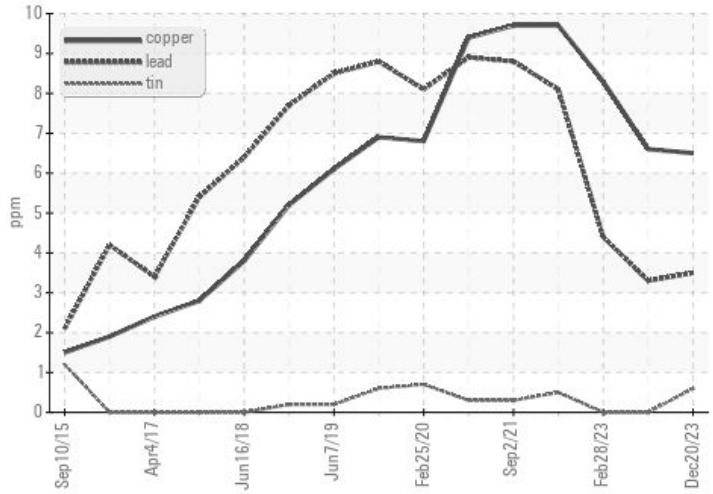
# LIEBHERR
## CONSTRUCTION EQUIPMENT


## GRAPHS

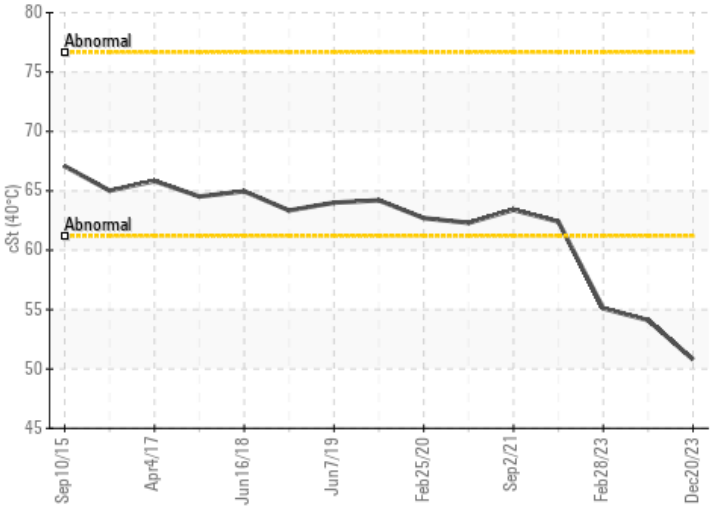
### Ferrous Alloys



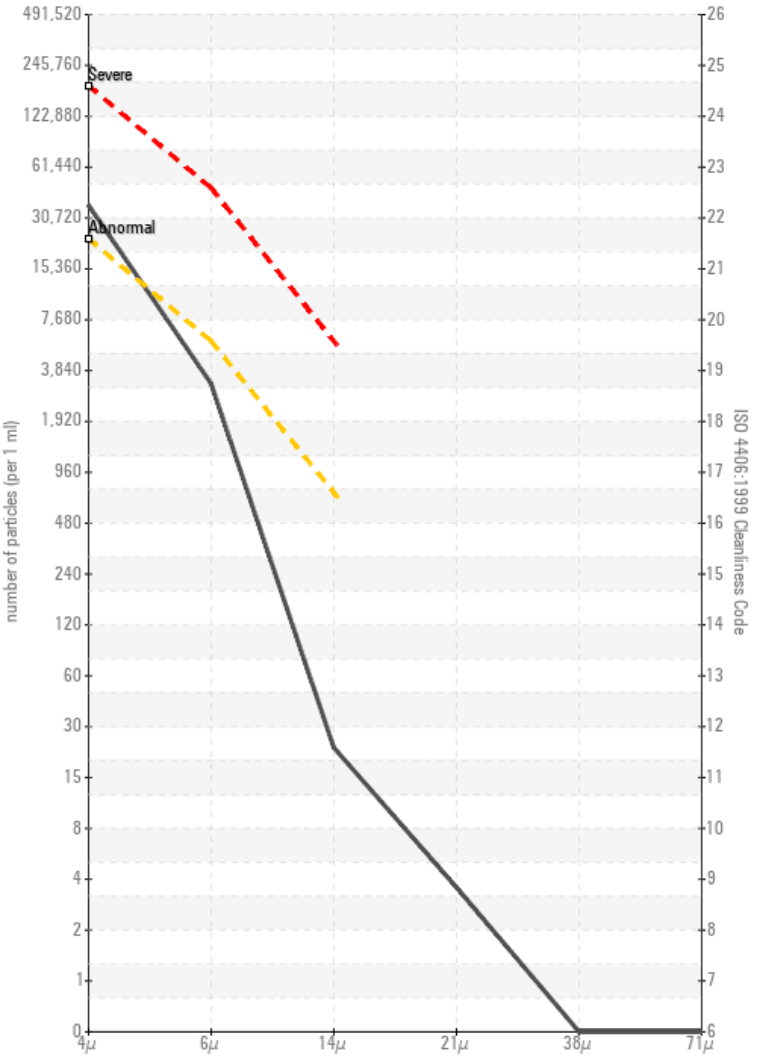

### Non-ferrous Metals




### Viscosity @ 40°C




### Particle Count




### Acid Number