# LIEBHERR
## CONSTRUCTION EQUIPMENT

# LIEBHERR LH50 119411-1216 - Hydraulic System

**Sample No:** LH0268843

**Oil Type:** LIEBHERR HYDRAULIC HVI


**SIMS METAL MANAGEMENT**
3220 DEEPWATER TERMINAL RD
RICHMOND, VA
US 23234
Contact: Service Manager

T: (703)392-0111
F:


## SAMPLE INFORMATION

| | | | | | |
|---|---|---|---|---|---|
| Sample Number | | **LH0268843** | LH0264639 | LH0253951 | LH0172059 |
| Sample Date | | **28 Jan 2024** | 18 Jul 2023 | 01 Mar 2023 | 23 Mar 2021 |
| Machine Hours | | **5692** | 4944 | 4520 | 1989 |
| Oil Hours | | **5692** | 1000 | 4520 | 0 |
| Oil Changed | | **Not Changd** | Not Changd | Not Changd | Not Changd |
| Sample Status | | **NORMAL** | NORMAL | NORMAL | NORMAL |

## OIL CONDITION

| | | | | | |
|---|---|---|---|---|---|
| Visc @ 40°C | cSt | **54.5** | 54.4 | 54.4 | 50.1 |
| Acid Number (AN) | mg KOH/g | **0.67** | 0.73 | 0.62 | 0.973 |

## CONTAMINATION

| | | | | | |
|---|---|---|---|---|---|
| Water | % | **NEG** | NEG | NEG | NEG |
| Particles >4µm | | **2454** | 601 | 3194 | 1861 |
| Particles >6µm | | **467** | 183 | 1012 | 479 |
| Particles >14µm | | **25** | 16 | 79 | 47 |
| ISO 4406:1999 (c) | | **18/16/12** | 16/15/11 | 19/17/13 | 18/16/13 |
| Silicon | ppm | **2** | 2 | 2 | 1 |
| Sodium | ppm | **4** | 2 | 1 | <1 |
| Potassium | ppm | **0** | 2 | 0 | <1 |

## WEAR METALS

| | | | | | |
|---|---|---|---|---|---|
| Iron | ppm | **29** | 19 | 15 | 13 |
| Copper | ppm | **4** | 3 | 2 | 2 |
| Lead | ppm | **<1** | <1 | 0 | <1 |
| Tin | ppm | **0** | <1 | 0 | 0 |
| Aluminum | ppm | **<1** | <1 | <1 | <1 |
| Chromium | ppm | **2** | 2 | <1 | <1 |
| Molybdenum | ppm | **0** | <1 | <1 | <1 |
| Nickel | ppm | **0** | 0 | 0 | 0 |
| Titanium | ppm | **0** | 0 | 0 | 0 |
| Silver | ppm | **0** | 0 | 0 | <1 |
| Manganese | ppm | **<1** | <1 | <1 | <1 |
| Vanadium | ppm | **<1** | 0 | 0 | 0 |

## ADDITIVES

| | | | | | |
|---|---|---|---|---|---|
| Calcium | ppm | **582** | 559 | 574 | 864 |
| Magnesium | ppm | **2** | <1 | 7 | 6 |
| Zinc | ppm | **593** | 558 | 498 | 637 |
| Phosphorus | ppm | **450** | 437 | 414 | 489 |
| Barium | ppm | **0** | 0 | 0 | 0 |
| Boron | ppm | **<1** | 0 | 0 | 2 |

## Diagnosis

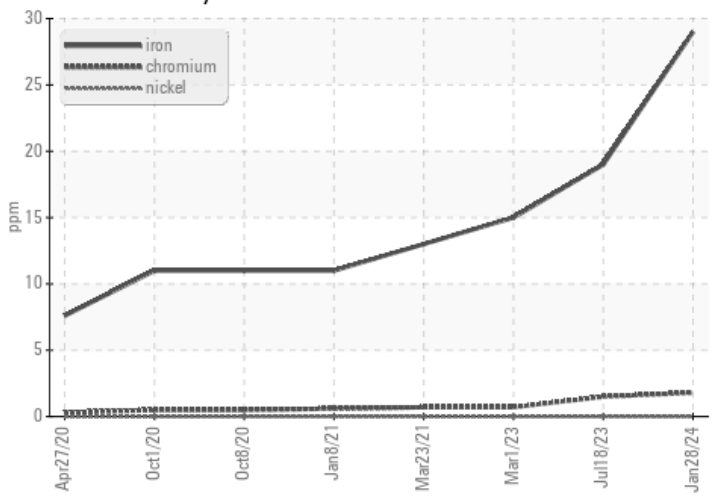
Resample at the next service interval to monitor.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

**Depot:** SIMRICLH
**Unique No:** 10903347
**Signed:** Wes Davis
**Report Date:** 01 Mar 2024

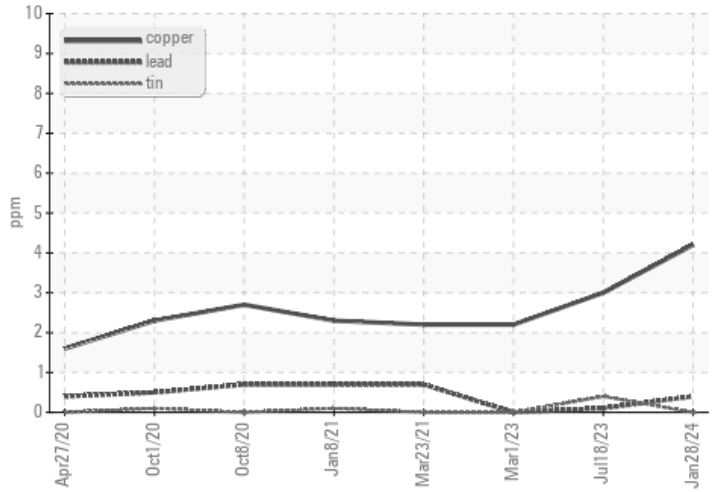
# LIEBHERR
## CONSTRUCTION EQUIPMENT


## GRAPHS

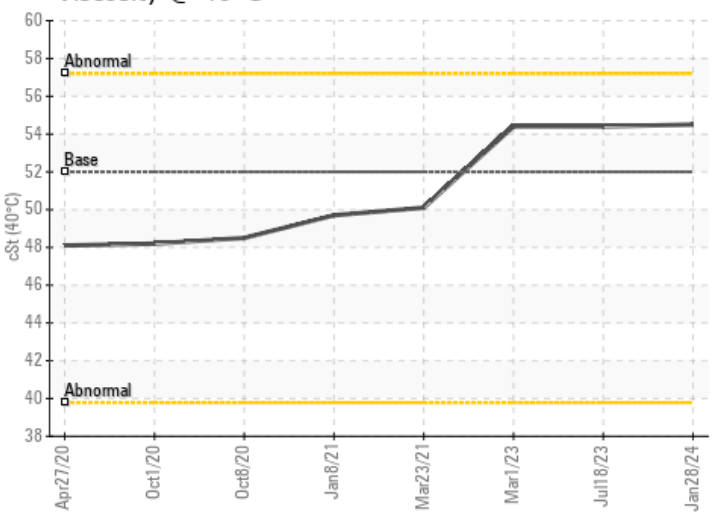
### Ferrous Alloys



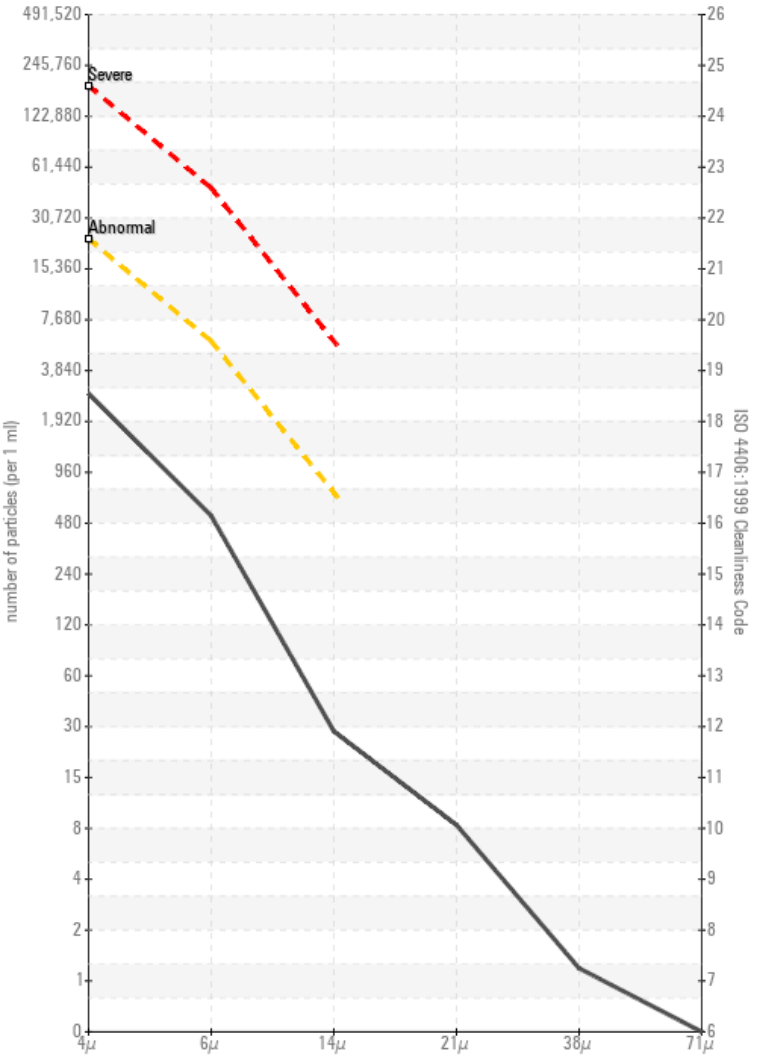

### Non-ferrous Metals




### Viscosity @ 40°C




### Particle Count




### Acid Number