

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH50M 1216-108671 - Hydraulic System

Sample No: LH0263828

Oil Type: LIEBHERR HYDRAULIC HVI



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#### SAMPLE INFORMATION

|               |                    |             |             |             |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | <b>LH0263828</b>   | LH0254786   | LH0236087   | LH0229316   |
| Sample Date   | <b>29 Jun 2023</b> | 12 Apr 2023 | 27 Jan 2023 | 17 Jun 2022 |
| Machine Hours | <b>17296</b>       | 16979       | 15891       | 14203       |
| Oil Hours     | <b>0</b>           | 0           | 0           | 0           |
| Oil Changed   | <b>Not Changd</b>  | Not Changd  | Not Changd  | N/A         |
| Sample Status | <b>NORMAL</b>      | NORMAL      | NORMAL      | NORMAL      |



#### OIL CONDITION

|                  |          |             |       |      |      |
|------------------|----------|-------------|-------|------|------|
| Visc @ 40°C      | cSt      | <b>40.8</b> | 41.3  | 41.4 | 41.1 |
| Acid Number (AN) | mg KOH/g | <b>0.72</b> | 0.564 | 0.71 | 0.84 |



#### CONTAMINATION

|                   |     |                 |          |          |          |
|-------------------|-----|-----------------|----------|----------|----------|
| Particles >4µm    |     | <b>171</b>      | 546      | 248      | 505      |
| Particles >6µm    |     | <b>50</b>       | 118      | 76       | 126      |
| Particles >14µm   |     | <b>5</b>        | 11       | 8        | 11       |
| ISO 4406:1999 (c) |     | <b>15/13/10</b> | 16/14/11 | 15/13/10 | 16/14/11 |
| Silicon           | ppm | <b>&lt;1</b>    | <1       | <1       | 0        |
| Sodium            | ppm | <b>&lt;1</b>    | 2        | 0        | 3        |
| Potassium         | ppm | <b>1</b>        | 0        | 2        | 0        |



#### WEAR METALS

|            |     |              |    |    |    |
|------------|-----|--------------|----|----|----|
| Iron       | ppm | <b>31</b>    | 30 | 28 | 27 |
| Copper     | ppm | <b>3</b>     | 2  | 3  | 3  |
| Lead       | ppm | <b>&lt;1</b> | 0  | <1 | <1 |
| Tin        | ppm | <b>&lt;1</b> | 0  | 0  | 0  |
| Aluminum   | ppm | <b>0</b>     | 0  | 0  | <1 |
| Chromium   | ppm | <b>&lt;1</b> | <1 | <1 | <1 |
| Molybdenum | ppm | <b>2</b>     | 2  | 2  | 2  |
| Nickel     | ppm | <b>&lt;1</b> | 0  | 0  | 0  |
| Titanium   | ppm | <b>&lt;1</b> | <1 | 0  | <1 |
| Silver     | ppm | <b>0</b>     | 0  | 0  | 0  |
| Manganese  | ppm | <b>&lt;1</b> | <1 | <1 | <1 |
| Vanadium   | ppm | <b>0</b>     | <1 | 0  | 0  |



#### ADDITIVES

|            |     |            |     |     |     |
|------------|-----|------------|-----|-----|-----|
| Calcium    | ppm | <b>605</b> | 632 | 690 | 814 |
| Magnesium  | ppm | <b>13</b>  | 17  | 16  | 21  |
| Zinc       | ppm | <b>561</b> | 576 | 586 | 603 |
| Phosphorus | ppm | <b>437</b> | 450 | 458 | 509 |
| Barium     | ppm | <b>0</b>   | 0   | 2   | 0   |
| Boron      | ppm | <b>3</b>   | 3   | 3   | 9   |

#### Diagnosis

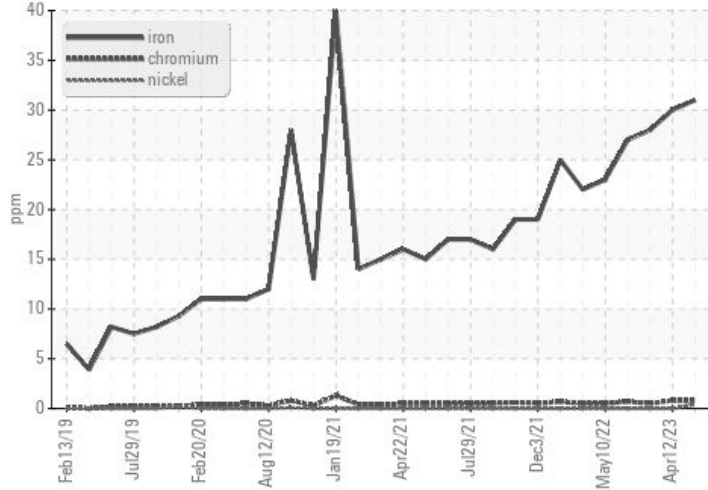
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable. The condition of oil is suitable for further service.

Depot: LEC0008  
 Unique No: 10546659  
 Signed: Don Baldrige  
 Report Date: 07 Jul 2023

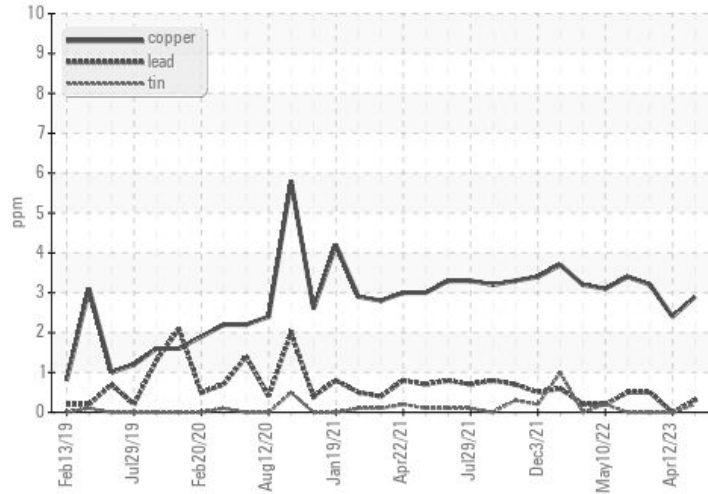


### GRAPHS

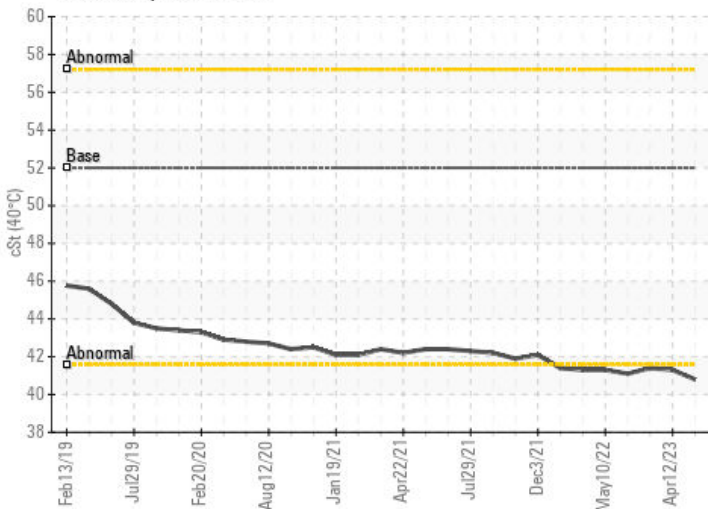
#### Ferrous Alloys



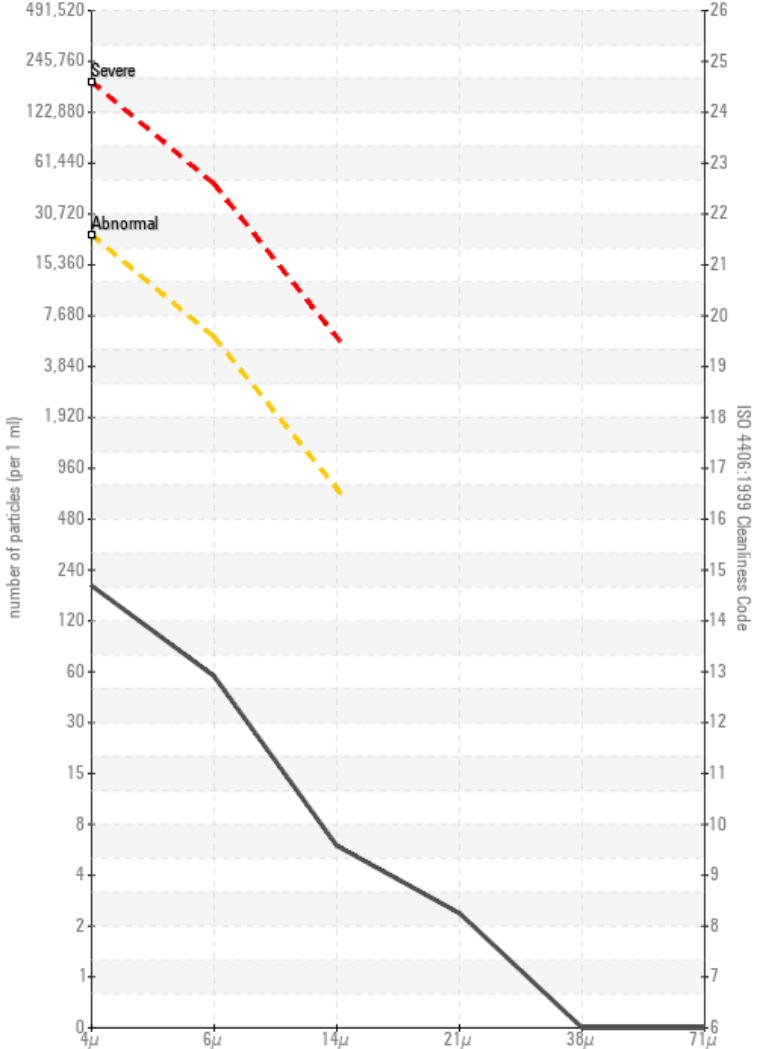
#### Non-ferrous Metals



#### Viscosity @ 40°C



#### Particle Count



#### Acid Number

