

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### [(336345)] LIEBHERR L586 060438-1334 - Hydraulic System

Sample No: LH0288239  
 Oil Type: NOT GIVEN



#### Sample Information

| Sample Number | LH0288239   | LH0278552   | LH0242721   | LH          |
|---------------|-------------|-------------|-------------|-------------|
| Sample Date   | 26 Apr 2024 | 01 Nov 2023 | 14 Jan 2023 | 24 Sep 2022 |
| Machine Hours | 7991        | 6957        | 5019        | 6018        |
| Oil Hours     | 0           | 0           | 0           | 0           |
| Oil Changed   | Not Changd  | Not Changd  | Not Changd  | Not Changd  |
| Sample Status | SEVERE      | SEVERE      | ATTENTION   | ABNORMAL    |

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#### Oil Condition

| Visc @ 40°C | cSt | 40.4 | 41.5 | 40.9 | 42.3 |
|-------------|-----|------|------|------|------|
|             |     |      |      |      |      |



#### Contamination

| Water             | %   | NEG      | NEG      | NEG      | NEG      |
|-------------------|-----|----------|----------|----------|----------|
| Particles >4µm    |     | 138820   | 122775   | 30313    | 74116    |
| Particles >6µm    |     | 58405    | 53624    | 4685     | 10339    |
| Particles >14µm   |     | 2804     | 1696     | 455      | 248      |
| ISO 4406:1999 (c) |     | 24/23/19 | 24/23/18 | 22/19/16 | 23/21/15 |
| Silicon           | ppm | 11       | 11       | 9        | 2        |
| Sodium            | ppm | 4        | 4        | 4        | <1       |
| Potassium         | ppm | 2        | 2        | 3        | <1       |



#### Wear Metals

|            |     |    |    |    |    |
|------------|-----|----|----|----|----|
| Iron       | ppm | 33 | 32 | 27 | 15 |
| Copper     | ppm | 7  | 7  | 6  | 2  |
| Lead       | ppm | 10 | 12 | 10 | 3  |
| Tin        | ppm | <1 | <1 | <1 | 0  |
| Aluminum   | ppm | 4  | 4  | 3  | <1 |
| Chromium   | ppm | 7  | 6  | 5  | <1 |
| Molybdenum | ppm | 0  | 0  | 0  | 0  |
| Nickel     | ppm | 0  | <1 | <1 | 0  |
| Titanium   | ppm | <1 | 0  | <1 | <1 |
| Silver     | ppm | 0  | <1 | 0  | 0  |
| Manganese  | ppm | <1 | 0  | <1 | <1 |
| Vanadium   | ppm | 0  | 0  | 0  | 0  |



#### Additives

|            |     |      |      |      |     |
|------------|-----|------|------|------|-----|
| Calcium    | ppm | 1585 | 1487 | 1539 | 744 |
| Magnesium  | ppm | 19   | 15   | 13   | 5   |
| Zinc       | ppm | 749  | 726  | 719  | 813 |
| Phosphorus | ppm | 622  | 607  | 658  | 714 |
| Barium     | ppm | <1   | <1   | 0    | 0   |
| Boron      | ppm | 15   | 9    | 9    | 11  |

#### Diagnosis

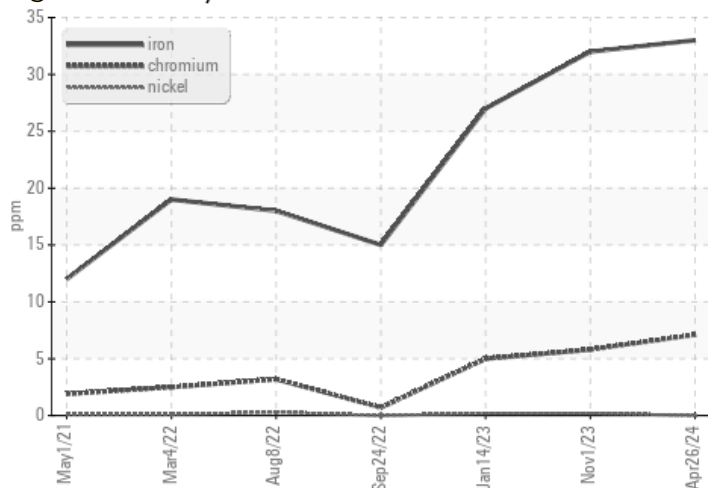
We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. Chromium ppm levels are abnormal. Ring wear is indicated. There is a high amount of particulates (2 to 100 microns in size) present in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: BIRWIN  
 Unique No: 5773487  
 Signed: Kevin Marson  
 Report Date: 01 May 2024

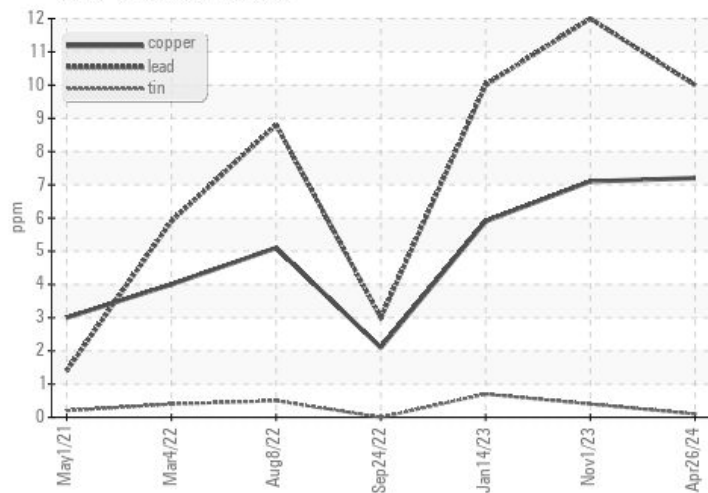


### Graphs

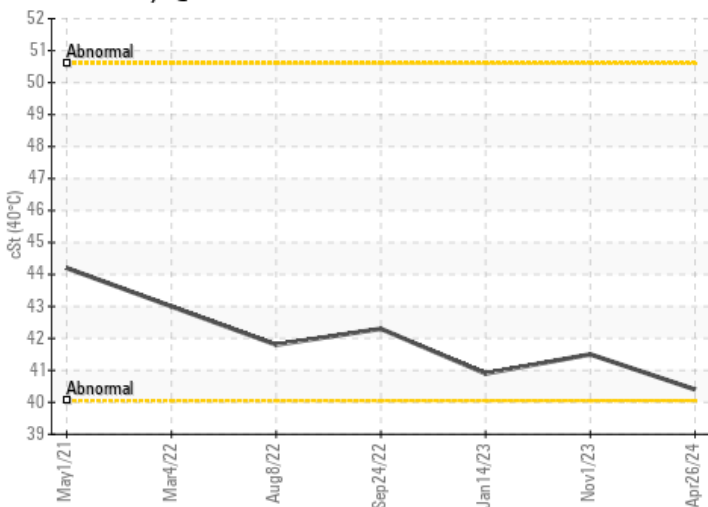
#### ● Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C



#### ● Particle Count

