

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### [[FROM COOLER]] LIEBHERR 5049 (S/N 088750) - Hydraulic System

Sample No: LH0236077

Oil Type: LIEBHERR HYDRAULIC 37



#### SAMPLE INFORMATION

|               |             |     |     |     |
|---------------|-------------|-----|-----|-----|
| Sample Number | LH0236077   | --- | --- | --- |
| Sample Date   | 20 Mar 2024 | --- | --- | --- |
| Machine Hours | 0           | --- | --- | --- |
| Oil Hours     | 0           | --- | --- | --- |
| Oil Changed   | N/A         | --- | --- | --- |
| Sample Status | NORMAL      | --- | --- | --- |

**MACALJON MECHANICAL CONT**  
 4524 OGEECHEE RD  
 SAVANNAH, GA  
 US 31405  
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 T: (912)236-9333  
 F:



#### OIL CONDITION

|                  |          |        |     |     |     |
|------------------|----------|--------|-----|-----|-----|
| Visc @ 40°C      | cSt      | ● 45.2 | --- | --- | --- |
| Acid Number (AN) | mg KOH/g | ● 0.30 | --- | --- | --- |



#### CONTAMINATION

|                   |     |          |     |     |     |
|-------------------|-----|----------|-----|-----|-----|
| Water             | %   | NEG      | --- | --- | --- |
| Particles >4µm    |     | ● 528    | --- | --- | --- |
| Particles >6µm    |     | ● 75     | --- | --- | --- |
| Particles >14µm   |     | ● 16     | --- | --- | --- |
| ISO 4406:1999 (c) |     | 16/13/11 | --- | --- | --- |
| Silicon           | ppm | ● 2      | --- | --- | --- |
| Sodium            | ppm | ● 0      | --- | --- | --- |
| Potassium         | ppm | ● 1      | --- | --- | --- |

#### Diagnosis

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



#### WEAR METALS

|            |     |      |     |     |     |
|------------|-----|------|-----|-----|-----|
| Iron       | ppm | ● <1 | --- | --- | --- |
| Copper     | ppm | ● 1  | --- | --- | --- |
| Lead       | ppm | ● <1 | --- | --- | --- |
| Tin        | ppm | ● <1 | --- | --- | --- |
| Aluminum   | ppm | ● 3  | --- | --- | --- |
| Chromium   | ppm | ● <1 | --- | --- | --- |
| Molybdenum | ppm | ● <1 | --- | --- | --- |
| Nickel     | ppm | ● 0  | --- | --- | --- |
| Titanium   | ppm | <1   | --- | --- | --- |
| Silver     | ppm | 0    | --- | --- | --- |
| Manganese  | ppm | ● 0  | --- | --- | --- |
| Vanadium   | ppm | <1   | --- | --- | --- |



#### ADDITIVES

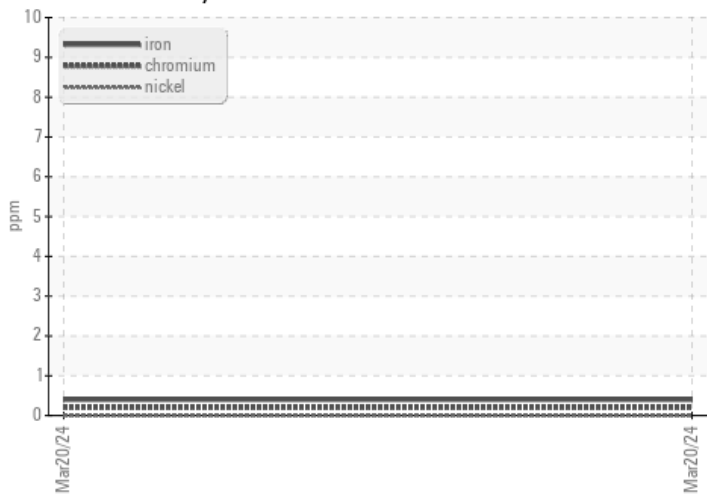
|            |     |       |     |     |     |
|------------|-----|-------|-----|-----|-----|
| Calcium    | ppm | ● 384 | --- | --- | --- |
| Magnesium  | ppm | ● 4   | --- | --- | --- |
| Zinc       | ppm | ● 488 | --- | --- | --- |
| Phosphorus | ppm | ● 402 | --- | --- | --- |
| Barium     | ppm | ● <1  | --- | --- | --- |
| Boron      | ppm | ● 2   | --- | --- | --- |

**Depot:** MACSAV  
**Unique No:** 10952650  
**Signed:** Jonathan Hester  
**Report Date:** 03 Apr 2024

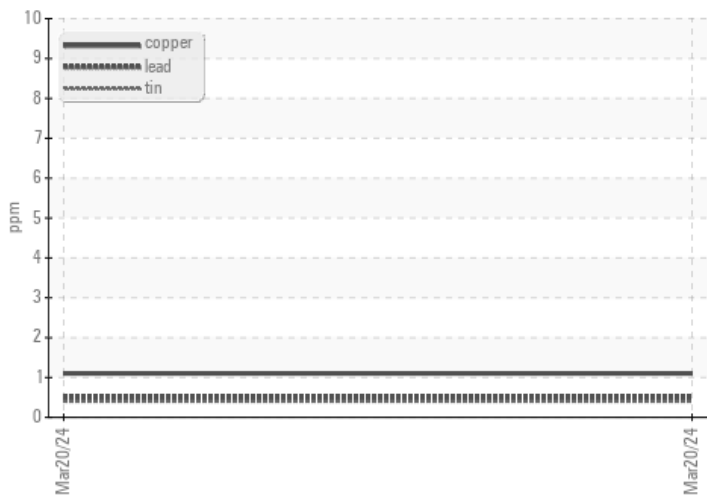


### GRAPHS

#### Ferrous Alloys



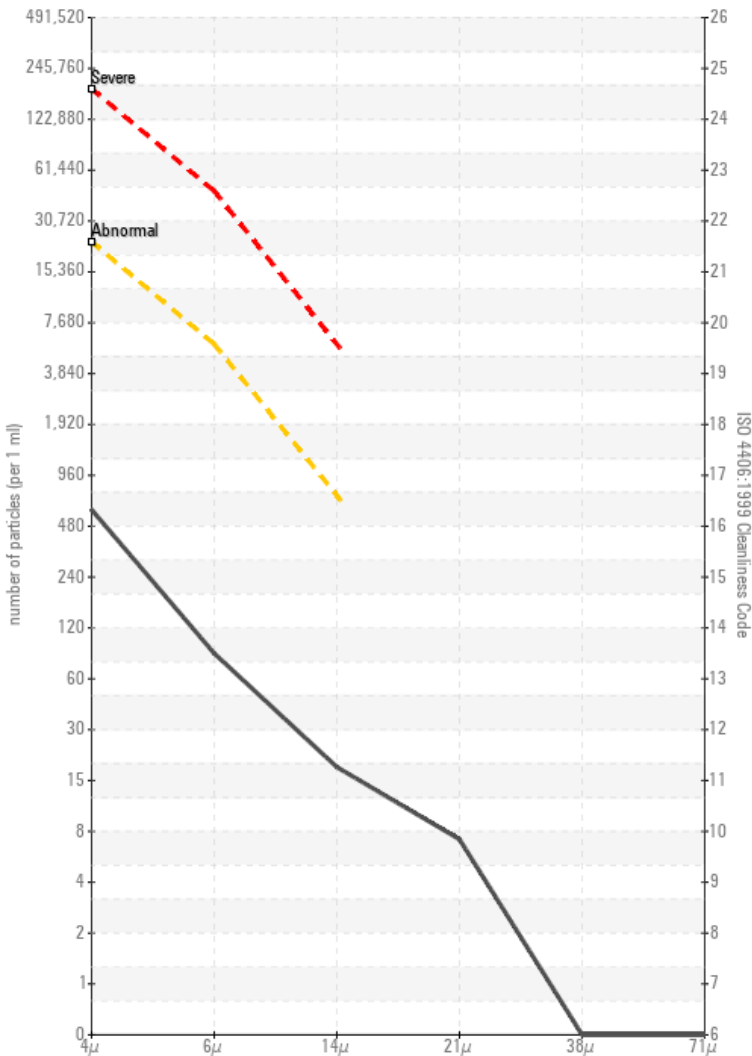
#### Non-ferrous Metals



#### Viscosity @ 40°C



#### Particle Count



#### Acid Number

