

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LTM1090-4.2 089274 - Transmission

Sample No: LH0258656

Oil Type: ZF EXO-FLUID



#### Sample Information

|               |             |     |     |     |
|---------------|-------------|-----|-----|-----|
| Sample Number | LH0258656   | --- | --- | --- |
| Sample Date   | 28 May 2024 | --- | --- | --- |
| Machine Hours | 20437       | --- | --- | --- |
| Oil Hours     | 0           | --- | --- | --- |
| Oil Changed   | Changed     | --- | --- | --- |
| Sample Status | NORMAL      | --- | --- | --- |

LIEBHERR USA CO - MOBILE AND CRAWLER CRANES  
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 F:



#### Oil Condition

|             |     |        |     |     |     |
|-------------|-----|--------|-----|-----|-----|
| Visc @ 40°C | cSt | ● 45.3 | --- | --- | --- |
|-------------|-----|--------|-----|-----|-----|



#### Contamination

|           |     |     |     |     |     |
|-----------|-----|-----|-----|-----|-----|
| Water     | %   | NEG | --- | --- | --- |
| Silicon   | ppm | ● 7 | --- | --- | --- |
| Sodium    | ppm | ● 2 | --- | --- | --- |
| 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 fluid. The condition of the fluid is acceptable for the time in service.



#### Wear Metals

|            |     |      |     |     |     |
|------------|-----|------|-----|-----|-----|
| Iron       | ppm | ● 35 | --- | --- | --- |
| Copper     | ppm | ● 30 | --- | --- | --- |
| Lead       | ppm | ● <1 | --- | --- | --- |
| Tin        | ppm | ● 0  | --- | --- | --- |
| Aluminum   | ppm | ● 7  | --- | --- | --- |
| Chromium   | ppm | ● <1 | --- | --- | --- |
| Molybdenum | ppm | <1   | --- | --- | --- |
| Nickel     | ppm | 0    | --- | --- | --- |
| Titanium   | ppm | <1   | --- | --- | --- |
| Silver     | ppm | 0    | --- | --- | --- |
| Manganese  | ppm | <1   | --- | --- | --- |
| Vanadium   | ppm | <1   | --- | --- | --- |



#### Additives

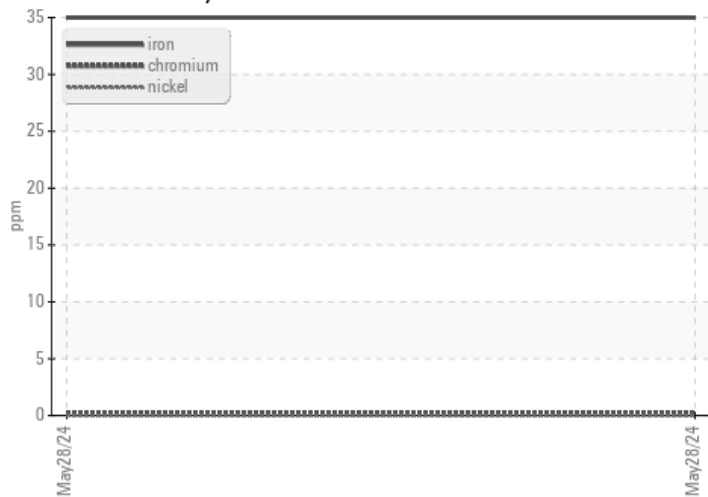
|            |     |     |     |     |     |
|------------|-----|-----|-----|-----|-----|
| Calcium    | ppm | 830 | --- | --- | --- |
| Magnesium  | ppm | 2   | --- | --- | --- |
| Zinc       | ppm | 44  | --- | --- | --- |
| Phosphorus | ppm | 544 | --- | --- | --- |
| Barium     | ppm | 0   | --- | --- | --- |
| Boron      | ppm | 0   | --- | --- | --- |

Depot: LIENEW  
 Unique No: 11063007  
 Signed: Don Baldrige  
 Report Date: 08 Jun 2024

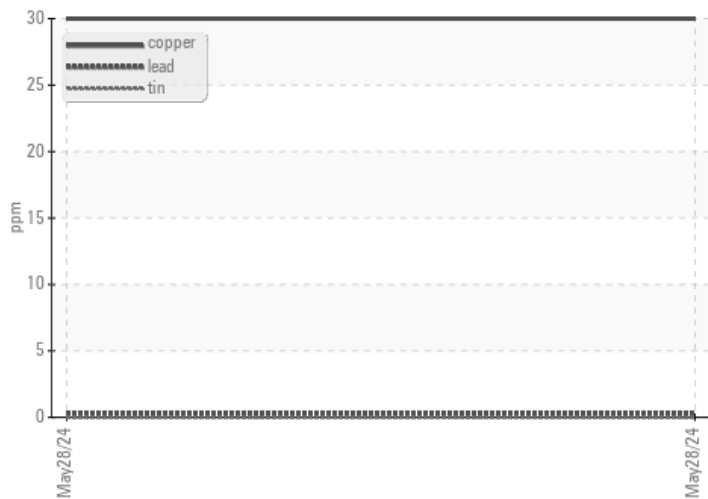


### Graphs

#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C

