

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### 116431-1217 -Rear Left Wheel Hub

Sample No: LH0277747

Oil Type: LIEBHERR GEAR BASIC 90 LS



#### SAMPLE INFORMATION

| Sample Number | LH0277747   | LH0202728   | LH0239232   | LH          |
|---------------|-------------|-------------|-------------|-------------|
| Sample Date   | 08 Jan 2024 | 09 May 2023 | 29 Aug 2022 | 26 Jan 2022 |
| Machine Hours | 8104        | 7133        | 6053        | 4903        |
| Oil Hours     | 0           | 0           | 0           | 0           |
| Oil Changed   | Changed     | Changed     | Changed     | Changed     |
| Sample Status | NORMAL      | NORMAL      | NORMAL      | NORMAL      |

#### American Iron and Metal

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#### OIL CONDITION

| Visc @ 40°C | cSt | 109 | 110 | 103 | 99.5 |
|-------------|-----|-----|-----|-----|------|
|             |     |     |     |     |      |



#### CONTAMINATION

| Water     | %   | NEG | NEG | NEG | NEG |
|-----------|-----|-----|-----|-----|-----|
| Silicon   | ppm | 2   | 2   | 2   | 4   |
| Sodium    | ppm | <1  | <1  | 1   | 1   |
| Potassium | ppm | <1  | 0   | 0   | <1  |



#### WEAR METALS

|            |     |    |    |    |    |
|------------|-----|----|----|----|----|
| Iron       | ppm | 11 | 9  | 8  | 22 |
| Copper     | ppm | 14 | 13 | 13 | 30 |
| Lead       | ppm | <1 | <1 | <1 | 1  |
| Tin        | ppm | 0  | 0  | 0  | <1 |
| Aluminum   | ppm | <1 | 0  | 0  | <1 |
| Chromium   | ppm | 0  | 0  | 0  | <1 |
| Molybdenum | ppm | <1 | <1 | 0  | 0  |
| Nickel     | ppm | 0  | 0  | <1 | <1 |
| Titanium   | ppm | 0  | 0  | 0  | 0  |
| Silver     | ppm | 0  | 0  | 3  | <1 |
| Manganese  | ppm | 0  | <1 | <1 | <1 |
| Vanadium   | ppm | 0  | 0  | 0  | 0  |



#### ADDITIVES

|            |     |      |      |      |      |
|------------|-----|------|------|------|------|
| Calcium    | ppm | 21   | 12   | 8    | 7    |
| Magnesium  | ppm | 13   | 6    | 1    | 1    |
| Zinc       | ppm | 26   | 17   | 12   | 23   |
| Phosphorus | ppm | 1495 | 1634 | 1384 | 2179 |
| Barium     | ppm | 4    | 4    | 5    | 31   |
| Boron      | ppm | 253  | 265  | 308  | 282  |

#### Diagnosis

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

Depot: BAKOTT  
Unique No: 5711756  
Signed: Wes Davis  
Report Date: 23 Jan 2024



### GRAPHS

