

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH50 1216-130389 - Swing Drive

Sample No: LH0217919

Oil Type: GEAR OIL LS 80W90



**AMERICAN STATE EQUIPMENT CO.**  
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#### SAMPLE INFORMATION

| Sample Number | LH0217919   | LH0217907   | LH0217895   | LH0200594   |
|---------------|-------------|-------------|-------------|-------------|
| Sample Date   | 19 Mar 2024 | 14 Jun 2023 | 18 Aug 2022 | 10 Feb 2022 |
| Machine Hours | 3007        | 1990        | 997         | 488         |
| Oil Hours     | 0           | 0           | 0           | 0           |
| Oil Changed   | Changed     | Changed     | Changed     | Changed     |
| Sample Status | NORMAL      | NORMAL      | NORMAL      | NORMAL      |



#### OIL CONDITION

| Visc @ 40°C | cSt | 123 | 144 | 149 | 176 |
|-------------|-----|-----|-----|-----|-----|
|             |     | ●   | ●   | ●   | ●   |



#### CONTAMINATION

| Water     | %   | NEG | NEG  | NEG  | NEG |
|-----------|-----|-----|------|------|-----|
| Silicon   | ppm | ● 2 | ● <1 | ● <1 | ● 3 |
| Sodium    | ppm | ● 2 | ● 2  | ● <1 | ● 6 |
| Potassium | ppm | ● 2 | ● 3  | ● 1  | ● 2 |



#### WEAR METALS

|            |     |       |       |      |       |
|------------|-----|-------|-------|------|-------|
| Iron       | ppm | ● 367 | ● 712 | ● 64 | ● 320 |
| Copper     | ppm | ● 39  | ● 27  | ● 22 | ● 46  |
| Lead       | ppm | ● 0   | ● 0   | ● <1 | ● <1  |
| Tin        | ppm | ● <1  | ● <1  | ● <1 | ● 2   |
| Aluminum   | ppm | ● 0   | ● 2   | ● <1 | ● 1   |
| Chromium   | ppm | ● 4   | ● 6   | ● 0  | ● 2   |
| Molybdenum | ppm | ● 0   | ● 0   | ● <1 | ● <1  |
| Nickel     | ppm | ● 2   | ● <1  | ● 0  | ● <1  |
| Titanium   | ppm | <1    | 0     | 0    | 0     |
| Silver     | ppm | 0     | 0     | 0    | 0     |
| Manganese  | ppm | ● 3   | ● 5   | ● <1 | ● 3   |
| Vanadium   | ppm | 0     | 0     | 0    | 0     |



#### ADDITIVES

|            |     |       |       |        |        |
|------------|-----|-------|-------|--------|--------|
| Calcium    | ppm | ● 36  | ● 41  | ● 45   | ● 42   |
| Magnesium  | ppm | ● 8   | ● 2   | ● 3    | ● 2    |
| Zinc       | ppm | ● 25  | ● 36  | ● 21   | ● 19   |
| Phosphorus | ppm | ● 852 | ● 717 | ● 1189 | ● 2483 |
| Barium     | ppm | ● 0   | ● 6   | ● 0    | ● 9    |
| Boron      | ppm | <1    | ● 2   | ● 9    | ● 15   |

#### 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 condition of the oil is acceptable for the time in service.

Depot: LEC0008  
 Unique No: 10955345  
 Signed: Wes Davis  
 Report Date: 03 Apr 2024



### GRAPHS

