

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### [RMR-Louisville] LIEBHERR LH60M 114199-1217 - Swing Drive

Sample No: LHMC79472

Oil Type: LIEBHERR GEAR BASIC 90 LS



#### SAMPLE INFORMATION

|               |             |             |             |             |
|---------------|-------------|-------------|-------------|-------------|
| Sample Number | LHMC79472   | DJJMC124951 | DJJ0004056  | LHMC50607   |
| Sample Date   | 16 Jun 2021 | 03 Mar 2021 | 18 Nov 2020 | 03 Apr 2020 |
| Machine Hours | 4478        | 3793        | 3111        | 1846        |
| Oil Hours     | 0           | 0           | 0           | 0           |
| Oil Changed   | Changed     | Not Chngd   | Changed     | Changed     |
| Sample Status | SEVERE      | SEVERE      | ABNORMAL    | NORMAL      |

RIVER METALS RECYCLING - LOUISVILLE  
 PO BOX 6521  
 LOUISVILLE, KY  
 US 40206  
 Contact: RYAN BOWDEN



#### OIL CONDITION

|             |     |     |     |     |     |
|-------------|-----|-----|-----|-----|-----|
| Visc @ 40°C | cSt | 253 | 211 | 280 | 197 |
|-------------|-----|-----|-----|-----|-----|

T:  
 F: (502)587-8699



#### CONTAMINATION

|           |     |      |      |       |     |
|-----------|-----|------|------|-------|-----|
| Water     | %   | 1.15 | 1.56 | 0.155 | --- |
| Silicon   | ppm | 3    | 2    | 2     | 1   |
| Sodium    | ppm | 2    | 2    | 3     | 4   |
| Potassium | ppm | 0    | 0    | 10    | 0   |

#### Diagnosis

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Gear wear is indicated. There is a high concentration of water present in the oil. The oil is no longer serviceable due to the presence of contaminants.



#### WEAR METALS

|            |     |      |     |     |     |
|------------|-----|------|-----|-----|-----|
| Iron       | ppm | 1186 | 648 | 885 | 265 |
| Copper     | ppm | 136  | 50  | 92  | 55  |
| Lead       | ppm | 0    | 1   | 0   | <1  |
| Tin        | ppm | 4    | 0   | 0   | 0   |
| Aluminum   | ppm | 0    | <1  | <1  | <1  |
| Chromium   | ppm | 13   | 6   | 8   | 2   |
| Molybdenum | ppm | <1   | 0   | 0   | 0   |
| Nickel     | ppm | 1    | 1   | 1   | <1  |
| Titanium   | ppm | <1   | 0   | 0   | 0   |
| Silver     | ppm | <1   | <1  | 0   | 0   |
| Manganese  | ppm | 8    | 5   | 6   | 2   |
| Vanadium   | ppm | <1   | 0   | 0   | <1  |



#### ADDITIVES

|            |     |      |      |      |      |
|------------|-----|------|------|------|------|
| Calcium    | ppm | 5    | 6    | 9    | 9    |
| Magnesium  | ppm | <1   | 0    | 2    | 2    |
| Zinc       | ppm | 0    | 6    | 17   | 10   |
| Phosphorus | ppm | 2231 | 2088 | 1870 | 2132 |
| Barium     | ppm | <1   | 0    | <1   | 3    |
| Boron      | ppm | 10   | 3    | 2    | 1    |

Depot: RIVLOU  
 Unique No: 9583154  
 Signed: Don Baldrige  
 Report Date: 19 Jul 2021



### GRAPHS

