



# LIEBHERR

## OIL ANALYSIS REPORT

|                 |        |
|-----------------|--------|
| WEAR            | NORMAL |
| CONTAMINATION   | NORMAL |
| FLUID CONDITION | NORMAL |



Machine Id  
**LIEBHERR LH60M 1217-94975**  
Component  
**Rear Left Wheel Hub**  
Fluid  
**GEAR OIL SAE 80W90 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current     | History1    | History2 |
|----------------|-----|-------------|-----------|-------------|-------------|----------|
| Sample Number  |     | Client Info |           | LHMC166763  | LHMC119722  | ---      |
| Sample Date    |     | Client Info |           | 10 Apr 2024 | 13 Jun 2019 | ---      |
| Machine Age    | hrs | Client Info |           | 8268        | 5269        | ---      |
| Oil Age        | hrs | Client Info |           | 0           | 0           | ---      |
| Filter Age     | hrs | Client Info |           | 0           | 0           | ---      |
| Oil Changed    |     | Client Info |           | Changed     | N/A         | ---      |
| Filter Changed |     | Client Info |           | N/A         | N/A         | ---      |
| Sample Status  |     |             |           | NORMAL      | ABNORMAL    | ---      |

### WEAR

All component wear rates are normal.

|              |        |             |      |      |      |     |
|--------------|--------|-------------|------|------|------|-----|
| Iron         | ppm    | ASTM D5185m | >650 | 83   | 26   | --- |
| Chromium     | ppm    | ASTM D5185m | >4   | <1   | <1   | --- |
| Nickel       | ppm    | ASTM D5185m | >4   | 0    | 1    | --- |
| Titanium     | ppm    | ASTM D5185m | >4   | <1   | 0    | --- |
| Silver       | ppm    | ASTM D5185m |      | 0    | 0    | --- |
| Aluminum     | ppm    | ASTM D5185m | >25  | 2    | <1   | --- |
| Lead         | ppm    | ASTM D5185m | >4   | 0    | 0    | --- |
| Copper       | ppm    | ASTM D5185m | >60  | 31   | 20   | --- |
| Tin          | ppm    | ASTM D5185m | >4   | <1   | 0    | --- |
| Vanadium     | ppm    | ASTM D5185m |      | 0    | <1   | --- |
| White Metal  | scalar | *Visual     | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual     | NONE | NONE | NONE | --- |

### CONTAMINATION

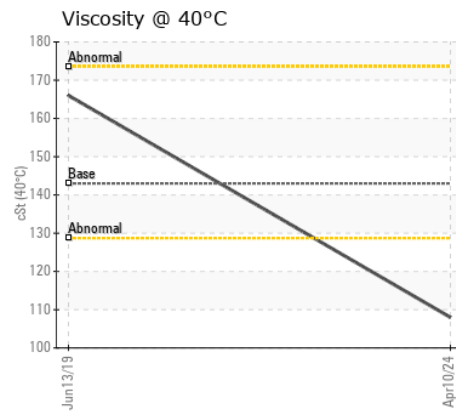
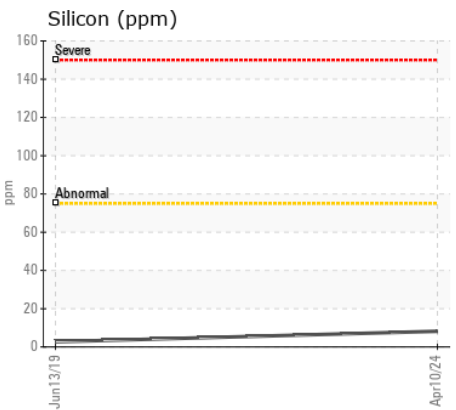
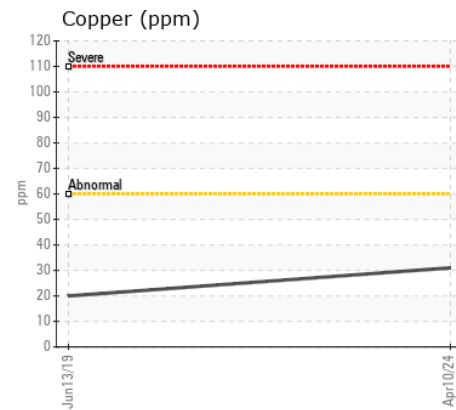
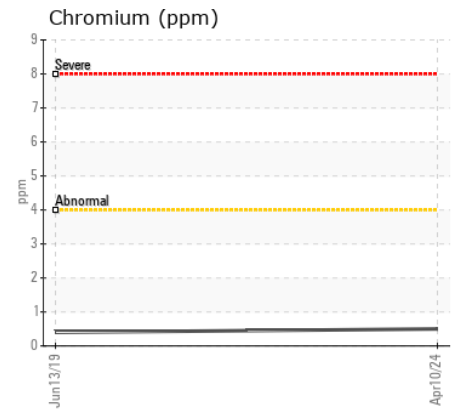
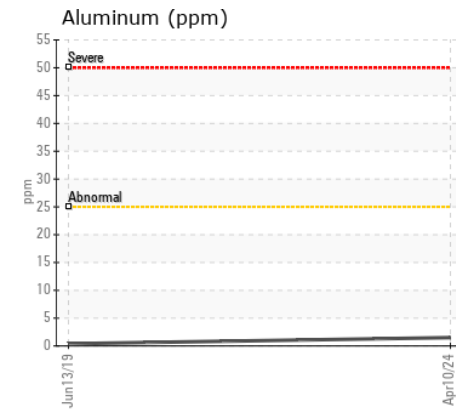
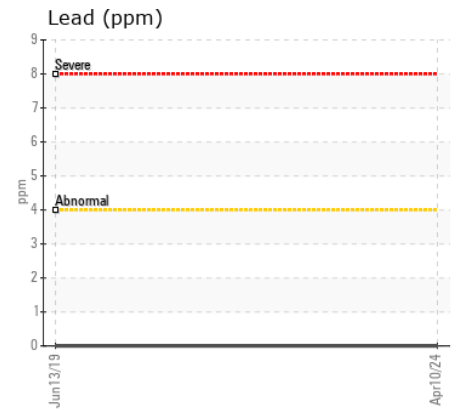
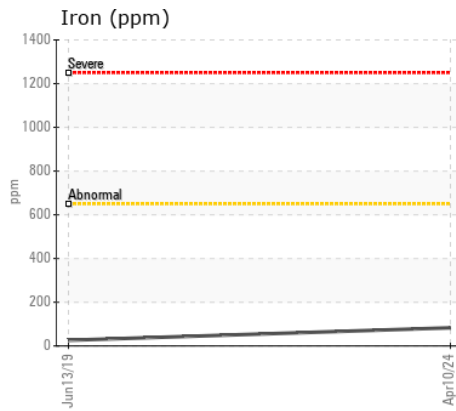
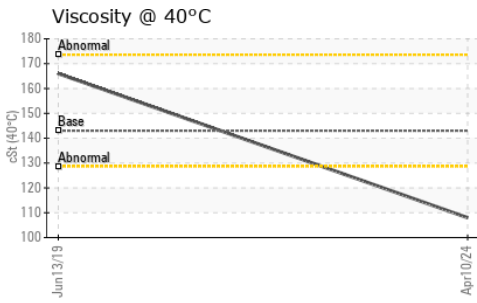
There is no indication of any contamination in the oil.

|                  |        |             |       |       |         |     |
|------------------|--------|-------------|-------|-------|---------|-----|
| Silicon          | ppm    | ASTM D5185m | >75   | 8     | 3       | --- |
| Potassium        | ppm    | ASTM D5185m | >20   | 9     | 10      | --- |
| Water            |        | WC Method   | >0.2  | NEG   | NEG     | --- |
| Silt             | scalar | *Visual     | NONE  | NONE  | NONE    | --- |
| Debris           | scalar | *Visual     | NONE  | NONE  | ▲ MODER | --- |
| Sand/Dirt        | scalar | *Visual     | NONE  | NONE  | NONE    | --- |
| Appearance       | scalar | *Visual     | NORML | NORML | NORML   | --- |
| Odor             | scalar | *Visual     | NORML | NORML | NORML   | --- |
| Emulsified Water | scalar | *Visual     | >0.2  | NEG   | NEG     | --- |

### FLUID CONDITION

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

|             |     |             |       |       |       |     |
|-------------|-----|-------------|-------|-------|-------|-----|
| Sodium      | ppm | ASTM D5185m | >170  | <1    | 1     | --- |
| Boron       | ppm | ASTM D5185m | 400   | 155   | 3     | --- |
| Barium      | ppm | ASTM D5185m | 200   | 4     | 40    | --- |
| Molybdenum  | ppm | ASTM D5185m | 12    | 8     | 3     | --- |
| Manganese   | ppm | ASTM D5185m |       | <1    | <1    | --- |
| Magnesium   | ppm | ASTM D5185m | 12    | 87    | 9     | --- |
| Calcium     | ppm | ASTM D5185m | 150   | 604   | 30    | --- |
| Phosphorus  | ppm | ASTM D5185m | 1650  | 1275  | 391   | --- |
| Zinc        | ppm | ASTM D5185m | 125   | 318   | 40    | --- |
| Sulfur      | ppm | ASTM D5185m | 22500 | 19387 | 11632 | --- |
| Visc @ 40°C | cSt | ASTM D445   | 143   | 108   | 166   | --- |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LHMC166763  
**Lab Number** : 06151341  
**Unique Number** : 10981419  
**Test Package** : MOB 1 ( Additional Tests: PQ )

AMERICAN STATE EQUIPMENT CO. (RENTAL TO ARCELOR MITTAL)  
 138 HWY 3217  
 LAPLACE, LA  
 US 70068  
 Contact: SERVICE MANAGER

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T: (414)541-8700

F: