



# LIEBHERR

## OIL ANALYSIS REPORT

|                 |               |
|-----------------|---------------|
| WEAR            | <b>NORMAL</b> |
| CONTAMINATION   | <b>NORMAL</b> |
| FLUID CONDITION | <b>NORMAL</b> |



Machine Id  
**LIEBHERR LH22M 146587-1250**  
Component  
**Front Differential**  
Fluid  
**LIEBHERR GEAR BASIC 90 LS (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>LH0282648</b>   | LH0279508   | LH          |
| Sample Date    |     | Client Info |           | <b>05 Dec 2023</b> | 05 Dec 2023 | 28 Aug 2023 |
| Machine Age    | hrs | Client Info |           | <b>2000</b>        | 1259        | 574         |
| Oil Age        | hrs | Client Info |           | <b>1000</b>        | 0           | 0           |
| Filter Age     | hrs | Client Info |           | <b>1000</b>        | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | N/A         | N/A         |
| Filter Changed |     | Client Info |           | <b>None</b>        | N/A         | N/A         |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

### WEAR

All component wear rates are normal.

|              |        |               |      |              |      |       |
|--------------|--------|---------------|------|--------------|------|-------|
| Iron         | ppm    | ASTM D5185(m) | >190 | <b>8</b>     | 16   | 21    |
| Chromium     | ppm    | ASTM D5185(m) | >2   | <b>0</b>     | 0    | <1    |
| Nickel       | ppm    | ASTM D5185(m) | >2   | <b>&lt;1</b> | <1   | <1    |
| Titanium     | ppm    | ASTM D5185(m) |      | <b>0</b>     | 0    | 0     |
| Silver       | ppm    | ASTM D5185(m) |      | <b>0</b>     | <1   | 0     |
| Aluminum     | ppm    | ASTM D5185(m) | >5   | <b>0</b>     | <1   | 1     |
| Lead         | ppm    | ASTM D5185(m) | >15  | <b>0</b>     | 0    | 0     |
| Copper       | ppm    | ASTM D5185(m) | >70  | <b>&lt;1</b> | <1   | 1     |
| Tin          | ppm    | ASTM D5185(m) | >2   | <b>0</b>     | 0    | 0     |
| Vanadium     | ppm    | ASTM D5185(m) |      | <b>0</b>     | 0    | 0     |
| White Metal  | scalar | Visual*       | NONE | <b>NONE</b>  | NONE | LIGHT |
| Yellow Metal | scalar | Visual*       | NONE | <b>NONE</b>  | NONE | NONE  |

### CONTAMINATION

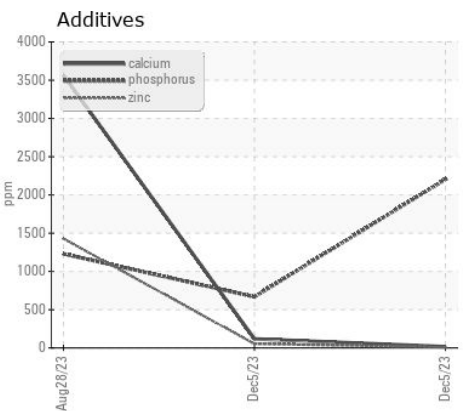
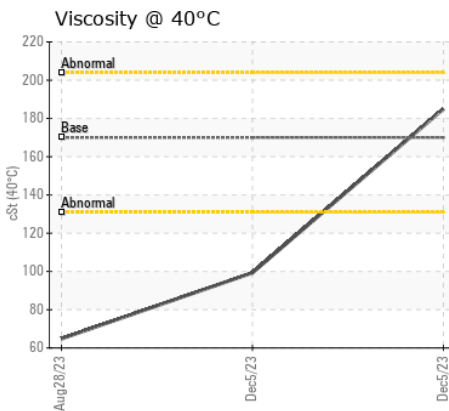
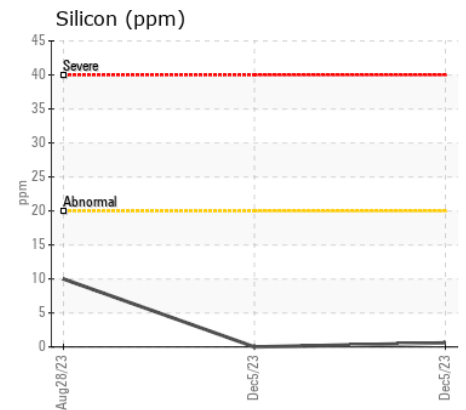
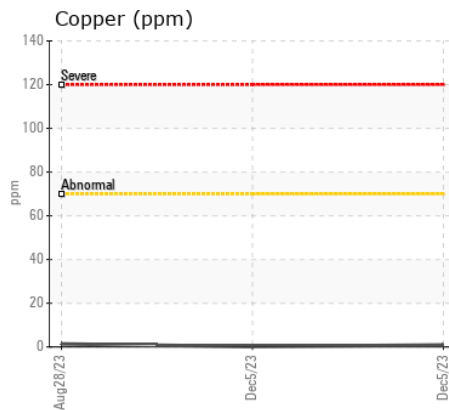
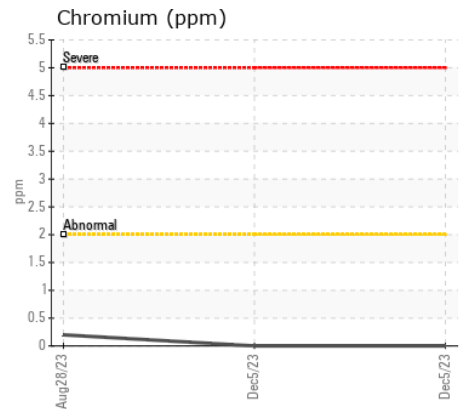
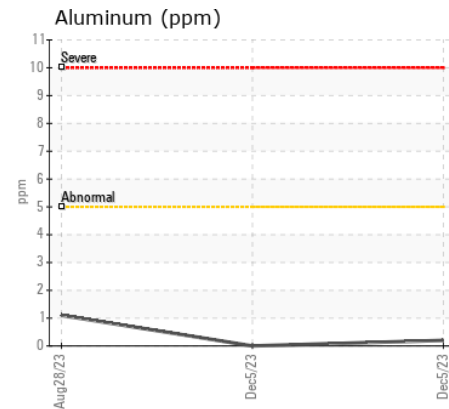
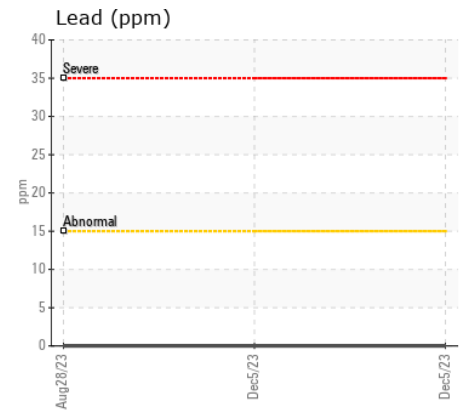
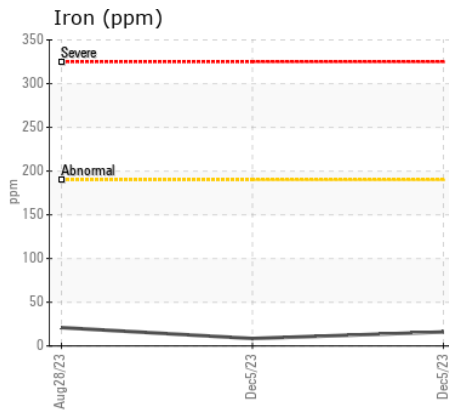
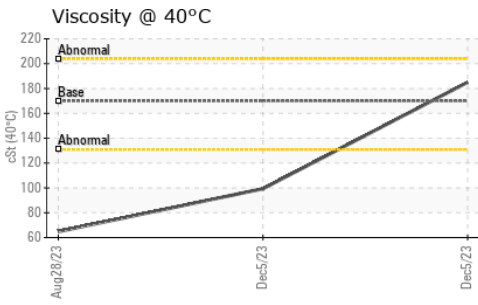
There is no indication of any contamination in the oil.

|                  |        |               |       |              |       |       |
|------------------|--------|---------------|-------|--------------|-------|-------|
| Silicon          | ppm    | ASTM D5185(m) | >20   | <b>0</b>     | <1    | 10    |
| Potassium        | ppm    | ASTM D5185(m) | >20   | <b>0</b>     | 0     | <1    |
| Water            |        | WC Method     | >.2   | <b>NEG</b>   | NEG   | NEG   |
| Silt             | scalar | Visual*       | NONE  | <b>NONE</b>  | NONE  | NONE  |
| Debris           | scalar | Visual*       | NONE  | <b>NONE</b>  | NONE  | NONE  |
| Sand/Dirt        | scalar | Visual*       | NONE  | <b>NONE</b>  | NONE  | NONE  |
| Appearance       | scalar | Visual*       | NORML | <b>NORML</b> | NORML | NORML |
| Odor             | scalar | Visual*       | NORML | <b>NORML</b> | NORML | NORML |
| Emulsified Water | scalar | Visual*       | >.2   | <b>NEG</b>   | NEG   | NEG   |

### FLUID CONDITION

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

|             |     |               |       |              |       |      |
|-------------|-----|---------------|-------|--------------|-------|------|
| Sodium      | ppm | ASTM D5185(m) |       | <b>1</b>     | 2     | 15   |
| Boron       | ppm | ASTM D5185(m) | 0     | <b>&lt;1</b> | 6     | 108  |
| Barium      | ppm | ASTM D5185(m) | 0     | <b>0</b>     | <1    | <1   |
| Molybdenum  | ppm | ASTM D5185(m) | 0     | <b>0</b>     | 0     | <1   |
| Manganese   | ppm | ASTM D5185(m) | 0     | <b>&lt;1</b> | <1    | 10   |
| Magnesium   | ppm | ASTM D5185(m) | <1    | <b>&lt;1</b> | <1    | 11   |
| Calcium     | ppm | ASTM D5185(m) | <1    | <b>17</b>    | 119   | 3565 |
| Phosphorus  | ppm | ASTM D5185(m) | 2143  | <b>2203</b>  | 668   | 1230 |
| Zinc        | ppm | ASTM D5185(m) | <1    | <b>7</b>     | 53    | 1429 |
| Sulfur      | ppm | ASTM D5185(m) | 23468 | <b>23987</b> | 19586 | 2883 |
| Visc @ 40°C | cSt | ASTM D7279(m) | 170   | <b>185</b>   | 99.3  | 64.8 |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0282648 **Received** : 29 Apr 2024  
**Lab Number** : 02632043 **Tested** : 29 Apr 2024  
**Unique Number** : 5773196 **Diagnosed** : 29 Apr 2024 - Wes Davis  
**Test Package** : MOB 1

**CONTENEUR ROSE INC.**  
 89 RUE MORANE  
 LAVAL, QC  
 CA H7M 1R5  
 Contact: Service Manager

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

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F: