



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR L556 059655-1332**  
Component  
**Rear Right Wheel Hub**  
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>LH</b>          | LH0180822   | LH0180809   |
| Sample Date    |     | Client Info |           | <b>28 Feb 2024</b> | 10 Dec 2021 | 10 Sep 2021 |
| Machine Age    | hrs | Client Info |           | <b>250</b>         | 5000        | 4019        |
| Oil Age        | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>N/A</b>         | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | None        | None        |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

### WEAR

All component wear rates are normal.

|              |        |               |      |              |      |       |
|--------------|--------|---------------|------|--------------|------|-------|
| Iron         | ppm    | ASTM D5185(m) | >500 | <b>23</b>    | 52   | 54    |
| Chromium     | ppm    | ASTM D5185(m) | >8   | <b>0</b>     | <1   | <1    |
| Nickel       | ppm    | ASTM D5185(m) | >5   | <b>&lt;1</b> | <1   | <1    |
| Titanium     | ppm    | ASTM D5185(m) |      | <b>0</b>     | 0    | 0     |
| Silver       | ppm    | ASTM D5185(m) |      | <b>0</b>     | 0    | <1    |
| Aluminum     | ppm    | ASTM D5185(m) | >5   | <b>&lt;1</b> | 0    | <1    |
| Lead         | ppm    | ASTM D5185(m) | >5   | <b>&lt;1</b> | <1   | <1    |
| Copper       | ppm    | ASTM D5185(m) | >50  | <b>6</b>     | 15   | 22    |
| Tin          | ppm    | ASTM D5185(m) |      | <b>&lt;1</b> | <1   | <1    |
| Vanadium     | ppm    | ASTM D5185(m) |      | <b>0</b>     | 0    | 0     |
| White Metal  | scalar | Visual*       | NONE | <b>VLITE</b> | NONE | VLITE |
| Yellow Metal | scalar | Visual*       | NONE | <b>NONE</b>  | NONE | NONE  |

### CONTAMINATION

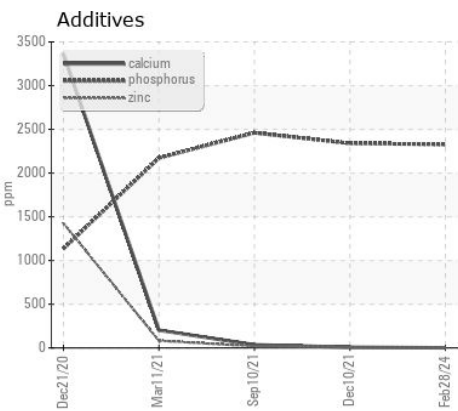
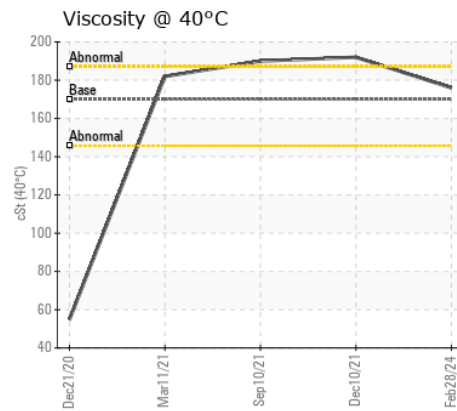
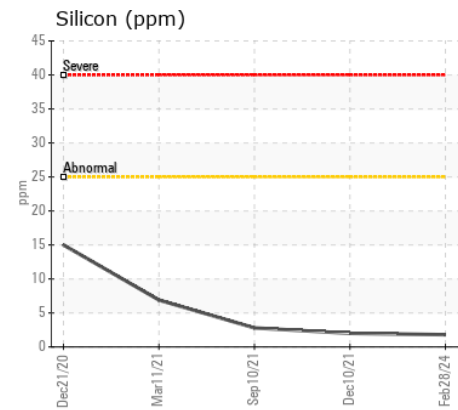
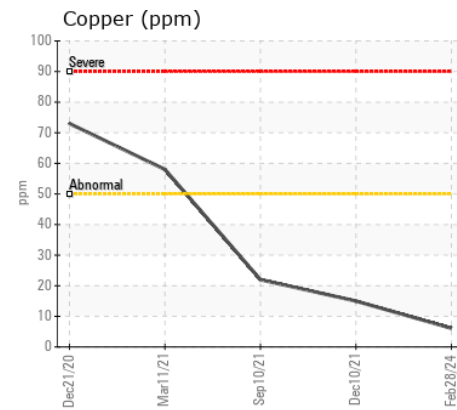
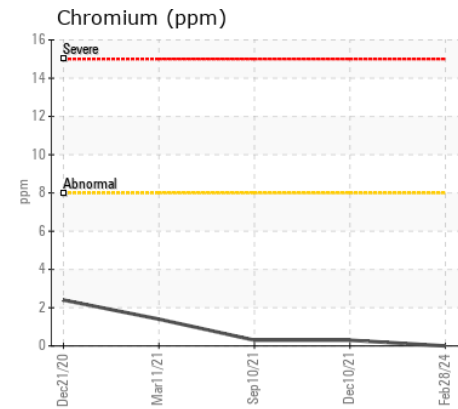
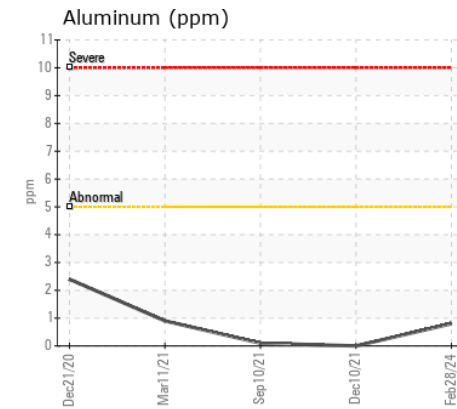
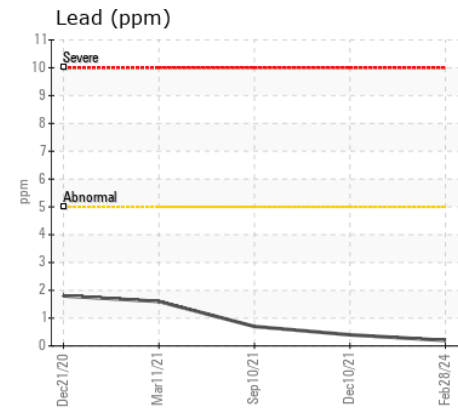
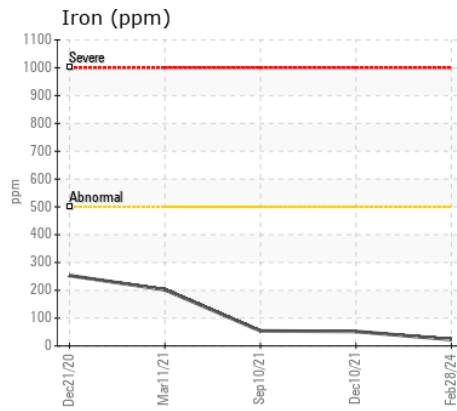
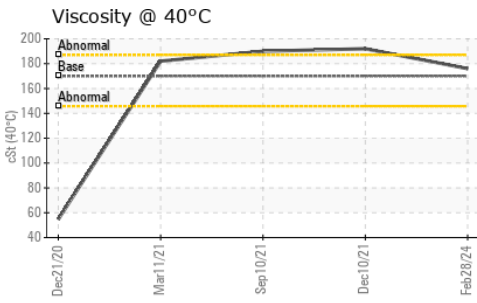
There is no indication of any contamination in the oil.

|                  |        |               |       |              |       |       |
|------------------|--------|---------------|-------|--------------|-------|-------|
| Silicon          | ppm    | ASTM D5185(m) | >25   | <b>2</b>     | 2     | 3     |
| Potassium        | ppm    | ASTM D5185(m) | >20   | <b>&lt;1</b> | <1    | <1    |
| Water            |        | WC Method     | >0.2  | <b>NEG</b>   | NEG   | NEG   |
| Silt             | scalar | Visual*       | NONE  | <b>NONE</b>  | NONE  | NONE  |
| Debris           | scalar | Visual*       | NONE  | <b>VLITE</b> | NONE  | NONE  |
| Sand/Dirt        | scalar | Visual*       | NONE  | <b>VLITE</b> | VLITE | NONE  |
| Appearance       | scalar | Visual*       | NORML | <b>NORML</b> | NORML | NORML |
| Odor             | scalar | Visual*       | NORML | <b>NORML</b> | NORML | NORML |
| Emulsified Water | scalar | Visual*       | >0.2  | <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>&lt;1</b> | 2     | 3     |
| Boron       | ppm | ASTM D5185(m) | 0     | <b>0</b>     | <1    | 3     |
| Barium      | ppm | ASTM D5185(m) | 0     | <b>&lt;1</b> | 0     | 0     |
| Molybdenum  | ppm | ASTM D5185(m) | 0     | <b>&lt;1</b> | 3     | 3     |
| Manganese   | ppm | ASTM D5185(m) | 0     | <b>0</b>     | 2     | 2     |
| Magnesium   | ppm | ASTM D5185(m) | <1    | <b>&lt;1</b> | <1    | 2     |
| Calcium     | ppm | ASTM D5185(m) | <1    | <b>2</b>     | 8     | 36    |
| Phosphorus  | ppm | ASTM D5185(m) | 2143  | <b>2327</b>  | 2340  | 2461  |
| Zinc        | ppm | ASTM D5185(m) | <1    | <b>5</b>     | 8     | 18    |
| Sulfur      | ppm | ASTM D5185(m) | 23468 | <b>25603</b> | 24918 | 24622 |
| Visc @ 40°C | cSt | ASTM D7279(m) | 170   | <b>176</b>   | 192   | 190   |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH  
**Lab Number** : 02619039  
**Unique Number** : 5736149  
**Test Package** : MOB 1  
**Received** : 29 Feb 2024  
**Tested** : 29 Feb 2024  
**Diagnosed** : 29 Feb 2024 - Wes Davis

**PRODUITS FORESTIERS D.G. LTEE**  
 313 RANG ST-JOSEPH  
 STE-AURELIE, QC  
 CA G0M 1M0  
 Contact: Roger .

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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