



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR LH30M 140292-1253**  
Component  
**Hydraulic System**  
Fluid  
**{not provided} (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

| Test           | UOM | Method      | Limit/Abn | Current            | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|----------|----------|
| Sample Number  |     | Client Info |           | <b>LH0278879</b>   | ---      | ---      |
| Sample Date    |     | Client Info |           | <b>21 Jan 2024</b> | ---      | ---      |
| Machine Age    | hrs | Client Info |           | <b>1531</b>        | ---      | ---      |
| Oil Age        | hrs | Client Info |           | <b>0</b>           | ---      | ---      |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | ---      | ---      |
| Oil Changed    |     | Client Info |           | <b>Not Changd</b>  | ---      | ---      |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | ---      | ---      |
| Sample Status  |     |             |           | <b>NORMAL</b>      | ---      | ---      |

### WEAR

All component wear rates are normal.

|              |        |               |      |              |     |     |
|--------------|--------|---------------|------|--------------|-----|-----|
| Iron         | ppm    | ASTM D5185(m) | >50  | <b>15</b>    | --- | --- |
| Chromium     | ppm    | ASTM D5185(m) | >5   | <b>&lt;1</b> | --- | --- |
| Nickel       | ppm    | ASTM D5185(m) | >2   | <b>&lt;1</b> | --- | --- |
| Titanium     | ppm    | ASTM D5185(m) |      | <b>0</b>     | --- | --- |
| Silver       | ppm    | ASTM D5185(m) |      | <b>0</b>     | --- | --- |
| Aluminum     | ppm    | ASTM D5185(m) | >2   | <b>&lt;1</b> | --- | --- |
| Lead         | ppm    | ASTM D5185(m) | >4   | <b>&lt;1</b> | --- | --- |
| Copper       | ppm    | ASTM D5185(m) | >10  | <b>4</b>     | --- | --- |
| Tin          | ppm    | ASTM D5185(m) | >2   | <b>0</b>     | --- | --- |
| Vanadium     | ppm    | ASTM D5185(m) |      | <b>0</b>     | --- | --- |
| White Metal  | scalar | Visual*       | NONE | <b>NONE</b>  | --- | --- |
| Yellow Metal | scalar | Visual*       | NONE | <b>NONE</b>  | --- | --- |

### CONTAMINATION

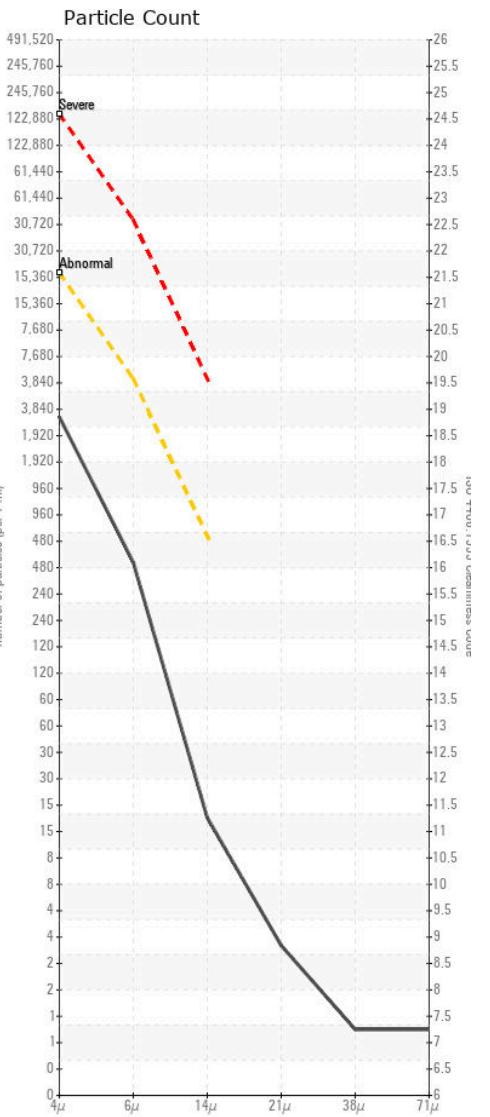
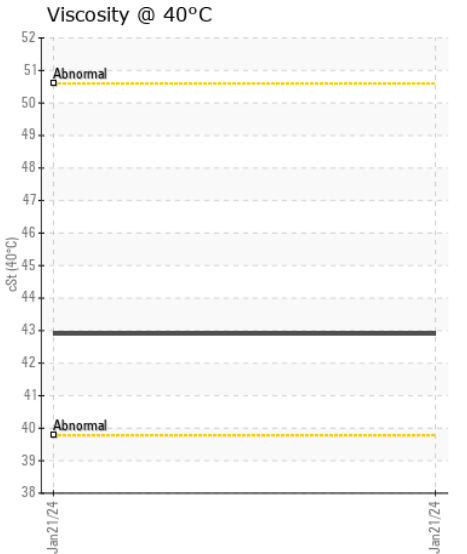
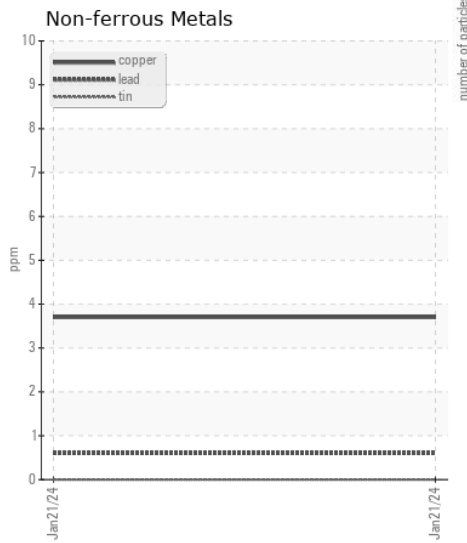
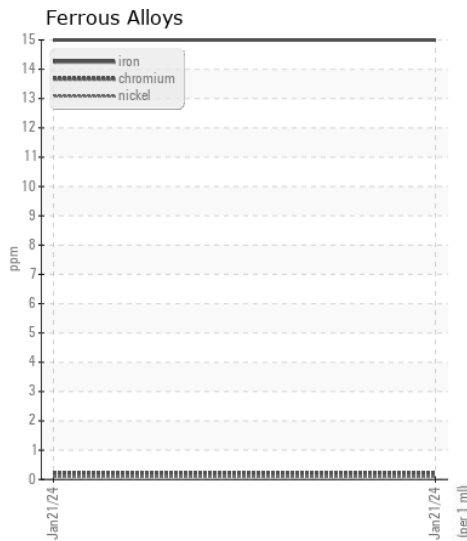
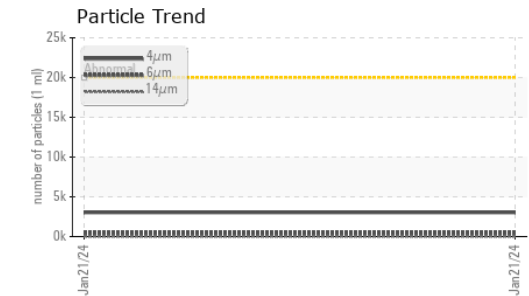
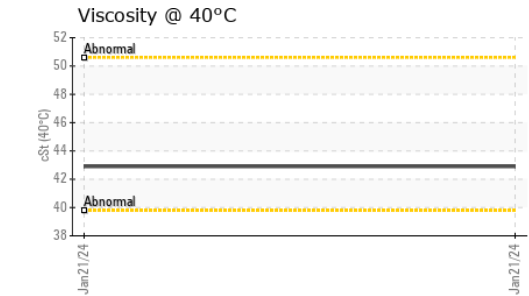
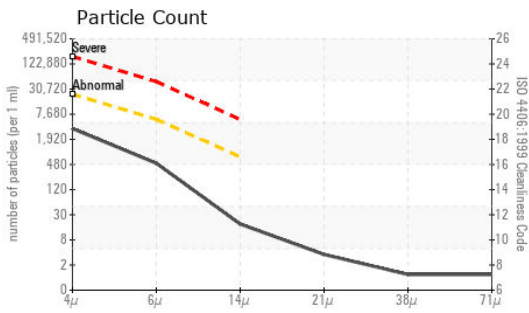
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

|                  |        |               |           |                 |     |     |
|------------------|--------|---------------|-----------|-----------------|-----|-----|
| Silicon          | ppm    | ASTM D5185(m) | >17       | <b>2</b>        | --- | --- |
| Potassium        | ppm    | ASTM D5185(m) | >20       | <b>&lt;1</b>    | --- | --- |
| Water            |        | WC Method     | >0.1      | <b>NEG</b>      | --- | --- |
| Particles >4µm   |        | ASTM D7647    | >20000    | <b>3031</b>     | --- | --- |
| Particles >6µm   |        | ASTM D7647    | >5000     | <b>452</b>      | --- | --- |
| Particles >14µm  |        | ASTM D7647    | >640      | <b>16</b>       | --- | --- |
| Particles >21µm  |        | ASTM D7647    | >160      | <b>3</b>        | --- | --- |
| Particles >38µm  |        | ASTM D7647    | >40       | <b>1</b>        | --- | --- |
| Particles >71µm  |        | ASTM D7647    | >10       | <b>1</b>        | --- | --- |
| Oil Cleanliness  |        | ISO 4406 (c)  | >21/19/16 | <b>19/16/11</b> | --- | --- |
| Silt             | scalar | Visual*       | NONE      | <b>NONE</b>     | --- | --- |
| Debris           | scalar | Visual*       | NONE      | <b>NONE</b>     | --- | --- |
| Sand/Dirt        | scalar | Visual*       | NONE      | <b>NONE</b>     | --- | --- |
| Appearance       | scalar | Visual*       | NORML     | <b>NORML</b>    | --- | --- |
| Odor             | scalar | Visual*       | NORML     | <b>NORML</b>    | --- | --- |
| Emulsified Water | scalar | Visual*       | >0.1      | <b>NEG</b>      | --- | --- |

### FLUID CONDITION

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

|             |     |               |  |              |     |     |
|-------------|-----|---------------|--|--------------|-----|-----|
| Sodium      | ppm | ASTM D5185(m) |  | <b>&lt;1</b> | --- | --- |
| Boron       | ppm | ASTM D5185(m) |  | <b>0</b>     | --- | --- |
| Barium      | ppm | ASTM D5185(m) |  | <b>0</b>     | --- | --- |
| Molybdenum  | ppm | ASTM D5185(m) |  | <b>0</b>     | --- | --- |
| Manganese   | ppm | ASTM D5185(m) |  | <b>0</b>     | --- | --- |
| Magnesium   | ppm | ASTM D5185(m) |  | <b>3</b>     | --- | --- |
| Calcium     | ppm | ASTM D5185(m) |  | <b>893</b>   | --- | --- |
| Phosphorus  | ppm | ASTM D5185(m) |  | <b>596</b>   | --- | --- |
| Zinc        | ppm | ASTM D5185(m) |  | <b>690</b>   | --- | --- |
| Sulfur      | ppm | ASTM D5185(m) |  | <b>2758</b>  | --- | --- |
| Visc @ 40°C | cSt | ASTM D7279(m) |  | <b>42.9</b>  | --- | --- |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0278879 **Received** : 22 Jan 2024  
**Lab Number** : 02610309 **Diagnosed** : 23 Jan 2024  
**Unique Number** : 5711395 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: PrtCount )

**Markham Metals**  
 280 Hopkins Street  
 Whitby, ON  
 CA L1N 2B9  
 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.

T:  
F: