



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR LH50M 077508**  
Component  
**Hydraulic System**  
Fluid  
**{not provided} (--- GAL)**

### RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you follow the water drain-off procedure for this component. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. Please specify the brand, type, and viscosity of the oil on your next sample.

### WEAR

All component wear rates are normal.

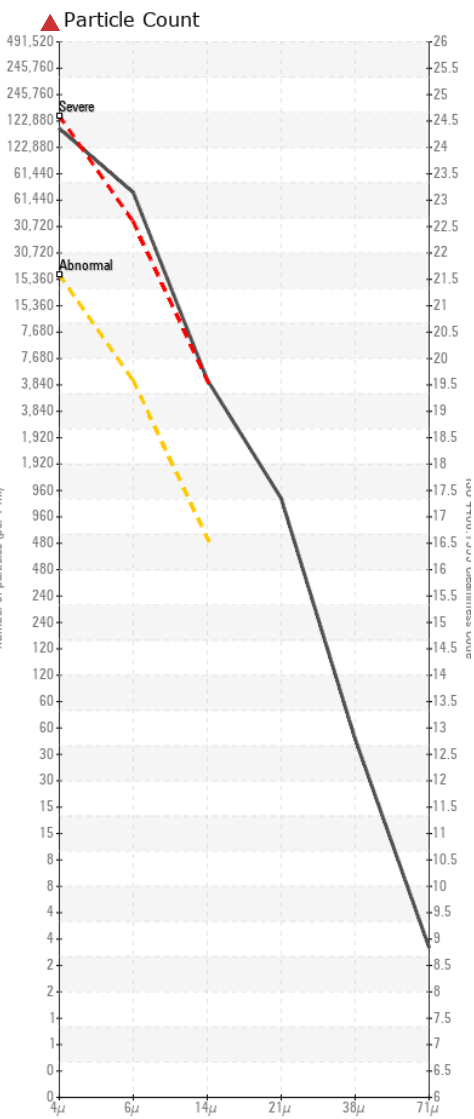
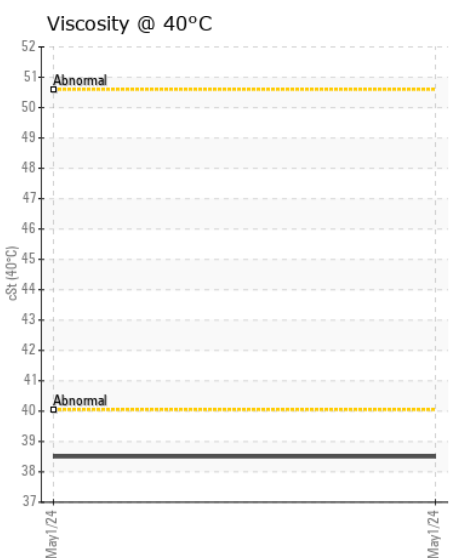
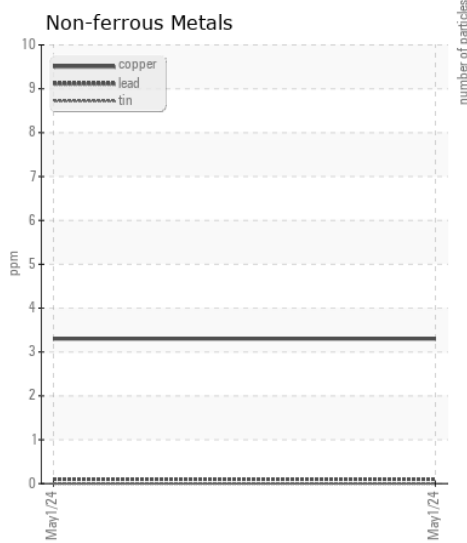
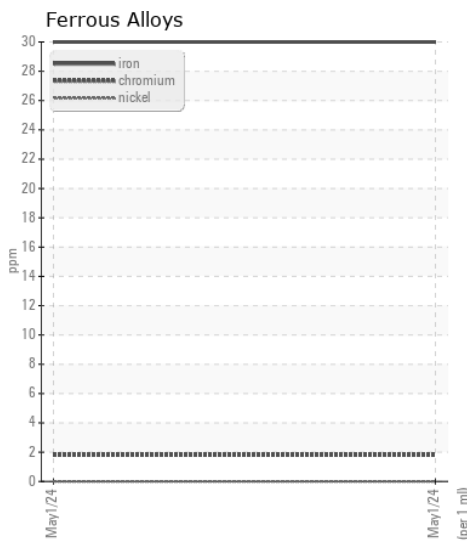
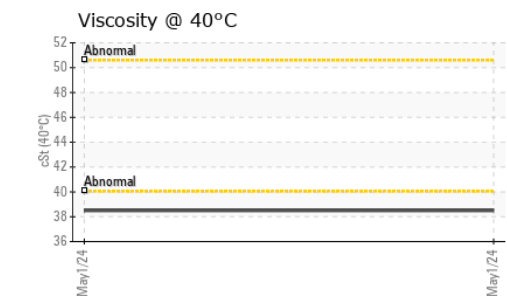
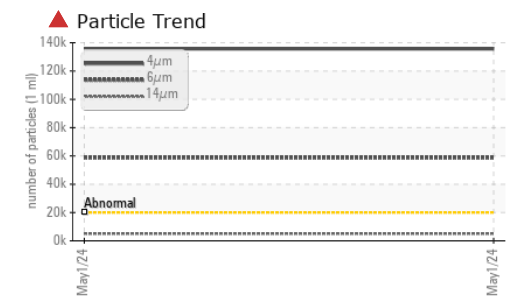
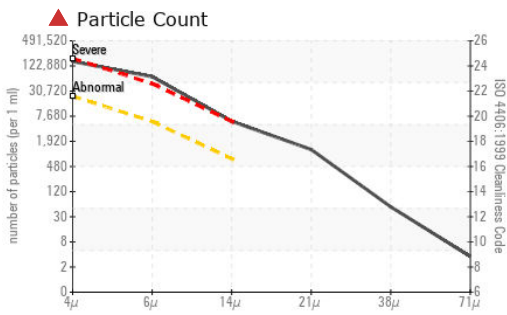
### CONTAMINATION

There is a high amount of particulates (2 to 100 microns in size) present in the oil. Free water present.

### FLUID CONDITION

The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

| Test             | UOM    | Method        | Limit/Abn | Current     | History1 | History2 |
|------------------|--------|---------------|-----------|-------------|----------|----------|
| Sample Number    |        | Client Info   |           | LH0289770   | ---      | ---      |
| Sample Date      |        | Client Info   |           | 01 May 2024 | ---      | ---      |
| Machine Age      | hrs    | Client Info   |           | 16364       | ---      | ---      |
| Oil Age          | hrs    | Client Info   |           | 0           | ---      | ---      |
| Filter Age       | hrs    | Client Info   |           | 0           | ---      | ---      |
| Oil Changed      |        | Client Info   |           | N/A         | ---      | ---      |
| Filter Changed   |        | Client Info   |           | N/A         | ---      | ---      |
| Sample Status    |        |               |           | SEVERE      | ---      | ---      |
| Iron             | ppm    | ASTM D5185(m) | >60       | 30          | ---      | ---      |
| Chromium         | ppm    | ASTM D5185(m) | >40       | 2           | ---      | ---      |
| Nickel           | ppm    | ASTM D5185(m) | >10       | 0           | ---      | ---      |
| Titanium         | ppm    | ASTM D5185(m) |           | 0           | ---      | ---      |
| Silver           | ppm    | ASTM D5185(m) |           | <1          | ---      | ---      |
| Aluminum         | ppm    | ASTM D5185(m) | >5        | <1          | ---      | ---      |
| Lead             | ppm    | ASTM D5185(m) | >5        | <1          | ---      | ---      |
| Copper           | ppm    | ASTM D5185(m) | >15       | 3           | ---      | ---      |
| Tin              | ppm    | ASTM D5185(m) | >5        | 0           | ---      | ---      |
| Vanadium         | ppm    | ASTM D5185(m) |           | 0           | ---      | ---      |
| White Metal      | scalar | Visual*       | NONE      | NONE        | ---      | ---      |
| Yellow Metal     | scalar | Visual*       | NONE      | NONE        | ---      | ---      |
| Silicon          | ppm    | ASTM D5185(m) | >15       | 1           | ---      | ---      |
| Potassium        | ppm    | ASTM D5185(m) | >20       | <1          | ---      | ---      |
| Water            |        | WC Method     | >0.1      | NEG         | ---      | ---      |
| Particles >4µm   |        | ASTM D7647    | >20000    | ▲ 135667    | ---      | ---      |
| Particles >6µm   |        | ASTM D7647    | >5000     | ▲ 58718     | ---      | ---      |
| Particles >14µm  |        | ASTM D7647    | >640      | ▲ 5064      | ---      | ---      |
| Particles >21µm  |        | ASTM D7647    | >160      | ▲ 1071      | ---      | ---      |
| Particles >38µm  |        | ASTM D7647    | >40       | 46          | ---      | ---      |
| Particles >71µm  |        | ASTM D7647    | >10       | 3           | ---      | ---      |
| Oil Cleanliness  |        | ISO 4406 (c)  | >21/19/16 | ▲ 24/23/20  | ---      | ---      |
| Silt             | scalar | Visual*       | NONE      | NONE        | ---      | ---      |
| Debris           | scalar | Visual*       | NONE      | VLITE       | ---      | ---      |
| Sand/Dirt        | scalar | Visual*       | NONE      | NONE        | ---      | ---      |
| Appearance       | scalar | Visual*       | NORML     | ▲ WGOIL     | ---      | ---      |
| Odor             | scalar | Visual*       | NORML     | NORML       | ---      | ---      |
| Emulsified Water | scalar | Visual*       | >0.1      | .2%         | ---      | ---      |
| Sodium           | ppm    | ASTM D5185(m) |           | 1           | ---      | ---      |
| Boron            | ppm    | ASTM D5185(m) |           | <1          | ---      | ---      |
| Barium           | ppm    | ASTM D5185(m) |           | 0           | ---      | ---      |
| Molybdenum       | ppm    | ASTM D5185(m) |           | 0           | ---      | ---      |
| Manganese        | ppm    | ASTM D5185(m) |           | <1          | ---      | ---      |
| Magnesium        | ppm    | ASTM D5185(m) |           | 13          | ---      | ---      |
| Calcium          | ppm    | ASTM D5185(m) |           | 64          | ---      | ---      |
| Phosphorus       | ppm    | ASTM D5185(m) |           | 539         | ---      | ---      |
| Zinc             | ppm    | ASTM D5185(m) |           | 653         | ---      | ---      |
| Sulfur           | ppm    | ASTM D5185(m) |           | 1299        | ---      | ---      |
| Visc @ 40°C      | cSt    | ASTM D7279(m) |           | 38.5        | ---      | ---      |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0289770 **Received** : 13 May 2024  
**Lab Number** : 02634958 **Tested** : 13 May 2024  
**Unique Number** : 5776111 **Diagnosed** : 13 May 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: PrtCount )

**J.M. BASTILLE ACIER INC**  
 396 RUE TEMISCOUATA,, CP 744  
 RIVIERE DU LOUP, QC  
 CA G5R 3Z3  
 Contact: MANAGER SERVICE

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: (418)862-3346  
 F: