



LIEBHERR

OIL ANALYSIS REPORT

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



Machine Id
LIEBHERR LH50M 144587-1216
Component
Swing Drive
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 | | LH | LH | LH0242725 |
| Sample Date | | Client Info | | 17 Jun 2024 | 12 Dec 2023 | 21 Jun 2023 |
| Machine Age | hrs | Client Info | | 3191 | 2050 | 1004 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|---------------|-------|--------------|------|-------|
| Iron | ppm | ASTM D5185(m) | >1450 | 124 | 167 | 99 |
| Chromium | ppm | ASTM D5185(m) | >11 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185(m) | >3 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >4 | <1 | 0 | 0 |
| Lead | ppm | ASTM D5185(m) | >4 | 1 | 1 | <1 |
| Copper | ppm | ASTM D5185(m) | >542 | 58 | 44 | 30 |
| Tin | ppm | ASTM D5185(m) | >38 | 2 | 2 | 1 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| White Metal | scalar | Visual* | NONE | NONE | NONE | VLITE |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE | NONE |

CONTAMINATION

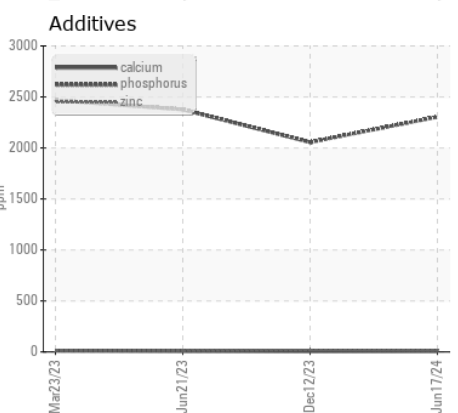
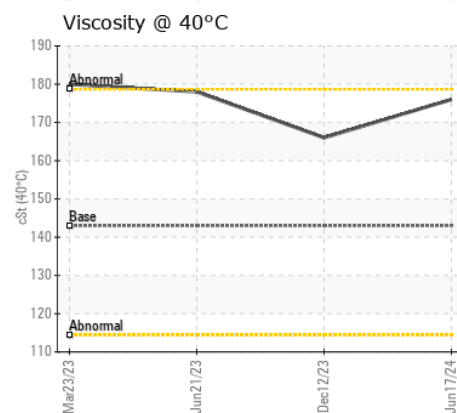
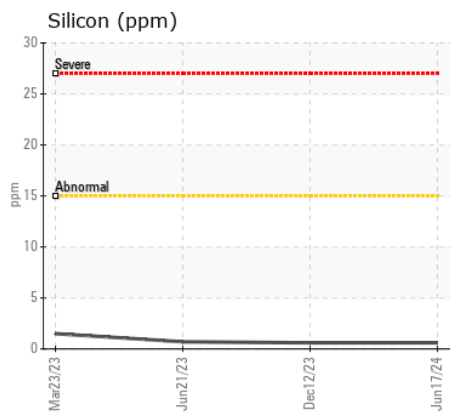
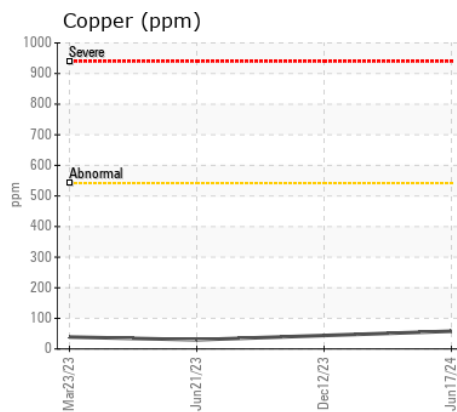
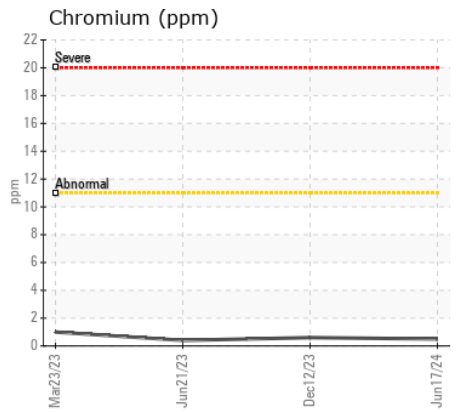
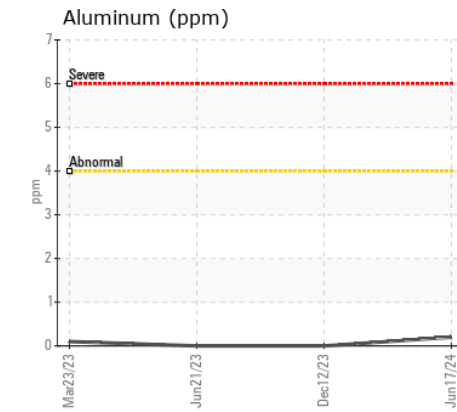
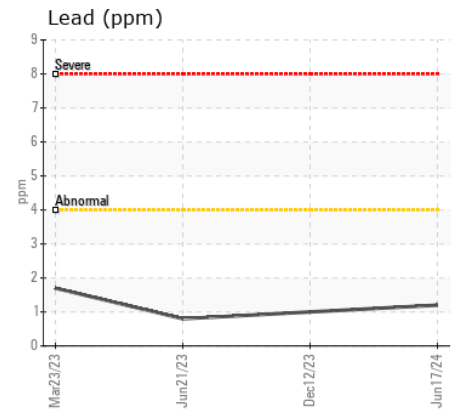
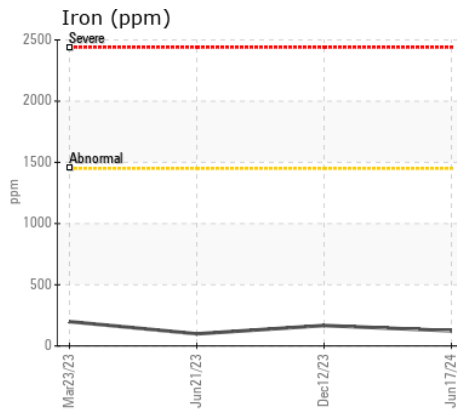
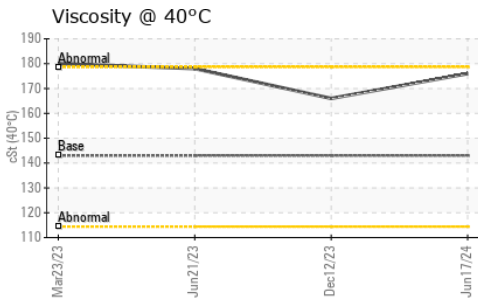
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|--------|---------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185(m) | >15 | <1 | <1 | <1 |
| Potassium | ppm | ASTM D5185(m) | >20 | 1 | <1 | 1 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Silt | scalar | Visual* | NONE | NONE | NONE | VLITE |
| Debris | scalar | Visual* | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | Visual* | NONE | NONE | NONE | NONE |
| Appearance | scalar | Visual* | NORML | NORML | NORML | NORML |
| Odor | scalar | Visual* | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | NEG | NEG |

FLUID CONDITION

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

| | | | | | | |
|-------------|-----|---------------|-------|--------------|-------|-------|
| Sodium | ppm | ASTM D5185(m) | >170 | 1 | 2 | 2 |
| Boron | ppm | ASTM D5185(m) | 400 | 10 | 18 | 2 |
| Barium | ppm | ASTM D5185(m) | 200 | <1 | 1 | 2 |
| Molybdenum | ppm | ASTM D5185(m) | 12 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185(m) | 12 | 2 | 2 | <1 |
| Calcium | ppm | ASTM D5185(m) | 150 | 8 | 8 | 10 |
| Phosphorus | ppm | ASTM D5185(m) | 1650 | 2304 | 2056 | 2377 |
| Zinc | ppm | ASTM D5185(m) | 125 | 15 | 20 | 12 |
| Sulfur | ppm | ASTM D5185(m) | 22500 | 24920 | 24411 | 25530 |
| Visc @ 40°C | cSt | ASTM D7279(m) | 143 | 176 | 166 | 178 |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH **Received** : 19 Jun 2024
Lab Number : 02643037 **Tested** : 19 Jun 2024
Unique Number : 5800576 **Diagnosed** : 19 Jun 2024 - Wes Davis
Test Package : MOB 1

Industrial Metals
 550 Messier St.
 Winnipeg, MB
 CA R2J 0G5
 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: