



LIEBHERR

OIL ANALYSIS REPORT

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



Machine Id
LIEBHERR LH60M 146313-1217
Component
Front Right Wheel Hub
Fluid
GEAR OIL SAE 75W90 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) GEAR OIL SAE 75W90. Please confirm.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | LH0286921 | LH0278935 | LH0274550 |
| Sample Date | | Client Info | | 17 Jun 2024 | 21 Jan 2024 | 05 Sep 2023 |
| Machine Age | hrs | Client Info | | 3178 | 2083 | 1114 |
| 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 | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|---------------|------|--------------|-------|-------|
| Iron | ppm | ASTM D5185(m) | >650 | 97 | 101 | 22 |
| Chromium | ppm | ASTM D5185(m) | >4 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185(m) | >4 | <1 | <1 | 0 |
| Titanium | ppm | ASTM D5185(m) | >4 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | | <1 | <1 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >25 | <1 | 1 | 0 |
| Lead | ppm | ASTM D5185(m) | >4 | 0 | <1 | <1 |
| Copper | ppm | ASTM D5185(m) | >60 | 11 | 13 | 16 |
| Tin | ppm | ASTM D5185(m) | >4 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| White Metal | scalar | Visual* | NONE | LIGHT | NONE | VLITE |
| Yellow Metal | scalar | Visual* | NONE | NONE | VLITE | NONE |

CONTAMINATION

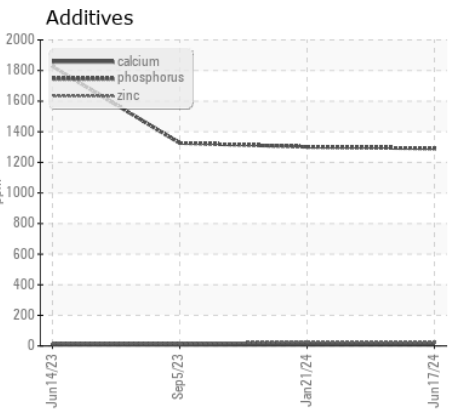
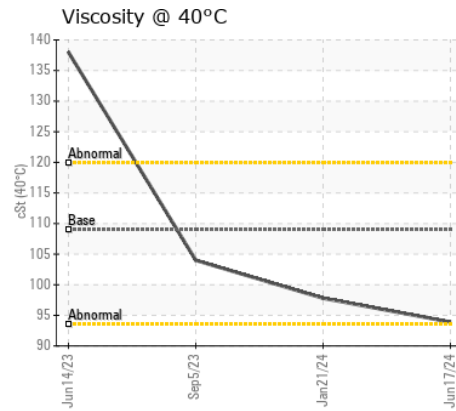
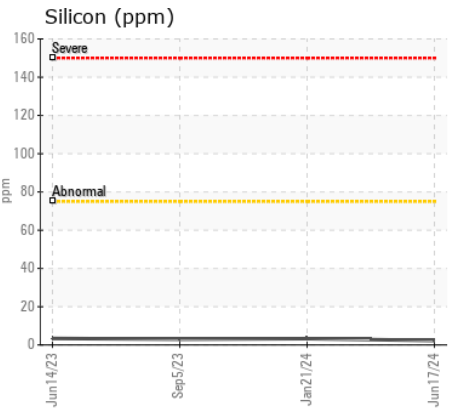
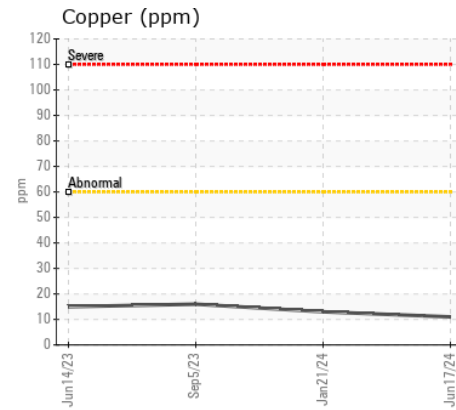
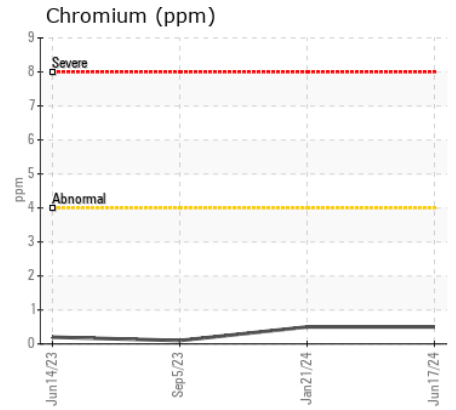
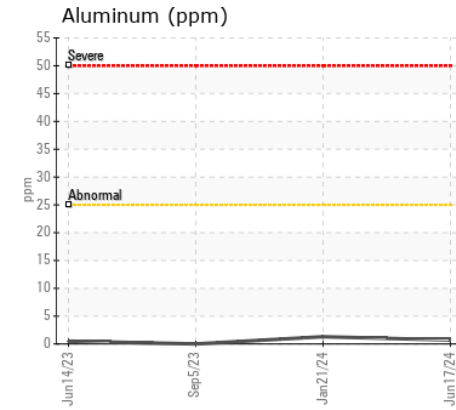
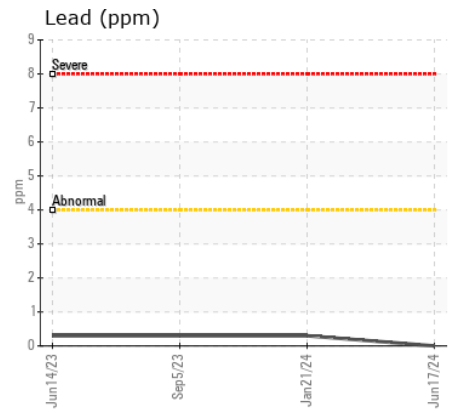
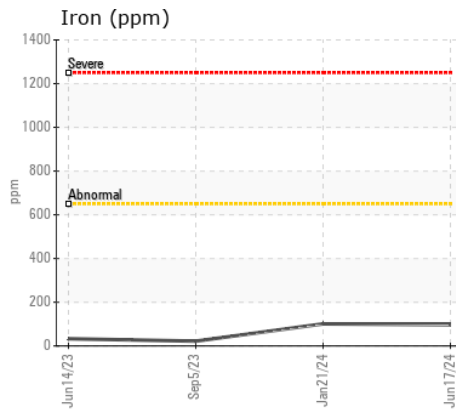
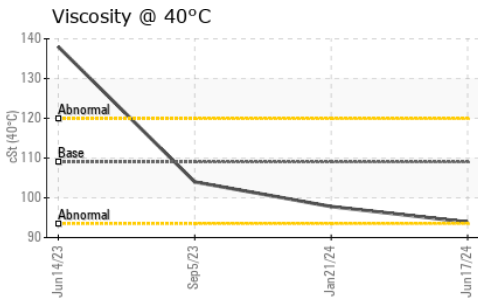
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|--------|---------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185(m) | >75 | 2 | 3 | 3 |
| Potassium | ppm | ASTM D5185(m) | >20 | 2 | <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) | | 2 | 1 | 1 |
| Boron | ppm | ASTM D5185(m) | 400 | 290 | 283 | 304 |
| Barium | ppm | ASTM D5185(m) | 200 | 7 | 12 | 1 |
| Molybdenum | ppm | ASTM D5185(m) | 12 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) | | 2 | 1 | <1 |
| Magnesium | ppm | ASTM D5185(m) | 12 | 2 | 2 | 2 |
| Calcium | ppm | ASTM D5185(m) | 150 | 16 | 14 | 11 |
| Phosphorus | ppm | ASTM D5185(m) | 1650 | 1291 | 1301 | 1326 |
| Zinc | ppm | ASTM D5185(m) | 125 | 22 | 26 | 16 |
| Sulfur | ppm | ASTM D5185(m) | 22500 | 21859 | 21739 | 21480 |
| Visc @ 40°C | cSt | ASTM D7279(m) | 109 | 93.9 | 97.8 | 104 |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0286921
Lab Number : 02642639
Unique Number : 5800178
Test Package : MOB 1
Received : 18 Jun 2024
Tested : 18 Jun 2024
Diagnosed : 18 Jun 2024 - Wes Davis

WENTWORTH METAL RECYCLING
 495 WENTWORTH STREET NORTH
 HAMILTON, ON
 CA L8L 5X1
 Contact: Jaason
 jaason@wentworthrecycling.com

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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