



LIEBHERR

OIL ANALYSIS REPORT

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



Machine Id
LIEBHERR L556 059655-1332
Component
Front Differential
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 | | LH | LH0180813 | LH0180800 |
| Sample Date | | Client Info | | 28 Feb 2024 | 10 Dec 2021 | 10 Sep 2021 |
| Machine Age | hrs | Client Info | | 250 | 5000 | 4019 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | Changed | Changed |
| Filter Changed | | Client Info | | N/A | N/A | None |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|---------------|-------|--------------|-------|-------|
| Iron | ppm | ASTM D5185(m) | >1000 | 21 | 61 | 55 |
| Chromium | ppm | ASTM D5185(m) | >10 | 0 | <1 | <1 |
| Nickel | ppm | ASTM D5185(m) | >2 | <1 | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | | 0 | <1 | <1 |
| Aluminum | ppm | ASTM D5185(m) | >25 | <1 | <1 | <1 |
| Lead | ppm | ASTM D5185(m) | >5 | <1 | <1 | 1 |
| Copper | ppm | ASTM D5185(m) | >100 | 7 | 33 | 39 |
| Tin | ppm | ASTM D5185(m) | >10 | <1 | 2 | 2 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| White Metal | scalar | Visual* | NONE | NONE | VLITE | VLITE |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE | NONE |

CONTAMINATION

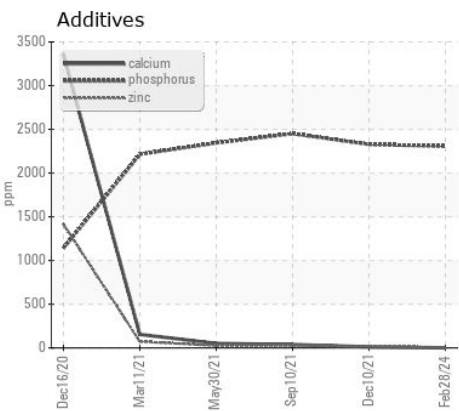
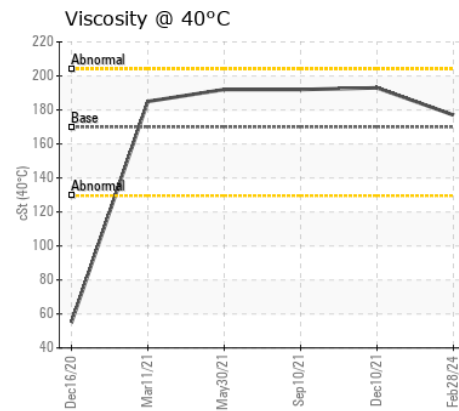
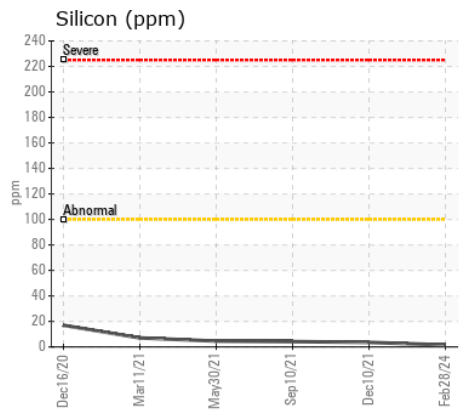
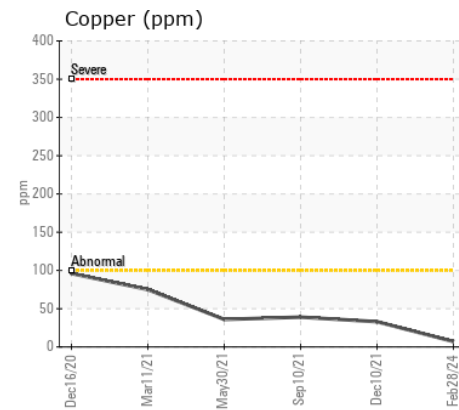
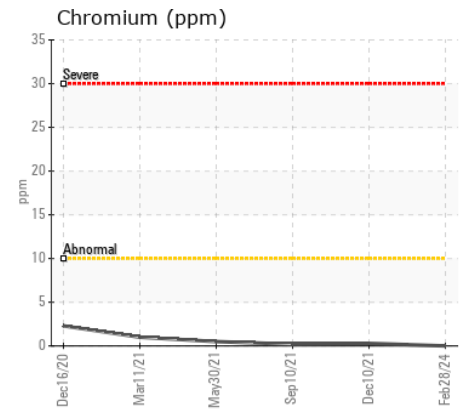
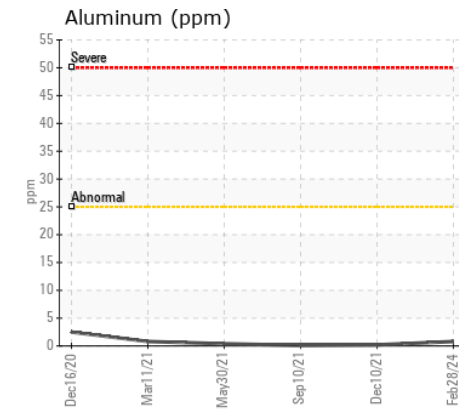
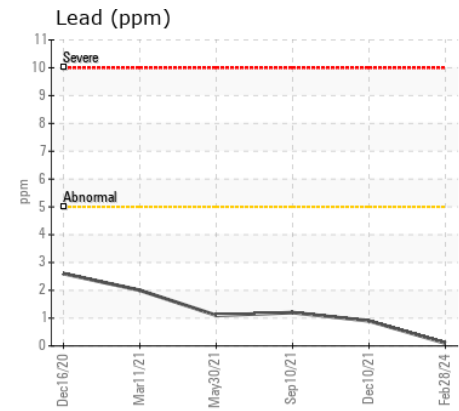
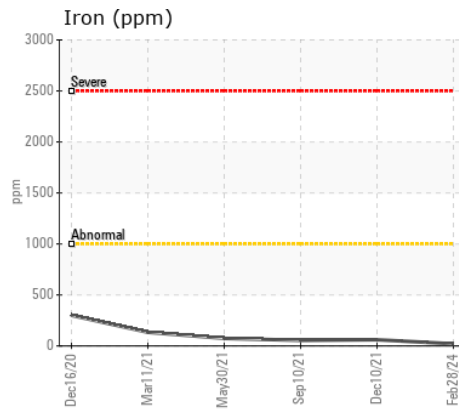
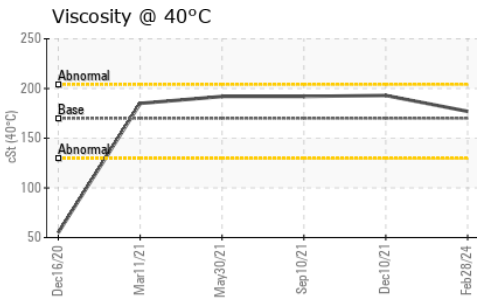
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|--------|---------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185(m) | >100 | 2 | 4 | 4 |
| Potassium | ppm | ASTM D5185(m) | >20 | <1 | <1 | <1 |
| Water | | WC Method | >.2 | NEG | NEG | NEG |
| Silt | scalar | Visual* | NONE | NONE | NONE | NONE |
| Debris | scalar | Visual* | NONE | VLITE | NONE | NONE |
| Sand/Dirt | scalar | Visual* | NONE | VLITE | VLITE | NONE |
| Appearance | scalar | Visual* | NORML | NORML | NORML | NORML |
| Odor | scalar | Visual* | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | Visual* | >.2 | NEG | NEG | NEG |

FLUID CONDITION

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

| | | | | | | |
|-------------|-----|---------------|-------|--------------|-------|-------|
| Sodium | ppm | ASTM D5185(m) | | <1 | 2 | 3 |
| Boron | ppm | ASTM D5185(m) | 0 | <1 | <1 | 3 |
| Barium | ppm | ASTM D5185(m) | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | 0 | 0 | 3 | 2 |
| Manganese | ppm | ASTM D5185(m) | 0 | 0 | 2 | 3 |
| Magnesium | ppm | ASTM D5185(m) | <1 | <1 | 3 | <1 |
| Calcium | ppm | ASTM D5185(m) | <1 | 1 | 12 | 39 |
| Phosphorus | ppm | ASTM D5185(m) | 2143 | 2307 | 2328 | 2451 |
| Zinc | ppm | ASTM D5185(m) | <1 | 5 | 19 | 30 |
| Sulfur | ppm | ASTM D5185(m) | 23468 | 25359 | 23780 | 24546 |
| Visc @ 40°C | cSt | ASTM D7279(m) | 170 | 177 | 193 | 192 |



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH
Lab Number : 02619038
Unique Number : 5736148
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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