



LIEBHERR

OIL ANALYSIS REPORT

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



Machine Id
LIEBHERR LH50 114410-1216
Component
Transmission (Manual)
Fluid
LIEBHERR GEAR BASIC 90 LS (--- GAL)

RECOMMENDATION

The fluid change at the time of sampling has been noted. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | LH0268378 | LH0244113 | LH0208096 |
| Sample Date | | Client Info | | 11 Jun 2024 | 06 Jun 2023 | 27 Dec 2021 |
| Machine Age | hrs | Client Info | | 6530 | 4573 | 0 |
| Oil Age | hrs | Client Info | | 0 | 500 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Not Changd | 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 D5185m | >200 | 15 | 12 | 20 |
| Chromium | ppm | ASTM D5185m | >5 | 0 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >7 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >25 | 3 | 2 | 2 |
| Lead | ppm | ASTM D5185m | >45 | 0 | <1 | 1 |
| Copper | ppm | ASTM D5185m | >225 | 19 | 14 | 46 |
| Tin | ppm | ASTM D5185m | >10 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

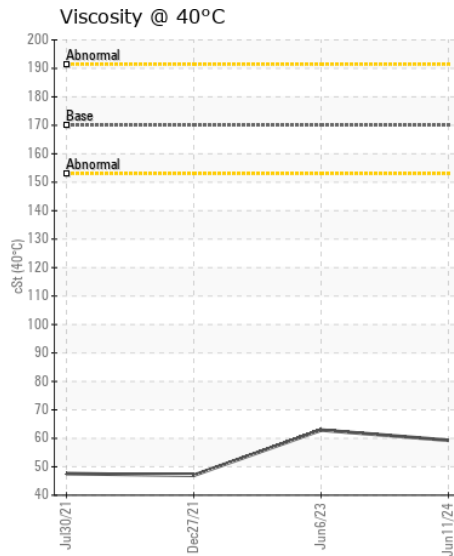
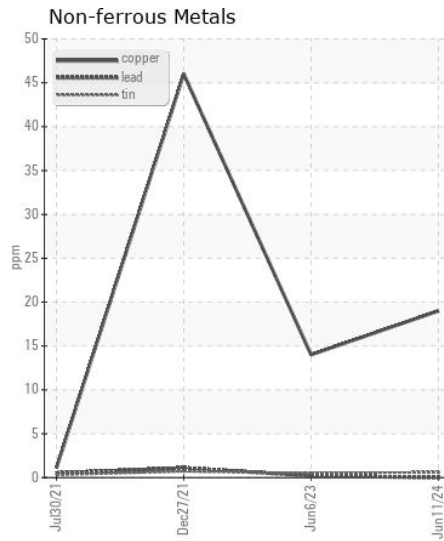
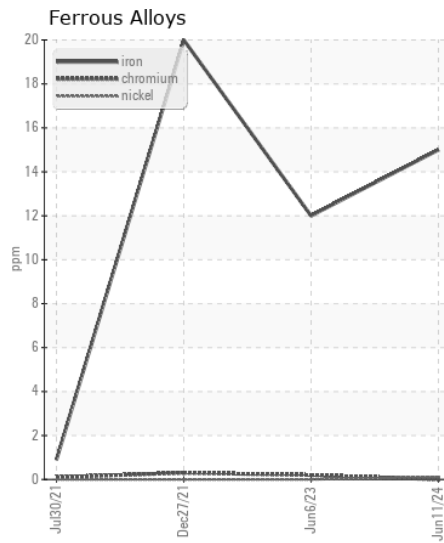
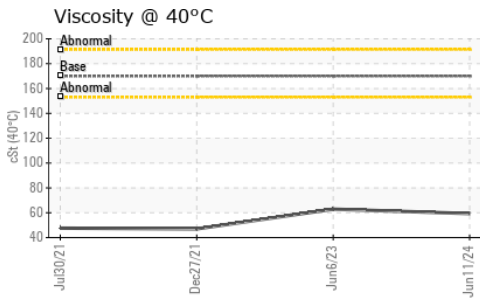
There is no indication of any contamination in the fluid.

| | | | | | | |
|------------------|--------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >125 | 5 | 4 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | 4 | 4 | 4 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | VLITE |
| 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 | >0.1 | NEG | NEG | NEG |

FLUID CONDITION

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

| | | | | | | |
|-------------|-----|-------------|-------|-------------|------|------|
| Sodium | ppm | ASTM D5185m | | 13 | 9 | 39 |
| Boron | ppm | ASTM D5185m | 0 | 161 | 156 | 4 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | 0 | 10 | 11 | <1 |
| Manganese | ppm | ASTM D5185m | 0 | 9 | 9 | 18 |
| Magnesium | ppm | ASTM D5185m | <1 | 699 | 648 | 7 |
| Calcium | ppm | ASTM D5185m | <1 | 1837 | 1792 | 3534 |
| Phosphorus | ppm | ASTM D5185m | 2143 | 941 | 873 | 1160 |
| Zinc | ppm | ASTM D5185m | <1 | 977 | 990 | 1115 |
| Sulfur | ppm | ASTM D5185m | 23468 | 6179 | 5682 | 9152 |
| Visc @ 40°C | cSt | ASTM D445 | 170 | 59.3 | 62.9 | 47.0 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : LH0268378

Lab Number : 06217222

Unique Number : 11090086

Test Package : CONST

Received : 21 Jun 2024

Tested : 24 Jun 2024

Diagnosed : 24 Jun 2024 - Don Baldrige

RECO EQUIPMENT INC

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US 48116

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To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)