



LIEBHERR

OIL ANALYSIS REPORT

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



Machine Id
LIEBHERR LH80C 1529-156494
Component
Diesel Engine
Fluid
LIEBHERR (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|----------|----------|
| Sample Number | | Client Info | | LH0286308 | --- | --- |
| Sample Date | | Client Info | | 05 Mar 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 1000 | --- | --- |
| Oil Age | hrs | Client Info | | 0 | --- | --- |
| Filter Age | hrs | Client Info | | 0 | --- | --- |
| Oil Changed | | Client Info | | Changed | --- | --- |
| Filter Changed | | Client Info | | Changed | --- | --- |
| Sample Status | | | | NORMAL | --- | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|-----|-----|
| Iron | ppm | ASTM D5185m | >100 | 12 | --- | --- |
| Chromium | ppm | ASTM D5185m | >5 | 1 | --- | --- |
| Nickel | ppm | ASTM D5185m | >5 | <1 | --- | --- |
| Titanium | ppm | ASTM D5185m | | <1 | --- | --- |
| Silver | ppm | ASTM D5185m | >3 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185m | >15 | 5 | --- | --- |
| Lead | ppm | ASTM D5185m | >30 | <1 | --- | --- |
| Copper | ppm | ASTM D5185m | >125 | 78 | --- | --- |
| Tin | ppm | ASTM D5185m | >5 | 1 | --- | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | --- | --- |
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |

CONTAMINATION

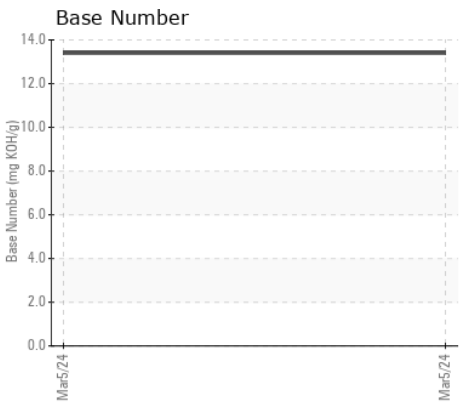
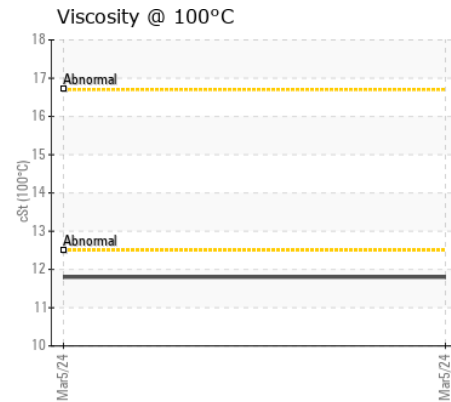
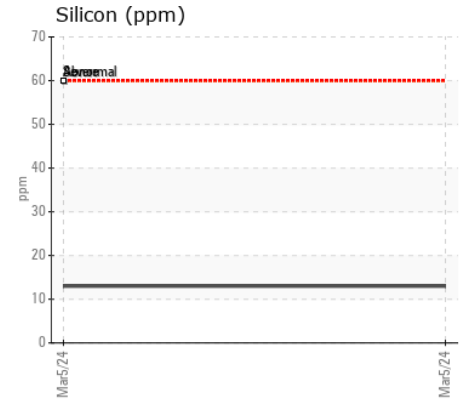
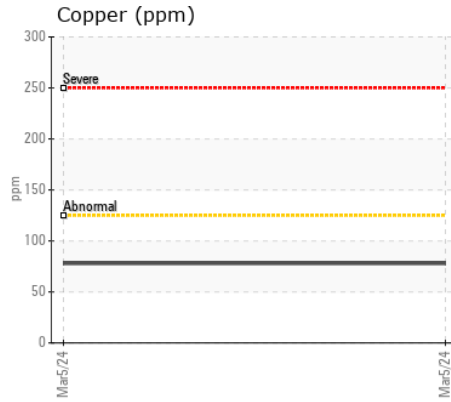
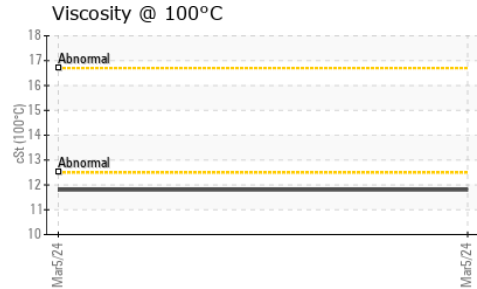
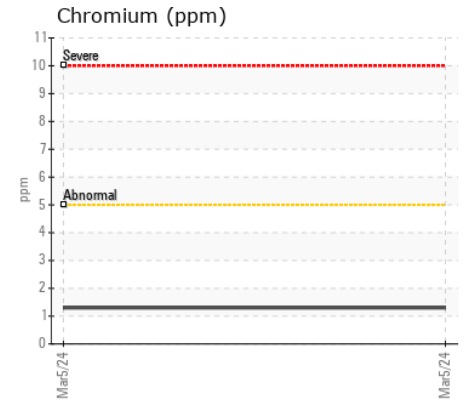
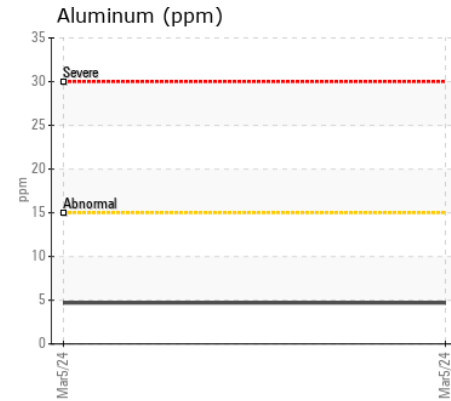
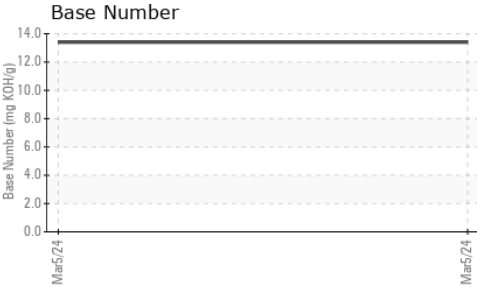
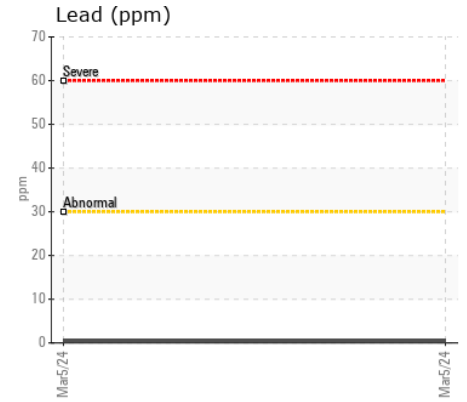
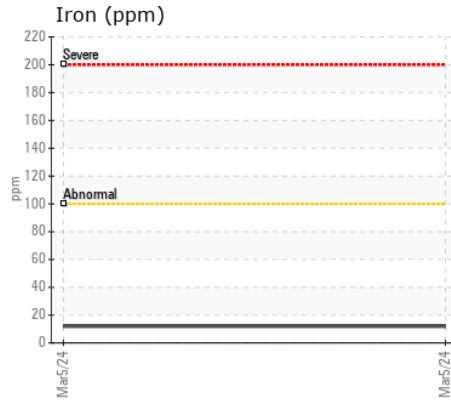
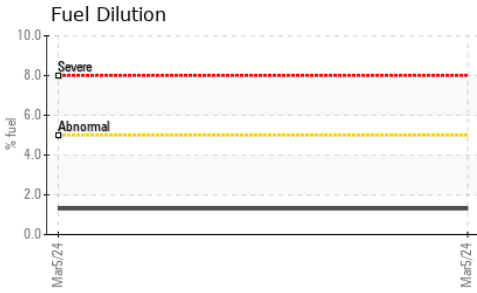
Fuel content negligible. There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|--------------|-----|-----|
| Silicon | ppm | ASTM D5185m | >60 | 13 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | 2 | --- | --- |
| Fuel | % | ASTM D3524 | >5 | 1.3 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| Glycol | | WC Method | | NEG | --- | --- |
| Soot % | % | *ASTM D7844 | >3 | 0.1 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 13.2 | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.5 | --- | --- |
| Silt | scalar | *Visual | NONE | NONE | --- | --- |
| Debris | scalar | *Visual | NONE | NONE | --- | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | --- | --- |
| Appearance | scalar | *Visual | NORML | NORML | --- | --- |
| Odor | scalar | *Visual | NORML | NORML | --- | --- |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | --- | --- |

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

| | | | | | | |
|------------------|----------|-------------|-----|--------------|-----|-----|
| Sodium | ppm | ASTM D5185m | | 5 | --- | --- |
| Boron | ppm | ASTM D5185m | | 332 | --- | --- |
| Barium | ppm | ASTM D5185m | | 3 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | | 10 | --- | --- |
| Manganese | ppm | ASTM D5185m | | <1 | --- | --- |
| Magnesium | ppm | ASTM D5185m | | 210 | --- | --- |
| Calcium | ppm | ASTM D5185m | | 5459 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | | 1415 | --- | --- |
| Zinc | ppm | ASTM D5185m | | 1650 | --- | --- |
| Sulfur | ppm | ASTM D5185m | | 4566 | --- | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 18.3 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 13.4 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | | 11.8 | --- | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0286308
Lab Number : 06121408
Unique Number : 10930241
Test Package : MOBCE (Additional Tests: FuelDilution, PercentFuel, TBN)

Received : 18 Mar 2024
Tested : 22 Mar 2024
Diagnosed : 22 Mar 2024 - Don Baldrige

C AND B EQUIPMENT, LLC
 4831 US-42
 GHENT, KY
 US 41045
 Contact: Service Manager

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)

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F: