



OIL ANALYSIS REPORT

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



Area
[MH-11]
 Machine Id
LIEBHERR LH-60 MH11 (S/N 1212-92011)
 Component
Rear Left Final Drive
 Fluid
DURALENE Posi-Traction 80W90 (11 LTR)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

WEAR

Gear wear is indicated. Bearing and/or bushing wear is indicated.

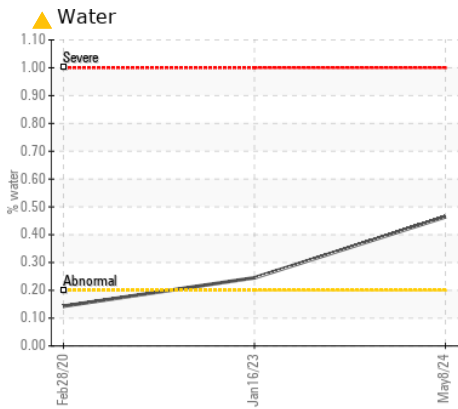
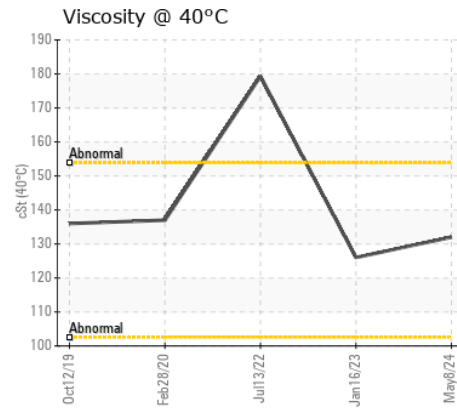
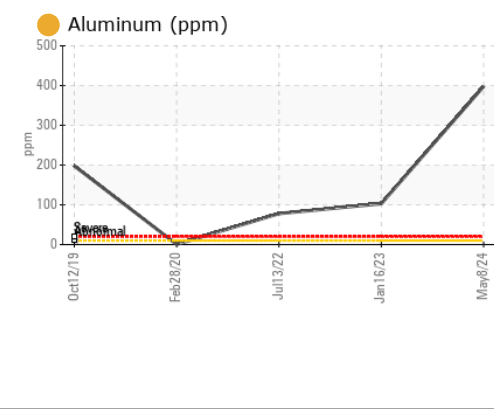
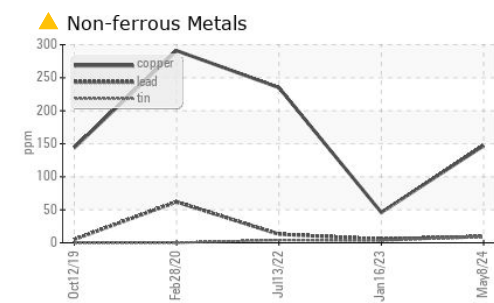
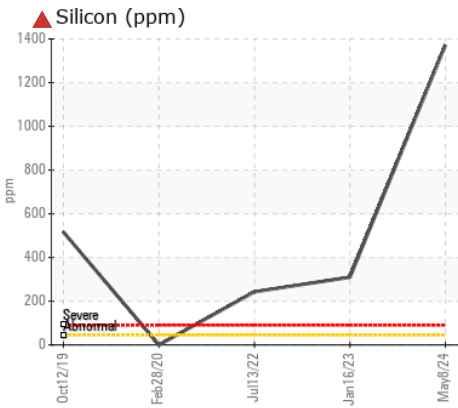
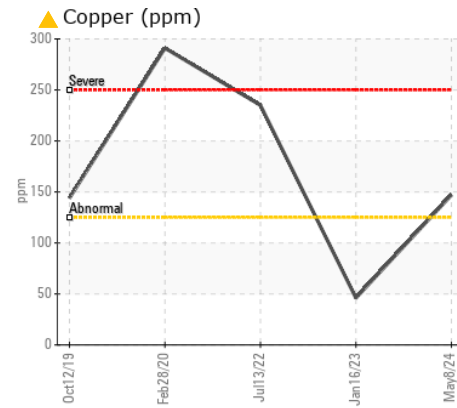
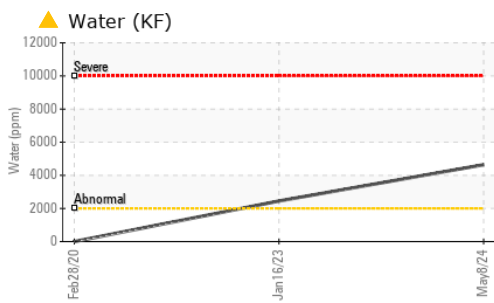
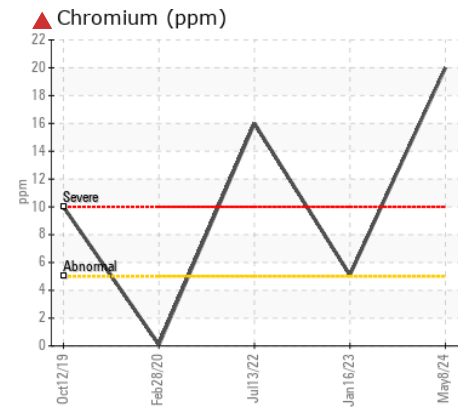
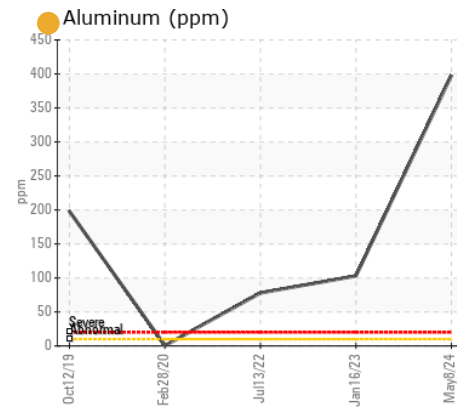
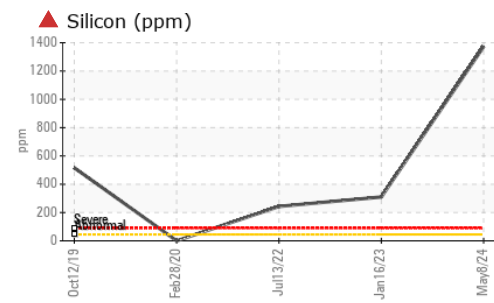
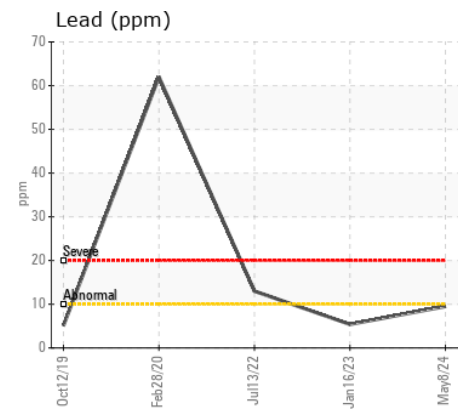
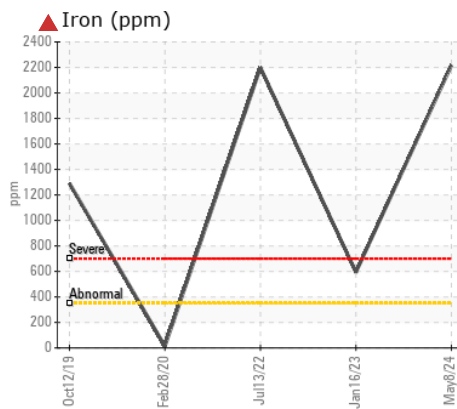
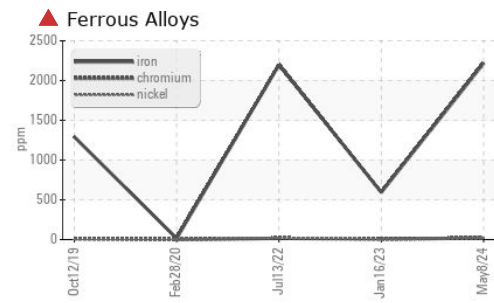
CONTAMINATION

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a moderate concentration of water present in the oil.

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|------------------|--------|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | DC0033548 | DC0022342 | DC0021504 |
| Sample Date | | Client Info | | 08 May 2024 | 16 Jan 2023 | 13 Jul 2022 |
| Machine Age | hrs | Client Info | | 11359 | 9179 | 8362 |
| Oil Age | hrs | Client Info | | 2180 | 300 | 2000 |
| 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 | | | | SEVERE | SEVERE | SEVERE |
| Iron | ppm | ASTM D5185m | >350 | ▲ 2216 | ▲ 594 | ▲ 2198 |
| Chromium | ppm | ASTM D5185m | >5 | ▲ 20 | ▲ 5 | ▲ 16 |
| Nickel | ppm | ASTM D5185m | >5 | ▲ 13 | 4 | ▲ 19 |
| Titanium | ppm | ASTM D5185m | | ▲ 28 | 6 | 5 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >10 | ● 398 | ● 103 | ● 78 |
| Lead | ppm | ASTM D5185m | >10 | 10 | 5 | ▲ 13 |
| Copper | ppm | ASTM D5185m | >125 | ▲ 147 | 46 | ▲ 235 |
| Tin | ppm | ASTM D5185m | >10 | ▲ 9 | 3 | 4 |
| Vanadium | ppm | ASTM D5185m | | 1 | <1 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | MODER | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >45 | ▲ 1372 | ▲ 310 | ▲ 243 |
| Potassium | ppm | ASTM D5185m | >20 | 147 | 28 | 18 |
| Water | % | ASTM D6304 | >0.2 | ▲ 0.464 | ▲ 0.245 | --- |
| ppm Water | ppm | ASTM D6304 | >2000 | ▲ 4640 | ▲ 2450 | --- |
| Silt | scalar | *Visual | NONE | NONE | MODER | NONE |
| 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 | ▲ 0.2% | ▲ 0.2% | NEG |
| Sodium | ppm | ASTM D5185m | | 30 | 7 | 5 |
| Boron | ppm | ASTM D5185m | | 158 | 71 | 21 |
| Barium | ppm | ASTM D5185m | | 8 | 2 | <1 |
| Molybdenum | ppm | ASTM D5185m | | 1 | 2 | 3 |
| Manganese | ppm | ASTM D5185m | | 22 | 6 | 15 |
| Magnesium | ppm | ASTM D5185m | | 277 | 89 | 65 |
| Calcium | ppm | ASTM D5185m | | 1102 | 409 | 267 |
| Phosphorus | ppm | ASTM D5185m | | 1423 | 1329 | 601 |
| Zinc | ppm | ASTM D5185m | | 127 | 85 | 88 |
| Sulfur | ppm | ASTM D5185m | | 25588 | 25056 | 25056 |
| Visc @ 40°C | cSt | ASTM D445 | | 132 | 126 | 179.3 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DC0033548 **Received** : 13 May 2024
Lab Number : 06177955 **Tested** : 15 May 2024
Unique Number : 11029281 **Diagnosed** : 15 May 2024 - Sean Felton
Test Package : MOB 1 (Additional Tests: KF)

CONSERVIT INC.
 PO BOX 1517
 HAGERSTOWN, MD
 US 21740
 Contact: DON LONG

Certificate L2367
 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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