

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH60C 1528-132602 - Hydraulic System

Sample No: LH0210078

Oil Type: LIEBHERR HYDRAULIC HVI



SAMPLE INFORMATION

| Sample Number | LH0210078 | LH0210069 | LH0210060 | LH0210051 |
|---------------|-------------|-------------|-------------|-------------|
| Sample Date | 22 Jan 2024 | 22 Sep 2023 | 04 Apr 2023 | 06 Jan 2023 |
| Machine Hours | 5938 | 5266 | 4009 | 3384 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | Not Changd | Not Changd | Not Changd | Not Changd |
| Sample Status | ABNORMAL | ABNORMAL | ABNORMAL | NORMAL |

STAIMAN RECYCLING

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F:



OIL CONDITION

| Visc @ 40°C | cSt | 43.8 | 43.0 | 42.9 | 43.5 |
|------------------|----------|------|------|------|------|
| Acid Number (AN) | mg KOH/g | 0.66 | 0.69 | 0.75 | 0.78 |



CONTAMINATION

| Water | % | NEG | NEG | NEG | NEG |
|-------------------|-----|----------|----------|----------|----------|
| Particles >4µm | | 7719 | 2008 | 4800 | 5658 |
| Particles >6µm | | 1591 | 423 | 1149 | 1438 |
| Particles >14µm | | 86 | 25 | 44 | 64 |
| ISO 4406:1999 (c) | | 20/18/14 | 18/16/12 | 19/17/13 | 20/18/13 |
| Silicon | ppm | 1 | 2 | 2 | 2 |
| Sodium | ppm | 2 | <1 | 1 | 2 |
| Potassium | ppm | 0 | <1 | <1 | 0 |

Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. The iron level has decreased, but is still abnormal. All other component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



WEAR METALS

| | | | | | |
|------------|-----|----|-----|----|----|
| Iron | ppm | 77 | 103 | 63 | 59 |
| Copper | ppm | 3 | 4 | 2 | 2 |
| Lead | ppm | 0 | <1 | <1 | 0 |
| Tin | ppm | 0 | 0 | 0 | 0 |
| Aluminum | ppm | 0 | 2 | 0 | 0 |
| Chromium | ppm | 1 | 2 | 1 | <1 |
| Molybdenum | ppm | 0 | <1 | <1 | <1 |
| Nickel | ppm | 0 | 0 | 0 | 0 |
| Titanium | ppm | <1 | 0 | 0 | 0 |
| Silver | ppm | 0 | 0 | 0 | 0 |
| Manganese | ppm | 1 | 2 | 1 | 1 |
| Vanadium | ppm | 0 | 0 | 0 | 0 |



ADDITIVES

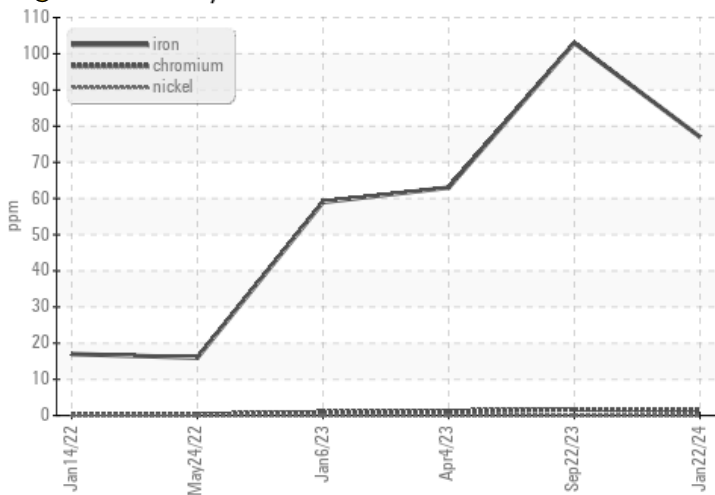
| | | | | | |
|------------|-----|-----|-----|-----|------|
| Calcium | ppm | 683 | 929 | 941 | 1139 |
| Magnesium | ppm | 0 | 6 | 5 | 5 |
| Zinc | ppm | 442 | 484 | 469 | 451 |
| Phosphorus | ppm | 356 | 399 | 392 | 403 |
| Barium | ppm | 0 | 0 | 0 | 0 |
| Boron | ppm | 0 | 0 | 0 | 0 |

Depot: STAWILLH
Unique No: 10855907
Signed: Don Baldrige
Report Date: 31 Jan 2024

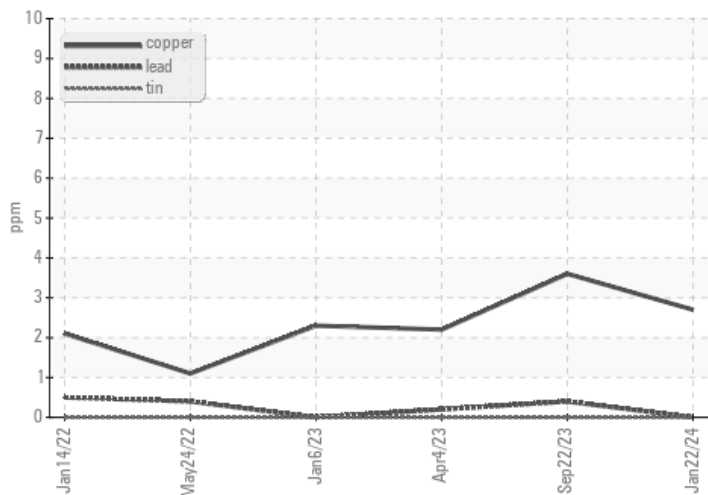


GRAPHS

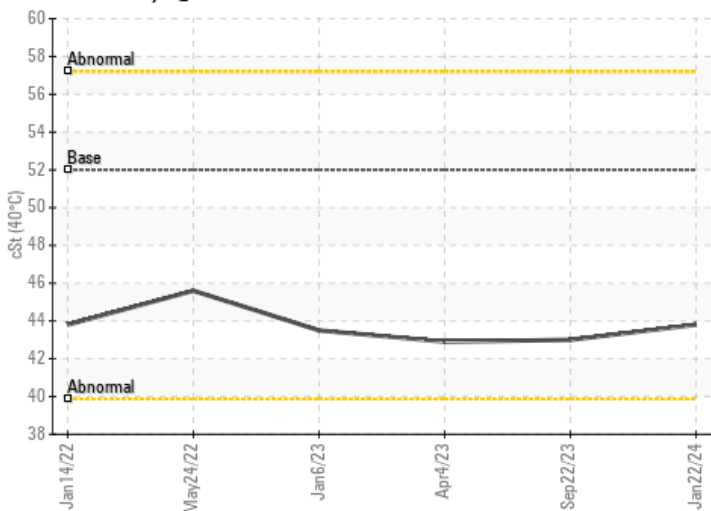
● Ferrous Alloys



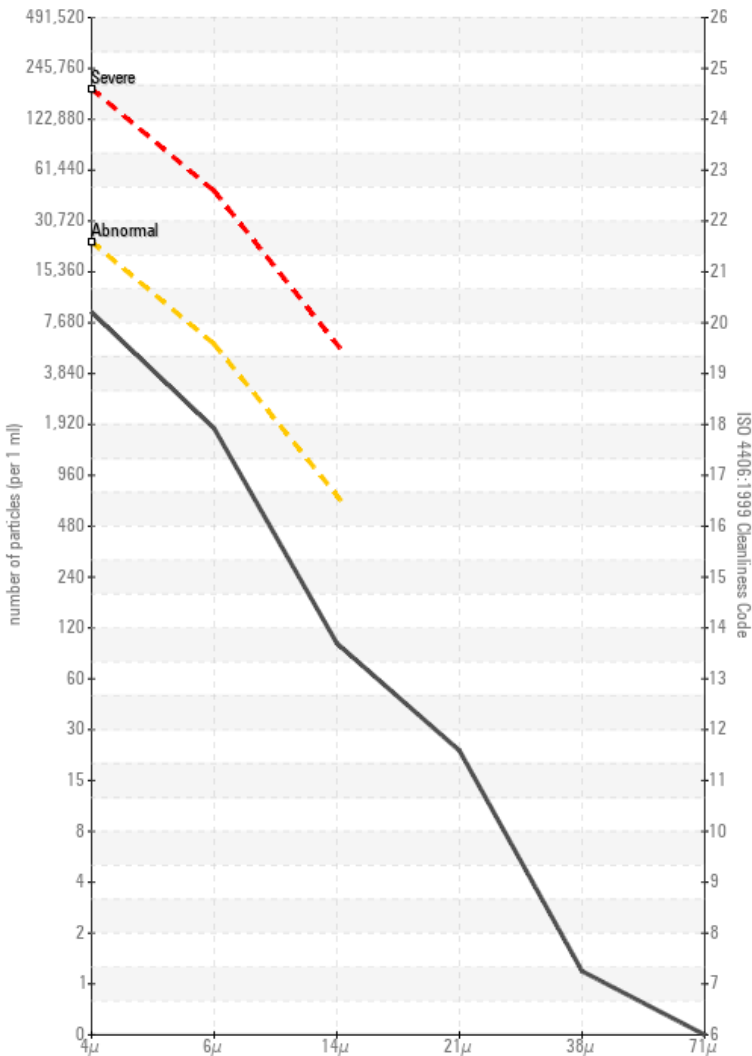
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

