

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR A934 044099-1007 - Hydraulic System

Sample No: LH0259166

Oil Type: MV 46



SAMPLE INFORMATION

| Sample Number | LH0259166 | LH0244934 | LH0230030 | LH0229940 |
|---------------|-------------|-------------|-------------|-------------|
| Sample Date | 10 Oct 2023 | 04 Apr 2023 | 02 Dec 2022 | 08 Aug 2022 |
| Machine Hours | 31151 | 30303 | 29760 | 29154 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | Not Changd | Not Changd | Not Changd | Not Changd |
| Sample Status | NORMAL | NORMAL | NORMAL | NORMAL |

INTEGRITY METALS

835 EAST INDUSTRIAL
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US 46161
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OIL CONDITION

| Visc @ 40°C | cSt | 58.5 | 60.4 | 61.1 | 62.8 |
|------------------|----------|------|------|------|------|
| Acid Number (AN) | mg KOH/g | 0.33 | 0.29 | 0.44 | 0.38 |



CONTAMINATION

| | | | | | |
|-------------------|-----|----------|----------|----------|----------|
| Particles >4µm | | 2602 | 5638 | 12617 | 18378 |
| Particles >6µm | | 341 | 996 | 2942 | 2919 |
| Particles >14µm | | 14 | 51 | 108 | 75 |
| ISO 4406:1999 (c) | | 19/16/11 | 20/17/13 | 21/19/14 | 21/19/13 |
| Silicon | ppm | <1 | 0 | 2 | <1 |
| Sodium | ppm | 2 | <1 | 0 | 0 |
| Potassium | ppm | 0 | 0 | <1 | 0 |

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



WEAR METALS

| | | | | | |
|------------|-----|----|----|----|----|
| Iron | ppm | 2 | 3 | 10 | 4 |
| Copper | ppm | 4 | <1 | 5 | 1 |
| Lead | ppm | <1 | 0 | <1 | 0 |
| Tin | ppm | <1 | 0 | <1 | 0 |
| Aluminum | ppm | <1 | 0 | 1 | <1 |
| Chromium | ppm | <1 | <1 | 1 | <1 |
| Molybdenum | ppm | 0 | <1 | <1 | <1 |
| Nickel | ppm | 0 | 0 | 0 | 0 |
| Titanium | ppm | 0 | 0 | 0 | 0 |
| Silver | ppm | 0 | 0 | 0 | <1 |
| Manganese | ppm | <1 | <1 | <1 | 0 |
| Vanadium | ppm | 0 | 0 | 0 | 0 |



ADDITIVES

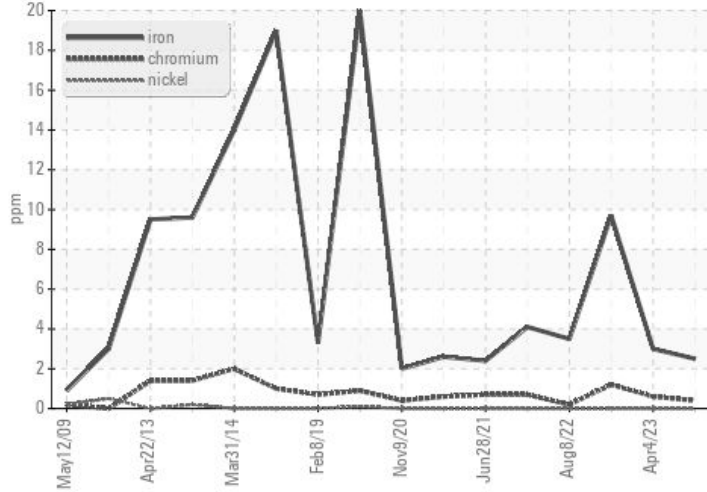
| | | | | | |
|------------|-----|-----|-----|-----|-----|
| Calcium | ppm | 156 | 141 | 148 | 165 |
| Magnesium | ppm | <1 | 6 | 5 | 10 |
| Zinc | ppm | 520 | 444 | 441 | 456 |
| Phosphorus | ppm | 403 | 343 | 353 | 364 |
| Barium | ppm | 0 | 0 | <1 | <1 |
| Boron | ppm | 0 | 0 | 0 | 0 |

Depot: INTMORLH
Unique No: 10702785
Signed: Wes Davis
Report Date: 23 Oct 2023

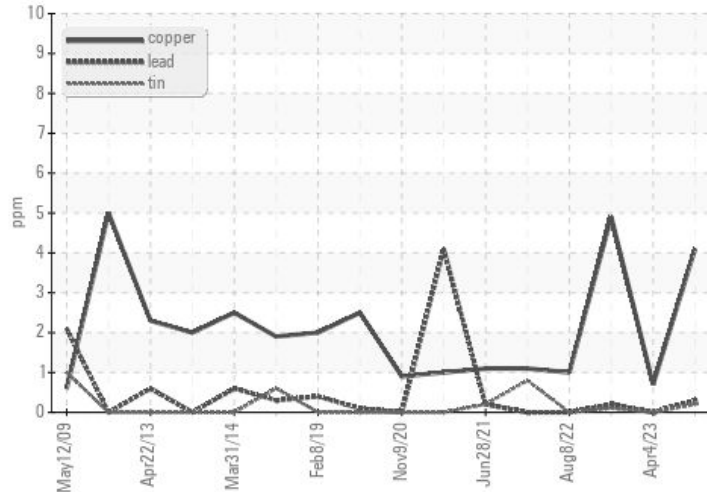


GRAPHS

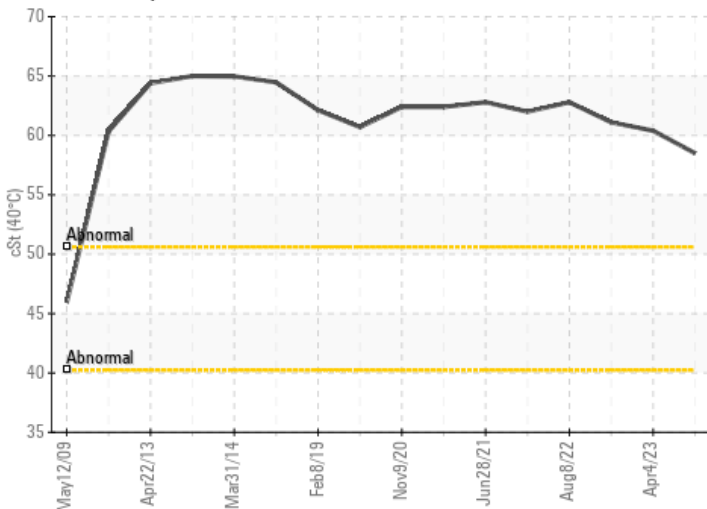
Ferrous Alloys



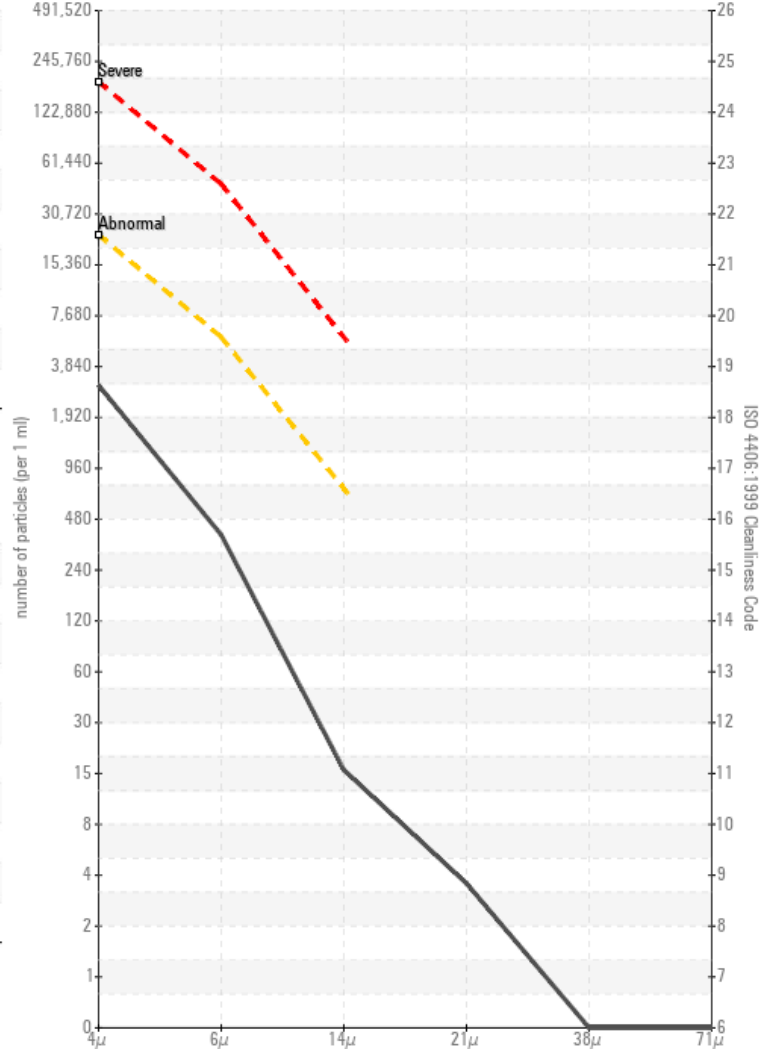
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

