

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L550 050779-1214 - Diesel Engine

Sample No: LH0243137

Oil Type: LIEBHERR MOTOROIL 5W-30 LOW ASH



SAMPLE INFORMATION

| Sample Number | LH0243137 | LH0243138 | LH0243139 | LH0207890 |
|---------------|-------------|-------------|-------------|-------------|
| Sample Date | 27 Sep 2023 | 11 Apr 2023 | 13 Dec 2022 | 08 Apr 2022 |
| Machine Hours | 1954 | 1453 | 939 | 476 |
| Oil Hours | 1015 | 514 | 939 | 476 |
| Oil Changed | Changed | Not Changd | Changed | Changed |
| Sample Status | NORMAL | NORMAL | NORMAL | NORMAL |

TIMBER PRODUCTS

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US 49862
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T: (906)452-7013
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OIL CONDITION

| Visc @ 100°C | cSt | 10.8 | 11.3 | 10.8 | 11.7 |
|------------------|----------|------|------|------|------|
| Base Number (BN) | mg KOH/g | 5.5 | 6.2 | 5.8 | 5.4 |
| Oxidation (PA) | % | 73 | 59 | 64 | 178 |



CONTAMINATION

| Water | % | NEG | NEG | NEG | NEG |
|----------------|-----|------|------|------|------|
| Soot % | % | 0.2 | 0.1 | 0.1 | 0.1 |
| Nitration (PA) | % | 89 | 75 | 68 | 88 |
| Sulfation (PA) | % | 64 | 56 | 58 | 104 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | <1.0 | <1.0 | <1.0 | <1.0 |
| Silicon | ppm | 8 | 7 | 8 | 11 |
| Sodium | ppm | 4 | 3 | 3 | 3 |
| Potassium | ppm | 16 | 6 | 22 | 8 |



WEAR METALS

| | | | | | |
|------------|-----|----|----|-----|-----|
| Iron | ppm | 12 | 5 | 5 | 11 |
| Copper | ppm | 67 | 61 | 136 | 185 |
| Lead | ppm | 4 | <1 | <1 | 5 |
| Tin | ppm | 2 | <1 | <1 | 2 |
| Aluminum | ppm | 2 | 1 | 3 | 2 |
| Chromium | ppm | <1 | 0 | 0 | <1 |
| Molybdenum | ppm | 2 | 1 | 14 | 42 |
| Nickel | ppm | 0 | 0 | 0 | <1 |
| Titanium | ppm | <1 | <1 | <1 | <1 |
| Silver | ppm | 0 | 0 | 0 | 1 |
| Manganese | ppm | <1 | <1 | <1 | 2 |
| Vanadium | ppm | 0 | 0 | 0 | 0 |



ADDITIVES

| | | | | | |
|------------|-----|------|------|------|------|
| Calcium | ppm | 1201 | 1216 | 1173 | 1386 |
| Magnesium | ppm | 628 | 630 | 590 | 876 |
| Zinc | ppm | 647 | 684 | 662 | 862 |
| Phosphorus | ppm | 629 | 664 | 655 | 714 |
| Barium | ppm | 2 | <1 | 5 | 31 |
| Boron | ppm | 22 | 64 | 76 | 114 |

Diagnosis

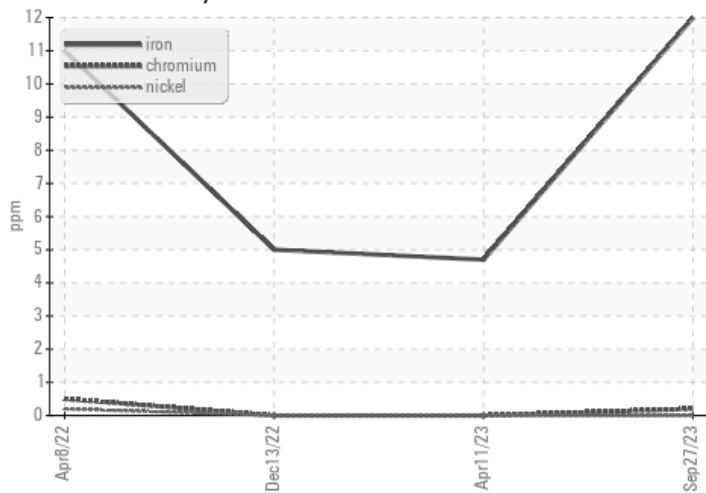
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot: TIMMUN
Unique No: 10896469
Signed: Don Baldrige
Report Date: 26 Feb 2024

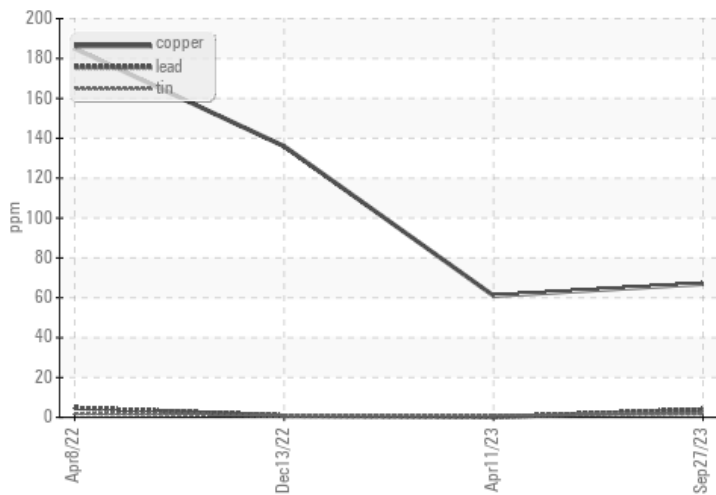


GRAPHS

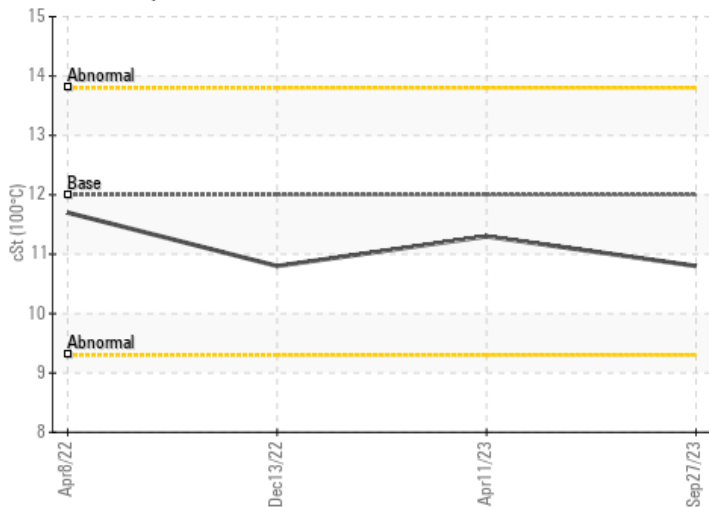
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

