

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L580 046903-1464 - Diesel Engine

Sample No: LHMC122834

Oil Type: LIEBHERR MOTOROIL 10W-40 LOW ASH



Sample Information

| Sample Number | LHMC122834 | LHMC122791 | LHMC163496 | LHMC122850 |
|---------------|-------------|-------------|-------------|-------------|
| Sample Date | 22 Apr 2024 | 07 Dec 2023 | 25 Oct 2023 | 06 Sep 2023 |
| Machine Hours | 12646 | 11891 | 11633 | 11386 |
| Oil Hours | 250 | 750 | 500 | 250 |
| Oil Changed | Not Changd | Not Changd | Not Changd | Not Changd |
| Sample Status | NORMAL | NORMAL | NORMAL | NORMAL |

GENESEE AGGREGATES

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Oil Condition

| Visc @ 100°C | cSt | 13.7 | 13.4 | 13.8 | 14.1 |
|------------------|----------|------|------|------|------|
| Base Number (BN) | mg KOH/g | 7.7 | 6.7 | 7.2 | 7.9 |
| Oxidation (PA) | % | 49 | 60 | 56 | 49 |



Contamination

| Water | % | NEG | NEG | NEG | NEG |
|----------------|-----|------|------|------|------|
| Soot % | % | 0.1 | 0.1 | 0.1 | 0.1 |
| Nitration (PA) | % | 61 | 75 | 71 | 64 |
| Sulfation (PA) | % | 49 | 56 | 53 | 48 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | <1.0 | <1.0 | <1.0 | <1.0 |
| Silicon | ppm | 7 | 9 | 8 | 9 |
| Sodium | ppm | 2 | 2 | <1 | 3 |
| Potassium | ppm | 2 | 4 | <1 | 4 |



Wear Metals

| | | | | | |
|------------|-----|----|----|----|----|
| Iron | ppm | 4 | 7 | 6 | 7 |
| Copper | ppm | <1 | 3 | 1 | 2 |
| Lead | ppm | <1 | 0 | 0 | <1 |
| Tin | ppm | 0 | <1 | <1 | <1 |
| Aluminum | ppm | 3 | 2 | 2 | 2 |
| Chromium | ppm | <1 | <1 | <1 | <1 |
| Molybdenum | ppm | 9 | 5 | 6 | 7 |
| Nickel | ppm | 0 | 0 | 0 | <1 |
| Titanium | ppm | 84 | 77 | 76 | 74 |
| Silver | ppm | <1 | <1 | <1 | 0 |
| Manganese | ppm | <1 | <1 | <1 | 1 |
| Vanadium | ppm | <1 | <1 | 1 | <1 |



Additives

| | | | | | |
|------------|-----|------|------|------|------|
| Calcium | ppm | 1379 | 1207 | 1282 | 1317 |
| Magnesium | ppm | 737 | 695 | 742 | 759 |
| Zinc | ppm | 1214 | 1134 | 1228 | 1231 |
| Phosphorus | ppm | 1057 | 904 | 1034 | 1028 |
| Barium | ppm | 0 | 0 | 0 | 0 |
| Boron | ppm | 142 | 74 | 90 | 117 |

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: GENMILLH
Unique No: 11009965
Signed: Wes Davis
Report Date: 06 May 2024



Graphs

