

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50M 120737-1216 - Diesel Engine

Sample No: LH0173875

Oil Type: CHEVRON URSA SUPER PLUS EC 15W40



SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-------------|-------------|-------------|
| Sample Number | LH0173875 | LHMC116392 | LH0173877 | LHMC116375 |
| Sample Date | 21 Jan 2022 | 04 Dec 2021 | 07 Oct 2021 | 02 Jul 2021 |
| Machine Hours | 4199 | 3856 | 3455 | 2691 |
| Oil Hours | 343 | 401 | 359 | 339 |
| Oil Changed | Changed | Changed | Changed | Changed |
| Sample Status | NORMAL | NORMAL | NORMAL | NORMAL |

STAIMAN RECYCLING

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OIL CONDITION

| | | | | | |
|------------------|----------|------|------|------|------|
| Visc @ 100°C | cSt | 13.1 | 13.1 | 13.1 | 13.2 |
| Base Number (BN) | mg KOH/g | 7.8 | 7.1 | --- | --- |
| Oxidation (PA) | % | 62 | 61 | 59 | 60 |

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.



CONTAMINATION

| | | | | | |
|----------------|-----|------|------|------|------|
| Soot % | % | 0.1 | 0.1 | 0.1 | 0.1 |
| Nitration (PA) | % | 58 | 58 | 58 | 58 |
| Sulfation (PA) | % | 61 | 58 | 58 | 59 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | <1.0 | <1.0 | <1.0 | <1.0 |
| Silicon | ppm | 9 | 9 | 7 | 6 |
| Sodium | ppm | <1 | 1 | 2 | 2 |
| Potassium | ppm | <1 | 1 | 1 | <1 |



WEAR METALS

| | | | | | |
|------------|-----|----|----|----|----|
| Iron | ppm | 3 | 4 | 3 | 3 |
| Copper | ppm | <1 | 5 | 2 | 2 |
| Lead | ppm | <1 | <1 | <1 | <1 |
| Tin | ppm | <1 | <1 | <1 | <1 |
| Aluminum | ppm | 1 | <1 | 2 | 1 |
| Chromium | ppm | <1 | <1 | <1 | <1 |
| Molybdenum | ppm | 86 | 83 | 85 | 77 |
| Nickel | ppm | <1 | 0 | 0 | 0 |
| Titanium | ppm | <1 | <1 | <1 | <1 |
| Silver | ppm | <1 | <1 | <1 | 1 |
| Manganese | ppm | <1 | <1 | <1 | <1 |
| Vanadium | ppm | <1 | 0 | 0 | 0 |



ADDITIVES

| | | | | | |
|------------|-----|------|------|------|------|
| Calcium | ppm | 1421 | 1370 | 1373 | 1317 |
| Magnesium | ppm | 392 | 391 | 406 | 345 |
| Zinc | ppm | 1308 | 1219 | 1182 | 1097 |
| Phosphorus | ppm | 1076 | 1050 | 1038 | 927 |
| Barium | ppm | 0 | 0 | 0 | 0 |
| Boron | ppm | 401 | 400 | 419 | 456 |

Depot: STAWILLH
Unique No: 9829398
Signed: Wes Davis
Report Date: 01 Feb 2022



GRAPHS

