

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH60 117 618-1217 - Diesel Engine

Sample No: LH05297186

Oil Type: DIESEL ENGINE OIL SAE 40



SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-------------|-------------|-------------|
| Sample Number | LH05297186 | LH05267456 | LH05223301 | LH05143201 |
| Sample Date | 07 Jul 2021 | 26 Apr 2021 | 06 Feb 2021 | 30 Nov 2020 |
| Machine Hours | 3534 | 3152 | 2495 | 1833 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | N/A | N/A | N/A | N/A |
| Sample Status | ATTENTION | NORMAL | NORMAL | NORMAL |

SOUTHERN RECYCLING

4801 FLORIDA AVENUE
NEW ORLEANS, LA
US 70117

Contact: Maintenance Analysis
joseph.paul@emrgr.com

T: x:

F: x:



OIL CONDITION

| | | | | | |
|----------------|-----|------|------|------|------|
| Visc @ 100°C | cSt | 12.3 | 13.0 | 12.9 | 13.2 |
| Oxidation (PA) | % | 71 | 90 | 88 | 75 |



CONTAMINATION

| | | | | | |
|----------------|-----|-----|-------|-------|------|
| Water | % | --- | 0.103 | 0.104 | --- |
| Soot % | % | 0.1 | 0.1 | 0.1 | 0.1 |
| Nitration (PA) | % | 80 | 95 | 91 | 78 |
| Sulfation (PA) | % | 63 | 75 | 75 | 67 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | 2.9 | <1.0 | <1.0 | <1.0 |
| Silicon | ppm | 6 | 8 | 7 | 8 |
| Sodium | ppm | 2 | 4 | 0 | 3 |
| Potassium | ppm | 7 | 8 | 7 | 10 |

Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Light fuel dilution occurring. The oil viscosity is lower than normal. Confirm oil type.



WEAR METALS

| | | | | | |
|------------|-----|----|----|----|----|
| Iron | ppm | 6 | 7 | 7 | 6 |
| Copper | ppm | 4 | 4 | 5 | 18 |
| Lead | ppm | <1 | 2 | 1 | 2 |
| Tin | ppm | <1 | <1 | <1 | <1 |
| Aluminum | ppm | 2 | 3 | 2 | 3 |
| Chromium | ppm | <1 | <1 | <1 | <1 |
| Molybdenum | ppm | 45 | 26 | 22 | 14 |
| Nickel | ppm | 0 | 0 | 0 | <1 |
| Titanium | ppm | <1 | <1 | <1 | 0 |
| Silver | ppm | 0 | <1 | <1 | <1 |
| Manganese | ppm | <1 | <1 | <1 | <1 |
| Vanadium | ppm | 0 | <1 | 0 | 0 |



ADDITIVES

| | | | | | |
|------------|-----|------|------|------|------|
| Calcium | ppm | 1985 | 1990 | 2083 | 2105 |
| Magnesium | ppm | 155 | 88 | 85 | 67 |
| Zinc | ppm | 1085 | 1020 | 1108 | 1122 |
| Phosphorus | ppm | 874 | 864 | 898 | 880 |
| Barium | ppm | 0 | 0 | <1 | 0 |
| Boron | ppm | 81 | 43 | 63 | 76 |

Depot: SOUNEVLH

Unique No: 9571141

Signed: Jonathan Hester

Report Date: 12 Jul 2021



GRAPHS

