

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L538P 046205-1559 - Front Right Wheel Hub

Sample No: LH0271479

Oil Type: GEAR OIL SAE 80W90



SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-------------|-------------|-------------|
| Sample Number | LH0271479 | LH | LH0167972 | LH0137155 |
| Sample Date | 25 Jul 2023 | 07 Apr 2021 | 22 Aug 2020 | 07 May 2019 |
| Machine Hours | 5955 | 0 | 3000 | 1039 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | N/A | Changed | Changed | Changed |
| Sample Status | NORMAL | NORMAL | NORMAL | NORMAL |

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OIL CONDITION

| | | | | | |
|-------------|-----|------|-----|------|-----|
| Visc @ 40°C | cSt | 91.5 | 120 | 84.8 | 188 |
|-------------|-----|------|-----|------|-----|



CONTAMINATION

| | | | | | |
|-----------|-----|----|----|----|----|
| Silicon | ppm | 6 | 2 | 4 | 10 |
| Sodium | ppm | <1 | 1 | <1 | 8 |
| Potassium | ppm | <1 | <1 | <1 | <1 |



WEAR METALS

| | | | | | |
|------------|-----|----|-----|----|----|
| Iron | ppm | 21 | 100 | 56 | 69 |
| Copper | ppm | <1 | <1 | <1 | <1 |
| Lead | ppm | 0 | 0 | <1 | 1 |
| Tin | ppm | 0 | <1 | 0 | 0 |
| Aluminum | ppm | <1 | <1 | <1 | <1 |
| Chromium | ppm | <1 | <1 | <1 | 1 |
| Molybdenum | ppm | <1 | <1 | 3 | <1 |
| Nickel | ppm | 0 | <1 | 0 | <1 |
| Titanium | ppm | 0 | 0 | <1 | 0 |
| Silver | ppm | <1 | <1 | <1 | 2 |
| Manganese | ppm | <1 | 2 | <1 | 2 |
| Vanadium | ppm | 0 | 0 | 0 | 0 |



ADDITIVES

| | | | | | |
|------------|-----|------|------|------|------|
| Calcium | ppm | 13 | 13 | 69 | 45 |
| Magnesium | ppm | 2 | 5 | 53 | 1 |
| Zinc | ppm | 17 | 19 | 78 | 41 |
| Phosphorus | ppm | 1995 | 2241 | 1727 | 2286 |
| Barium | ppm | 0 | <1 | <1 | 2 |
| Boron | ppm | 303 | 165 | 283 | 2 |

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. Viscosity of sample indicates oil is within SAE 75W90 range, advise investigate. The condition of the oil is acceptable for the time in service.

Depot: LESSTT
Unique No: 5618301
Signed: Wes Davis
Report Date: 31 Jul 2023



GRAPHS

