

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH110 1227-155752 - Rear Right Wheel Hub

Sample No: LH0280590

Oil Type: GEAR OIL SAE 80W90



KINDER MORGAN
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TRINITY, AL
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Sample Information

| Sample Number | LH0280590 | LH0280590 | LH0280579 | LH0280568 |
|---------------|-------------|-------------|-------------|-------------|
| Sample Date | 18 Apr 2024 | 19 Mar 2024 | 20 Feb 2024 | 11 Jan 2024 |
| Machine Hours | 1980 | 1544 | 1022 | 507 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | Changed | Not Changd | Changed | Not Changd |
| Sample Status | ATTENTION | ATTENTION | NORMAL | NORMAL |



Oil Condition

| Visc @ 40°C | cSt | 96.4 | 99.6 | 149 | 150 |
|-------------|-----|------|------|-----|-----|
| | | | | | |



Contamination

| Water | % | NEG | NEG | NEG | NEG |
|-----------|-----|-----|-----|-----|-----|
| Silicon | ppm | 5 | 4 | 8 | 7 |
| Sodium | ppm | <1 | <1 | 2 | 4 |
| Potassium | ppm | 0 | 1 | 0 | 1 |



Wear Metals

| | | | | | |
|------------|-----|----|----|----|----|
| Iron | ppm | 51 | 39 | 55 | 37 |
| Copper | ppm | 14 | 10 | 25 | 19 |
| Lead | ppm | 0 | 0 | <1 | <1 |
| Tin | ppm | 0 | 2 | 0 | <1 |
| Aluminum | ppm | <1 | <1 | <1 | <1 |
| Chromium | ppm | <1 | <1 | <1 | 0 |
| Molybdenum | ppm | 1 | 2 | <1 | 0 |
| Nickel | ppm | 0 | <1 | 0 | <1 |
| Titanium | ppm | <1 | 0 | 0 | 0 |
| Silver | ppm | 0 | 0 | <1 | 0 |
| Manganese | ppm | 1 | <1 | 2 | 2 |
| Vanadium | ppm | 0 | <1 | <1 | 0 |



Additives

| | | | | | |
|------------|-----|-----|-----|------|------|
| Calcium | ppm | 183 | 177 | 99 | 107 |
| Magnesium | ppm | 4 | 4 | 0 | 2 |
| Zinc | ppm | 105 | 93 | 24 | 23 |
| Phosphorus | ppm | 481 | 469 | 1365 | 1246 |
| Barium | ppm | 0 | 0 | <1 | 2 |
| Boron | ppm | 0 | 2 | 4 | 5 |

Diagnosis

The oil change at the time of sampling has been noted. 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 oil viscosity is lower than normal. Confirm oil type.

Depot: KINTRI
Unique No: 11031832
Signed: Don Baldrige
Report Date: 17 May 2024



Graphs

