

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH110 1227-155752 - Swing Drive

Sample No: LH0280575

Oil Type: SAE 30W



KINDER MORGAN
4301 IVERSON
TRINITY, AL
US 35601
Contact: CHIP OAKES

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SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-------------|-----|-----|
| Sample Number | LH0280575 | LH0280564 | --- | --- |
| Sample Date | 20 Feb 2024 | 11 Jan 2024 | --- | --- |
| Machine Hours | 1022 | 507 | --- | --- |
| Oil Hours | 0 | 0 | --- | --- |
| Oil Changed | Changed | Not Changd | --- | --- |
| Sample Status | ATTENTION | NORMAL | --- | --- |



OIL CONDITION

| | | | | | |
|-------------|-----|-----|-----|-----|-----|
| Visc @ 40°C | cSt | 179 | 180 | --- | --- |
|-------------|-----|-----|-----|-----|-----|



CONTAMINATION

| | | | | | |
|-----------|-----|-----|-----|-----|-----|
| Water | % | NEG | NEG | --- | --- |
| Silicon | ppm | 7 | 5 | --- | --- |
| Sodium | ppm | 3 | 4 | --- | --- |
| Potassium | ppm | <1 | 2 | --- | --- |



WEAR METALS

| | | | | | |
|------------|-----|-----|-----|-----|-----|
| Iron | ppm | 297 | 203 | --- | --- |
| Copper | ppm | 119 | 67 | --- | --- |
| Lead | ppm | 1 | <1 | --- | --- |
| Tin | ppm | 8 | 5 | --- | --- |
| Aluminum | ppm | 1 | 1 | --- | --- |
| Chromium | ppm | <1 | <1 | --- | --- |
| Molybdenum | ppm | 0 | 0 | --- | --- |
| Nickel | ppm | 0 | <1 | --- | --- |
| Titanium | ppm | 0 | 0 | --- | --- |
| Silver | ppm | 0 | 0 | --- | --- |
| Manganese | ppm | 2 | 2 | --- | --- |
| Vanadium | ppm | <1 | 0 | --- | --- |



ADDITIVES

| | | | | | |
|------------|-----|------|------|-----|-----|
| Calcium | ppm | 119 | 46 | --- | --- |
| Magnesium | ppm | <1 | 2 | --- | --- |
| Zinc | ppm | 39 | 16 | --- | --- |
| Phosphorus | ppm | 2188 | 1879 | --- | --- |
| Barium | ppm | 3 | 4 | --- | --- |
| Boron | ppm | 6 | 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 higher than normal. This plus the additive levels indicates the addition of a different brand, or type of oil. Confirm oil type.

Depot: KINTRI
Unique No: 10898746
Signed: Don Baldrige
Report Date: 28 Feb 2024



GRAPHS

