

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### 2018.03.8834 - Diesel Engine

Sample No: LH0274342

Oil Type: NOT GIVEN



#### SAMPLE INFORMATION

|               |             |     |     |     |
|---------------|-------------|-----|-----|-----|
| Sample Number | LH0274342   | --- | --- | --- |
| Sample Date   | 20 Oct 2023 | --- | --- | --- |
| Machine Hours | 0           | --- | --- | --- |
| Oil Hours     | 0           | --- | --- | --- |
| Oil Changed   | Not Chngd   | --- | --- | --- |
| Sample Status | ABNORMAL    | --- | --- | --- |

**LIEBHERR CANADA LTD. - REMAN**  
 1015 SUTTON DRIVE  
 BURLINGTON, ON  
 CA L7L 5Z8  
 Contact: Jeff Carter  
 jeff.carter@liebherr.com  
 T: (905)319-9222  
 F: (905)319-6622



#### OIL CONDITION

|                      |       |      |     |     |     |
|----------------------|-------|------|-----|-----|-----|
| Visc @ 40°C          | cSt   | 75.1 | --- | --- | --- |
| Visc @ 100°C         | cSt   | 11.3 | --- | --- | --- |
| Viscosity Index (VI) | Scale | 141  | --- | --- | --- |
| Oxidation (PA)       | %     | 99   | --- | --- | --- |

#### Diagnosis

Check for low coolant level. No corrective action is recommended at this time. We recommend that you drain the oil from the component if this has not already been done. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. Fuel content negligible. Water treatment chemicals present, indicating slow coolant leak. Test for glycol is negative. Additive levels indicate the addition of a different brand, or type of oil. Viscosity of sample indicates oil is within SAE 10W30 range, advise investigate. The condition of the oil is acceptable for the time in service (see recommendation).



#### CONTAMINATION

|                |     |     |     |     |     |
|----------------|-----|-----|-----|-----|-----|
| Soot %         | %   | 0   | --- | --- | --- |
| Nitration (PA) | %   | 63  | --- | --- | --- |
| Sulfation (PA) | %   | 62  | --- | --- | --- |
| Glycol         | %   | 0.0 | --- | --- | --- |
| Fuel           | %   | 0.8 | --- | --- | --- |
| Silicon        | ppm | 18  | --- | --- | --- |
| Sodium         | ppm | 4   | --- | --- | --- |
| Potassium      | ppm | 330 | --- | --- | --- |



#### WEAR METALS

|            |     |      |     |     |     |
|------------|-----|------|-----|-----|-----|
| Iron       | ppm | 2    | --- | --- | --- |
| Copper     | ppm | <1   | --- | --- | --- |
| Lead       | ppm | <1   | --- | --- | --- |
| Tin        | ppm | 0    | --- | --- | --- |
| Aluminum   | ppm | 10   | --- | --- | --- |
| Chromium   | ppm | 0    | --- | --- | --- |
| Molybdenum | ppm | 1170 | --- | --- | --- |
| Nickel     | ppm | 0    | --- | --- | --- |
| Titanium   | ppm | 0    | --- | --- | --- |
| Silver     | ppm | 0    | --- | --- | --- |
| Manganese  | ppm | 0    | --- | --- | --- |
| Vanadium   | ppm | 0    | --- | --- | --- |



#### ADDITIVES

|            |     |     |     |     |     |
|------------|-----|-----|-----|-----|-----|
| Calcium    | ppm | 484 | --- | --- | --- |
| Magnesium  | ppm | 97  | --- | --- | --- |
| Zinc       | ppm | 9   | --- | --- | --- |
| Phosphorus | ppm | 7   | --- | --- | --- |
| Barium     | ppm | <1  | --- | --- | --- |
| Boron      | ppm | 496 | --- | --- | --- |

**Depot:** REMAN  
**Unique No:** 5668003  
**Signed:** Kevin Marson  
**Report Date:** 27 Oct 2023



### GRAPHS

