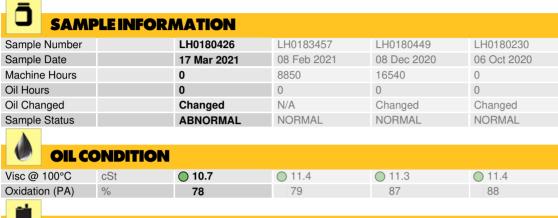
## LIEBHERR

## **CONSTRUCTION EQUIPMENT**

### LIEBHERR LH50M 097459-1216 - Diesel Engine

Sample No: LH0180426

Oil Type: PETRO CANADA DURON UHP 5W30



| CONTAMINATION  |     |              |          |          |          |  |  |  |
|----------------|-----|--------------|----------|----------|----------|--|--|--|
| Water          | %   | <b>0.335</b> |          |          |          |  |  |  |
| Soot %         | %   | <b>0</b>     | O 0      | O 0      | O 0      |  |  |  |
| Nitration (PA) | %   | 84           | 80       | 88       | 88       |  |  |  |
| Sulfation (PA) | %   | 57           | 57       | 61       | 61       |  |  |  |
| Glycol         | %   | <b>0.0</b>   | NEG      | NEG      | NEG      |  |  |  |
| Fuel           | %   | <1.0         | <1.0     | <1.0     | <1.0     |  |  |  |
| Silicon        | ppm | <b>7</b>     | <b>6</b> | <b>7</b> | <b>7</b> |  |  |  |
| Sodium         | ppm | <b>4</b>     | O 4      | <b>5</b> | <b>4</b> |  |  |  |
| Potassium      | ppm | <b>0</b>     | O <1     | <1       | O <1     |  |  |  |

| WEAR METALS |     |              |            |           |            |  |  |  |
|-------------|-----|--------------|------------|-----------|------------|--|--|--|
| Iron        | ppm | <b>4</b>     | <b>3</b>   | <b>4</b>  | <b>O</b> 5 |  |  |  |
| Copper      | ppm | <b>○</b> <1  | O <1       | O <1      | O 1        |  |  |  |
| Lead        | ppm | <b></b> <1   | O <1       | O <1      | O <1       |  |  |  |
| Tin         | ppm | <b></b> <1   | <b>O</b> 0 | O <1      | O <1       |  |  |  |
| Aluminum    | ppm | <b>1</b>     | <b>1</b>   | O 2       | O 1        |  |  |  |
| Chromium    | ppm | <b>○</b> <1  | O <1       | O <1      | O <1       |  |  |  |
| Molybdenum  | ppm | <b>55</b>    | <b>5</b> 9 | <b>60</b> | <b>5</b> 9 |  |  |  |
| Nickel      | ppm | <b>()</b> <1 | O <1       | O 0       | O 0        |  |  |  |
| Titanium    | ppm | 0            | 0          | 0         | 0          |  |  |  |
| Silver      | ppm | <1           | 0          | 0         | <1         |  |  |  |
| Manganese   | ppm | <b>O</b> <1  |            | <1        | O <1       |  |  |  |
| Vanadium    | ppm | 0            | 0          | 0         | 0          |  |  |  |

| ADDITIVES  |     |              |        |        |           |  |  |  |
|------------|-----|--------------|--------|--------|-----------|--|--|--|
| Calcium    | ppm | <b>797</b>   | ○ 865  | ○ 897  | O 912     |  |  |  |
| Magnesium  | ppm | <b>1106</b>  | O 1143 | O 1161 | O 1147    |  |  |  |
| Zinc       | ppm | <b>1236</b>  | O 1331 | O 1359 | O 1316    |  |  |  |
| Phosphorus | ppm | <b>997</b>   | O 1066 | O 1074 | O 1054    |  |  |  |
| Barium     | ppm | <b>()</b> <1 | 0      | <1     | O <1      |  |  |  |
| Boron      | ppm | <b>31</b>    | ○ 30   | O 21   | <b>20</b> |  |  |  |



#### J.D. Irving

Truro Sawmill, 529 Valley Dale Road Truro, NS CA B2N 5C5

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F:

#### Diagnosis

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a light concentration of water present in the oil. Test for glycol is negative. The oil is no longer serviceable due to the presence of contaminants.

Depot:JDITRUUnique No:5189400Signed:Kevin MarsonReport Date:18 Mar 2021

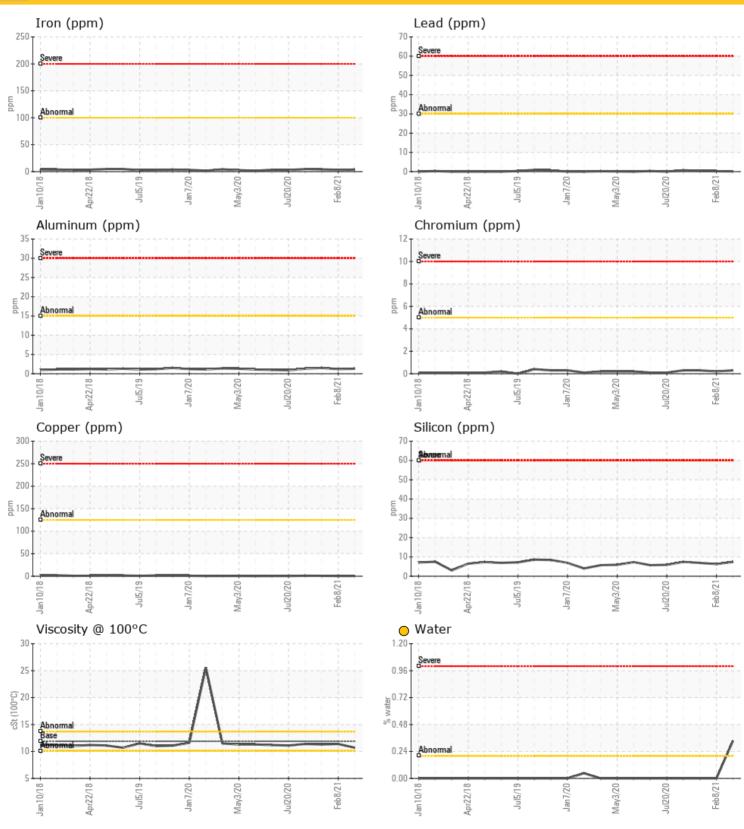
# LIEBHERR

CONSTRUCTION EQUIPMENT





### **GRAPHS**



Report Id: JDITRU [WCAMIS] 02409923 (Generated: 10/30/2023 14:26:18) Rev: 1

Submitted By: Sherrie Wilson