## LIEBHERR

## **CONSTRUCTION EQUIPMENT**

### LIEBHERR R945 055788-1866 - Diesel Engine

Sample No: LH0265570

Oil Type: PETRO CANADA SUPREME 5W30

| SAMPLEINFORMATION |             |             |  |  |  |  |
|-------------------|-------------|-------------|--|--|--|--|
| Sample Number     | LH0265570   | LH0250745   |  |  |  |  |
| Sample Date       | 23 Aug 2023 | 07 Mar 2023 |  |  |  |  |
| Machine Hours     | 967         | 500         |  |  |  |  |
| Oil Hours         | 0           | 0           |  |  |  |  |
| Oil Changed       | Changed     | Changed     |  |  |  |  |
| Sample Status     | NORMAL      | NORMAL      |  |  |  |  |
| <b>A</b>          |             |             |  |  |  |  |

| OIL CO         | <b>ONDITION</b> |             |        |      |
|----------------|-----------------|-------------|--------|------|
| Visc @ 100°C   | cSt             | <b>11.7</b> | O 11.8 | <br> |
| Oxidation (PA) | %               | 110         | 214    | <br> |
| _              |                 |             |        |      |

| <b>**</b>      |     |            |            |  |  |
|----------------|-----|------------|------------|--|--|
| CONTAMINATION  |     |            |            |  |  |
| Soot %         | %   | <b>0</b> 0 | <b>0</b> 0 |  |  |
| Nitration (PA) | %   | 93         | 108        |  |  |
| Sulfation (PA) | %   | 70         | 118        |  |  |
| Glycol         | %   | NEG        | NEG        |  |  |
| Fuel           | %   | <1.0       | <1.0       |  |  |
| Silicon        | ppm | <b>8</b>   | <b>9</b>   |  |  |
| Sodium         | ppm | <b>4</b>   | O 2        |  |  |
| Potassium      | ppm | <b>3</b>   | <b>4</b>   |  |  |

| (O) WE     |          |             |          |      |
|------------|----------|-------------|----------|------|
| WE!        | AR METAI | .S          |          |      |
| Iron       | ppm      | <b>11</b>   | O 14     | <br> |
| Copper     | ppm      | <b>64</b>   | O 173    | <br> |
| Lead       | ppm      | <b>2</b>    | O 7      | <br> |
| Tin        | ppm      | <b>1</b>    | O 2      | <br> |
| Aluminum   | ppm      | <b>2</b>    | <b>3</b> | <br> |
| Chromium   | ppm      | <b>○</b> <1 | O <1     | <br> |
| Molybdenum | ppm      | <b>58</b>   | O 45     | <br> |
| Nickel     | ppm      | <b>0</b>    | O <1     | <br> |
| Titanium   | ppm      | 0           | <1       | <br> |
| Silver     | ppm      | <b>0</b>    | 0        | <br> |
| Manganese  | ppm      | <b>○</b> <1 | O 1      | <br> |
| Vanadium   | ppm      | 0           | 0        | <br> |

| WIII.      |     |             |            |  |  |  |
|------------|-----|-------------|------------|--|--|--|
| ADDITIVES  |     |             |            |  |  |  |
| Calcium    | ppm | <b>916</b>  | 1494       |  |  |  |
| Magnesium  | ppm | <b>1075</b> | O 897      |  |  |  |
| Zinc       | ppm | <b>1113</b> | 833        |  |  |  |
| Phosphorus | ppm | <b>960</b>  | O 734      |  |  |  |
| Barium     | ppm | <b>5</b>    | 27         |  |  |  |
| Boron      | ppm | <b>31</b>   | <b>9</b> 3 |  |  |  |
|            |     |             |            |  |  |  |



American Iron and Metal 997 CARPIN BEACH RD SAULT ST MARIE, ON CA P6A 6K4 Contact: Service Manager

T: F:

#### Diagnosis

Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

Depot: AIMSAU
Unique No: 5643769
Signed: Kevin Marson
Report Date: 15 Sep 2023

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#### **GRAPHS**

