



# CONSTRUCTION EQUIPMENT

## A10991 VOLVO EC480DL 210065 - DIESEL ENGINE



**Sample No:** VCP421863  
**Oil Type:** MOBIL 15W40  
**Job No:** A10991



### SAMPLE INFORMATION

|               |                    |             |             |             |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | <b>VCP421863</b>   | VCP416829   | VCP399150   | VCP378611   |
| Sample Date   | <b>26 Aug 2023</b> | 07 Jun 2023 | 13 Jan 2023 | 01 Sep 2022 |
| Machine Hours | <b>8275</b>        | 8066        | 7764        | 7495        |
| Oil Hours     | <b>250</b>         | 0           | 0           | 250         |
| Oil Changed   | <b>Changed</b>     | N/A         | Changed     | Changed     |
| Sample Status | <b>NORMAL</b>      | NORMAL      | NORMAL      | NORMAL      |

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### OIL CONDITION

|                  |          |             |      |      |      |
|------------------|----------|-------------|------|------|------|
| Visc @ 100°C     | cSt      | <b>12.4</b> | 12.4 | 12.5 | 12.9 |
| Base Number (BN) | mg KOH/g | <b>9.8</b>  | 9.7  | 9.0  | 8.2  |
| Oxidation (PA)   | %        | <b>78</b>   | 86   | 55   | 63   |



### CONTAMINATION

|                |     |                |     |      |      |
|----------------|-----|----------------|-----|------|------|
| Soot %         | %   | <b>0.2</b>     | 0.2 | 0.2  | 0.2  |
| Nitration (PA) | %   | <b>53</b>      | 57  | 60   | 81   |
| Sulfation (PA) | %   | <b>59</b>      | 62  | 50   | 55   |
| Glycol         | %   | <b>NEG</b>     | NEG | NEG  | NEG  |
| Fuel           | %   | <b>&lt;1.0</b> | 1.6 | <1.0 | <1.0 |
| Silicon        | ppm | <b>5</b>       | 3   | 4    | 2    |
| Sodium         | ppm | <b>4</b>       | 2   | 0    | 4    |
| Potassium      | ppm | <b>0</b>       | 1   | <1   | 4    |



### WEAR METALS

|            |     |              |    |    |    |
|------------|-----|--------------|----|----|----|
| Iron       | ppm | <b>4</b>     | 2  | 4  | 5  |
| Copper     | ppm | <b>2</b>     | 0  | <1 | 1  |
| Lead       | ppm | <b>&lt;1</b> | 0  | 2  | 2  |
| Tin        | ppm | <b>&lt;1</b> | 0  | <1 | 1  |
| Aluminum   | ppm | <b>4</b>     | 10 | 2  | 2  |
| Chromium   | ppm | <b>0</b>     | 0  | <1 | <1 |
| Molybdenum | ppm | <b>41</b>    | 39 | 36 | 70 |
| Nickel     | ppm | <b>0</b>     | 0  | <1 | <1 |
| Titanium   | ppm | <b>&lt;1</b> | 0  | <1 | 0  |
| Silver     | ppm | <b>0</b>     | 0  | 0  | 0  |
| Manganese  | ppm | <b>&lt;1</b> | 0  | <1 | <1 |
| Vanadium   | ppm | <b>0</b>     | 0  | 0  | <1 |



### ADDITIVES

|            |     |             |      |      |      |
|------------|-----|-------------|------|------|------|
| Calcium    | ppm | <b>1783</b> | 1731 | 1717 | 1870 |
| Magnesium  | ppm | <b>518</b>  | 531  | 408  | 67   |
| Zinc       | ppm | <b>1107</b> | 1177 | 1129 | 1149 |
| Phosphorus | ppm | <b>966</b>  | 944  | 913  | 918  |
| Barium     | ppm | <b>0</b>    | 0    | 0    | 0    |
| Boron      | ppm | <b>51</b>   | 38   | 16   | 54   |

### Diagnosis

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

**Depot:** JAAPHI  
**Unique No:** 10648359  
**Signed:** Wes Davis  
**Report Date:** 18 Sep 2023



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## GRAPHS

