



# CONSTRUCTION EQUIPMENT

SPM594241 VOLVO EC480E 315141 - DIESEL ENGINE



**Sample No:** VCP412200  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** SPM594241



## SAMPLE INFORMATION

|               |                    |             |     |     |
|---------------|--------------------|-------------|-----|-----|
| Sample Number | <b>VCP412200</b>   | VCP422293   | --- | --- |
| Sample Date   | <b>16 Aug 2023</b> | 23 May 2023 | --- | --- |
| Machine Hours | <b>1133</b>        | 544         | --- | --- |
| Oil Hours     | <b>0</b>           | 0           | --- | --- |
| Oil Changed   | <b>Changed</b>     | Changed     | --- | --- |
| Sample Status | <b>ATTENTION</b>   | ATTENTION   | --- | --- |

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## OIL CONDITION

|                  |          |               |        |     |     |
|------------------|----------|---------------|--------|-----|-----|
| Visc @ 100°C     | cSt      | <b>▲ 12.2</b> | ▲ 10.8 | --- | --- |
| Base Number (BN) | mg KOH/g | <b>■ 7.2</b>  | ■ 4.1  | --- | --- |
| Oxidation (PA)   | %        | <b>86</b>     | 69     | --- | --- |

## Diagnosis

Oil and filter 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 lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



## CONTAMINATION

|                |     |                |       |     |     |
|----------------|-----|----------------|-------|-----|-----|
| Soot %         | %   | <b>■ 0.1</b>   | ■ 0.1 | --- | --- |
| Nitration (PA) | %   | <b>77</b>      | 83    | --- | --- |
| Sulfation (PA) | %   | <b>63</b>      | 60    | --- | --- |
| Glycol         | %   | <b>NEG</b>     | NEG   | --- | --- |
| Fuel           | %   | <b>&lt;1.0</b> | ■ 0.8 | --- | --- |
| Silicon        | ppm | <b>■ 16</b>    | ■ 28  | --- | --- |
| Sodium         | ppm | <b>■ 2</b>     | ■ 1   | --- | --- |
| Potassium      | ppm | <b>■ &lt;1</b> | ■ 4   | --- | --- |



## WEAR METALS

|            |     |                |       |     |     |
|------------|-----|----------------|-------|-----|-----|
| Iron       | ppm | <b>■ 8</b>     | ■ 13  | --- | --- |
| Copper     | ppm | <b>■ 63</b>    | ■ 204 | --- | --- |
| Lead       | ppm | <b>■ 0</b>     | ■ <1  | --- | --- |
| Tin        | ppm | <b>■ &lt;1</b> | ■ 2   | --- | --- |
| Aluminum   | ppm | <b>■ 2</b>     | ■ 2   | --- | --- |
| Chromium   | ppm | <b>■ &lt;1</b> | ■ 0   | --- | --- |
| Molybdenum | ppm | <b>■ 46</b>    | ■ 88  | --- | --- |
| Nickel     | ppm | <b>■ 0</b>     | ■ <1  | --- | --- |
| Titanium   | ppm | <b>0</b>       | 0     | --- | --- |
| Silver     | ppm | <b>■ 0</b>     | ■ 0   | --- | --- |
| Manganese  | ppm | <b>■ &lt;1</b> | ■ 2   | --- | --- |
| Vanadium   | ppm | <b>0</b>       | 0     | --- | --- |



## ADDITIVES

|            |     |               |        |     |     |
|------------|-----|---------------|--------|-----|-----|
| Calcium    | ppm | <b>■ 1779</b> | ■ 2214 | --- | --- |
| Magnesium  | ppm | <b>■ 481</b>  | 20     | --- | --- |
| Zinc       | ppm | <b>■ 1151</b> | ■ 1146 | --- | --- |
| Phosphorus | ppm | <b>■ 917</b>  | ■ 932  | --- | --- |
| Barium     | ppm | <b>■ 0</b>    | ■ 2    | --- | --- |
| Boron      | ppm | <b>■ 12</b>   | ■ 15   | --- | --- |

**Depot:** VOLVO0093  
**Unique No:** 10629141  
**Signed:** Sean Felton  
**Report Date:** 31 Aug 2023



# CONSTRUCTION EQUIPMENT



## GRAPHS

