



# CONSTRUCTION EQUIPMENT

## SW-25507-2 LANDMARK VOLVO EC350EL 314067 - DIESEL ENGINE



**Sample No:** VCP442155  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** SW-25507-2 LANDMARK



### SAMPLE INFORMATION

|               |             |             |     |     |
|---------------|-------------|-------------|-----|-----|
| Sample Number | VCP442155   | VCP372381   | --- | --- |
| Sample Date   | 18 Oct 2023 | 10 May 2022 | --- | --- |
| Machine Hours | 3845        | 1696        | --- | --- |
| Oil Hours     | 535         | 800         | --- | --- |
| Oil Changed   | Changed     | Changed     | --- | --- |
| Sample Status | ABNORMAL    | ABNORMAL    | --- | --- |

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### OIL CONDITION

|                  |          |        |        |     |     |
|------------------|----------|--------|--------|-----|-----|
| Visc @ 100°C     | cSt      | █ 13.2 | ▲ 12.4 | --- | --- |
| Base Number (BN) | mg KOH/g | █ 5.5  | █ 6.7  | --- | --- |
| Oxidation (PA)   | %        | 64     | 80     | --- | --- |



### CONTAMINATION

|                |     |       |       |     |     |
|----------------|-----|-------|-------|-----|-----|
| Soot %         | %   | █ 0.1 | █ 0.1 | --- | --- |
| Nitration (PA) | %   | 73    | 79    | --- | --- |
| Sulfation (PA) | %   | 56    | 61    | --- | --- |
| Glycol         | %   | NEG   | NEG   | --- | --- |
| Fuel           | %   | <1.0  | █ 0.4 | --- | --- |
| Silicon        | ppm | █ 9   | █ 8   | --- | --- |
| Sodium         | ppm | █ 4   | █ 2   | --- | --- |
| Potassium      | ppm | █ 0   | █ 0   | --- | --- |



### WEAR METALS

|            |     |      |      |     |     |
|------------|-----|------|------|-----|-----|
| Iron       | ppm | █ 11 | █ 9  | --- | --- |
| Copper     | ppm | ▲ 20 | ▲ 64 | --- | --- |
| Lead       | ppm | █ 0  | █ 1  | --- | --- |
| Tin        | ppm | █ <1 | █ 1  | --- | --- |
| Aluminum   | ppm | █ 2  | █ 2  | --- | --- |
| Chromium   | ppm | █ <1 | █ <1 | --- | --- |
| Molybdenum | ppm | █ 5  | █ 47 | --- | --- |
| Nickel     | ppm | █ 3  | █ 0  | --- | --- |
| Titanium   | ppm | █ 72 | <1   | --- | --- |
| Silver     | ppm | █ 0  | 0    | --- | --- |
| Manganese  | ppm | █ 1  | █ <1 | --- | --- |
| Vanadium   | ppm | <1   | 0    | --- | --- |



### ADDITIVES

|            |     |        |        |     |     |
|------------|-----|--------|--------|-----|-----|
| Calcium    | ppm | █ 1800 | █ 1828 | --- | --- |
| Magnesium  | ppm | █ 392  | █ 474  | --- | --- |
| Zinc       | ppm | █ 1221 | █ 1138 | --- | --- |
| Phosphorus | ppm | █ 901  | █ 994  | --- | --- |
| Barium     | ppm | █ 0    | █ 0    | --- | --- |
| Boron      | ppm | 112    | █ 37   | --- | --- |

### Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. The copper level has decreased, but is still abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other 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 acceptable for the time in service.

**Depot:** VOLVO8770  
**Unique No:** 10711585  
**Signed:** Sean Felton  
**Report Date:** 27 Oct 2023



# CONSTRUCTION EQUIPMENT



## GRAPHS

