



# CONSTRUCTION EQUIPMENT

## 24591 VOLVO L350 1222 - DIESEL ENGINE



**Sample No:** VCP439315  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 24591



### SAMPLE INFORMATION

|               |                    |             |             |             |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | <b>VCP439315</b>   | VCP435068   | VCP426923   | VCP407108   |
| Sample Date   | <b>14 Dec 2023</b> | 18 Oct 2023 | 25 Aug 2023 | 24 May 2023 |
| Machine Hours | <b>5072</b>        | 4423        | 3525        | 1980        |
| Oil Hours     | <b>1000</b>        | 1000        | 1000        | 1000        |
| Oil Changed   | <b>Not Chngd</b>   | Changed     | Changed     | Changed     |
| Sample Status | <b>NORMAL</b>      | NORMAL      | ABNORMAL    | ATTENTION   |

**218 - ASCENDUM MACHINERY INC - N. CHARLESTON**  
 7235 CROSS COUNTRY RD.  
 NORTH CHARLESTON, SC  
 US 29418  
 Contact: MATT MITCHAM  
 matt.mitcham@ascendummachinery.com  
 T:  
 F: (843)414-1129

### OIL CONDITION

|                  |          |             |      |        |        |
|------------------|----------|-------------|------|--------|--------|
| Visc @ 100°C     | cSt      | <b>12.6</b> | 12.3 | ▲ 11.7 | ▲ 10.8 |
| Base Number (BN) | mg KOH/g | <b>9.8</b>  | 9.2  | 7.2    | 9.7    |
| Oxidation (PA)   | %        | <b>82</b>   | 81   | 80     | 66     |

### CONTAMINATION

|                |     |                |      |      |     |
|----------------|-----|----------------|------|------|-----|
| Water          | %   | <b>NEG</b>     | NEG  | NEG  | NEG |
| Soot %         | %   | <b>0.3</b>     | 0.4  | 0.7  | 0.3 |
| Nitration (PA) | %   | <b>62</b>      | 66   | 77   | 54  |
| Sulfation (PA) | %   | <b>61</b>      | 61   | 61   | 58  |
| Glycol         | %   | <b>NEG</b>     | NEG  | NEG  | NEG |
| Fuel           | %   | <b>&lt;1.0</b> | <1.0 | <1.0 | 1.7 |
| Silicon        | ppm | <b>5</b>       | 6    | 8    | 7   |
| Sodium         | ppm | <b>2</b>       | 3    | 3    | 1   |
| Potassium      | ppm | <b>2</b>       | 9    | 29   | 6   |

### WEAR METALS

|            |     |              |    |      |    |
|------------|-----|--------------|----|------|----|
| Iron       | ppm | <b>3</b>     | 6  | 16   | 8  |
| Copper     | ppm | <b>4</b>     | 4  | ▲ 18 | 13 |
| Lead       | ppm | <b>0</b>     | <1 | 2    | <1 |
| Tin        | ppm | <b>&lt;1</b> | 2  | 2    | 2  |
| Aluminum   | ppm | <b>2</b>     | 4  | 8    | 3  |
| Chromium   | ppm | <b>0</b>     | <1 | <1   | <1 |
| Molybdenum | ppm | <b>38</b>    | 37 | 37   | 26 |
| Nickel     | ppm | <b>&lt;1</b> | 2  | 3    | 2  |
| Titanium   | ppm | <b>0</b>     | 0  | <1   | 0  |
| Silver     | ppm | <b>0</b>     | 0  | 0    | 0  |
| Manganese  | ppm | <b>&lt;1</b> | <1 | 1    | <1 |
| Vanadium   | ppm | <b>0</b>     | 0  | <1   | <1 |

### ADDITIVES

|            |     |             |      |      |      |
|------------|-----|-------------|------|------|------|
| Calcium    | ppm | <b>1603</b> | 1590 | 1869 | 2368 |
| Magnesium  | ppm | <b>518</b>  | 537  | 497  | 346  |
| Zinc       | ppm | <b>1073</b> | 1118 | 1119 | 1251 |
| Phosphorus | ppm | <b>842</b>  | 905  | 874  | 989  |
| Barium     | ppm | <b>0</b>    | 0    | 0    | 0    |
| Boron      | ppm | <b>41</b>   | 27   | 11   | 33   |

### 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:** VOLVO3387  
**Unique No:** 10792825  
**Signed:** Wes Davis  
**Report Date:** 19 Dec 2023



# CONSTRUCTION EQUIPMENT



## VOLVO GRAPHS

