



# CONSTRUCTION EQUIPMENT

## E15313 VOLVO L90H 626247 - DIESEL ENGINE



**Sample No:** VCP383766  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** E15313



### SAMPLE INFORMATION

|               |                    |             |             |             |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | <b>VCP383766</b>   | VCP383342   | VCP416738   | VCP383896   |
| Sample Date   | <b>12 Apr 2024</b> | 15 Dec 2023 | 25 Aug 2023 | 21 Jun 2023 |
| Machine Hours | <b>7253</b>        | 5880        | 4792        | 4143        |
| Oil Hours     | <b>0</b>           | 1088        | 600         | 500         |
| Oil Changed   | <b>N/A</b>         | Changed     | Changed     | Changed     |
| Sample Status | <b>NORMAL</b>      | NORMAL      | NORMAL      | NORMAL      |

**COLUMBIA FOREST**  
 395 MISSILE ST  
 PRESQUE ISLE, ME  
 US 04769  
 Contact: GARY

### OIL CONDITION

|                  |          |             |      |      |       |
|------------------|----------|-------------|------|------|-------|
| Visc @ 100°C     | cSt      | <b>13.9</b> | 13.8 | 13.3 | 13.77 |
| Base Number (BN) | mg KOH/g | <b>9.7</b>  | 10.0 | 10.5 | 9.8   |
| Oxidation (PA)   | %        | <b>87</b>   | 90   | 83   | 90    |

T: (207)764-9428  
 F:

### 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.

### CONTAMINATION

|                |     |                |      |      |      |
|----------------|-----|----------------|------|------|------|
| Water          | %   | <b>NEG</b>     | NEG  | NEG  | NEG  |
| Soot %         | %   | <b>0.6</b>     | 1.2  | 0.7  | 0.8  |
| Nitration (PA) | %   | <b>73</b>      | 86   | 66   | 73   |
| Sulfation (PA) | %   | <b>62</b>      | 64   | 64   | 64   |
| Glycol         | %   | <b>NEG</b>     | NEG  | NEG  | NEG  |
| Fuel           | %   | <b>&lt;1.0</b> | <1.0 | <1.0 | <1.0 |
| Silicon        | ppm | <b>6</b>       | 6    | 5    | 6    |
| Sodium         | ppm | <b>2</b>       | 1    | <1   | 2    |
| Potassium      | ppm | <b>2</b>       | 0    | <1   | <1   |

### WEAR METALS

|            |     |              |    |    |    |
|------------|-----|--------------|----|----|----|
| Iron       | ppm | <b>11</b>    | 17 | 12 | 19 |
| Copper     | ppm | <b>1</b>     | <1 | <1 | <1 |
| Lead       | ppm | <b>1</b>     | 0  | 0  | 0  |
| Tin        | ppm | <b>2</b>     | 3  | <1 | <1 |
| Aluminum   | ppm | <b>4</b>     | 6  | 2  | 3  |
| Chromium   | ppm | <b>1</b>     | <1 | <1 | <1 |
| Molybdenum | ppm | <b>46</b>    | 42 | 41 | 41 |
| Nickel     | ppm | <b>1</b>     | 0  | 0  | 0  |
| Titanium   | ppm | <b>&lt;1</b> | 0  | 0  | 0  |
| Silver     | ppm | <b>&lt;1</b> | 0  | 0  | 0  |
| Manganese  | ppm | <b>1</b>     | <1 | <1 | <1 |
| Vanadium   | ppm | <b>&lt;1</b> | 0  | 0  | 0  |

### ADDITIVES

|            |     |             |      |      |      |
|------------|-----|-------------|------|------|------|
| Calcium    | ppm | <b>1728</b> | 1744 | 1622 | 1744 |
| Magnesium  | ppm | <b>504</b>  | 531  | 476  | 530  |
| Zinc       | ppm | <b>970</b>  | 1256 | 1098 | 1179 |
| Phosphorus | ppm | <b>859</b>  | 1014 | 913  | 949  |
| Barium     | ppm | <b>0</b>    | 0    | 0    | 0    |
| Boron      | ppm | <b>33</b>   | 25   | 23   | 25   |

**Depot:** COLPRE  
**Unique No:** 10982939  
**Signed:** Wes Davis  
**Report Date:** 19 Apr 2024

**VOLVO** **GRAPHS**

