



# CONSTRUCTION EQUIPMENT

## SWA281424 IAA VOLVO L90H 623059 - DIESEL ENGINE



**Sample No:** VCP413377  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** SWA281424 IAA



### SAMPLE INFORMATION

|               |                    |             |             |             |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | <b>VCP413377</b>   | VCP307678   | VCP284779   | VCP261037   |
| Sample Date   | <b>12 Jun 2023</b> | 02 Jul 2021 | 29 Jun 2020 | 11 Nov 2019 |
| Machine Hours | <b>10956</b>       | 9377        | 8874        | 7972        |
| Oil Hours     | <b>0</b>           | 0           | 0           | 0           |
| Oil Changed   | <b>Changed</b>     | Changed     | Changed     | Changed     |
| Sample Status | <b>NORMAL</b>      | NORMAL      | NORMAL      | NORMAL      |

### ALTA EQUIPMENT COMPANY

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### OIL CONDITION

|                  |          |             |      |      |      |
|------------------|----------|-------------|------|------|------|
| Visc @ 100°C     | cSt      | <b>13.3</b> | 13.3 | 13.2 | 13.3 |
| Base Number (BN) | mg KOH/g | <b>11.0</b> | ---  | ---  | ---  |
| Oxidation (PA)   | %        | <b>82</b>   | 80   | 80   | 85   |

### 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

|                |     |                |      |      |      |
|----------------|-----|----------------|------|------|------|
| Soot %         | %   | <b>0.3</b>     | 0.5  | 0.4  | 0.6  |
| Nitration (PA) | %   | <b>65</b>      | 87   | 68   | 74   |
| Sulfation (PA) | %   | <b>62</b>      | 62   | 63   | 63   |
| Glycol         | %   | <b>NEG</b>     | NEG  | NEG  | NEG  |
| Fuel           | %   | <b>&lt;1.0</b> | <1.0 | <1.0 | <1.0 |
| Silicon        | ppm | <b>4</b>       | 5    | 4    | 6    |
| Sodium         | ppm | <b>2</b>       | 3    | 3    | 3    |
| Potassium      | ppm | <b>&lt;1</b>   | 1    | 1    | <1   |



### WEAR METALS

|            |     |              |    |    |    |
|------------|-----|--------------|----|----|----|
| Iron       | ppm | <b>6</b>     | 11 | 6  | 11 |
| Copper     | ppm | <b>&lt;1</b> | 1  | <1 | <1 |
| Lead       | ppm | <b>0</b>     | <1 | <1 | 0  |
| Tin        | ppm | <b>0</b>     | <1 | <1 | 0  |
| Aluminum   | ppm | <b>2</b>     | 9  | 3  | 6  |
| Chromium   | ppm | <b>0</b>     | <1 | <1 | <1 |
| Molybdenum | ppm | <b>47</b>    | 31 | 32 | 46 |
| Nickel     | ppm | <b>0</b>     | 0  | 0  | <1 |
| Titanium   | ppm | <b>&lt;1</b> | <1 | 0  | 0  |
| Silver     | ppm | <b>0</b>     | <1 | 0  | 0  |
| Manganese  | ppm | <b>&lt;1</b> | <1 | <1 | 1  |
| Vanadium   | ppm | <b>0</b>     | <1 | 0  | 0  |



### ADDITIVES

|            |     |             |      |      |      |
|------------|-----|-------------|------|------|------|
| Calcium    | ppm | <b>1793</b> | 1520 | 1610 | 1707 |
| Magnesium  | ppm | <b>564</b>  | 532  | 531  | 522  |
| Zinc       | ppm | <b>1244</b> | 1007 | 971  | 889  |
| Phosphorus | ppm | <b>993</b>  | 824  | 871  | 773  |
| Barium     | ppm | <b>14</b>   | 0    | 0    | 0    |
| Boron      | ppm | <b>35</b>   | 33   | 33   | 16   |

**Depot:** VOLVO0095  
**Unique No:** 10538092  
**Signed:** Wes Davis  
**Report Date:** 02 Jul 2023



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## GRAPHS

