



# CONSTRUCTION EQUIPMENT

SWO-071765 VOLVO A45G 342546 - DIESEL ENGINE



**Sample No:** VCP450906  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** SWO-071765



## SAMPLE INFORMATION

|               |                    |             |             |             |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | <b>VCP450906</b>   | VCP431671   | VCP417746   | VCP402207   |
| Sample Date   | <b>07 May 2024</b> | 04 Oct 2023 | 19 Jun 2023 | 28 Feb 2023 |
| Machine Hours | <b>8542</b>        | 8046        | 7553        | 7072        |
| Oil Hours     | <b>0</b>           | 0           | 0           | 0           |
| Oil Changed   | <b>Changed</b>     | Changed     | Changed     | Changed     |
| Sample Status | <b>NORMAL</b>      | NORMAL      | NORMAL      | NORMAL      |

### SAIIA CONSTRUCTION LLC

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## OIL CONDITION

|                  |          |             |      |      |      |
|------------------|----------|-------------|------|------|------|
| Visc @ 100°C     | cSt      | <b>12.7</b> | 12.5 | 12.7 | 12.7 |
| Base Number (BN) | mg KOH/g | <b>10.0</b> | 9.6  | 10.6 | 10.6 |
| Oxidation (PA)   | %        | <b>77</b>   | 77   | 80   | 78   |



## CONTAMINATION

|                |     |                |      |      |      |
|----------------|-----|----------------|------|------|------|
| Water          | %   | <b>NEG</b>     | NEG  | NEG  | NEG  |
| Soot %         | %   | <b>0.1</b>     | 0.1  | 0.1  | 0.2  |
| Nitration (PA) | %   | <b>53</b>      | 50   | 55   | 59   |
| Sulfation (PA) | %   | <b>58</b>      | 58   | 61   | 60   |
| Glycol         | %   | <b>NEG</b>     | NEG  | NEG  | NEG  |
| Fuel           | %   | <b>&lt;1.0</b> | <1.0 | <1.0 | <1.0 |
| Silicon        | ppm | <b>4</b>       | 4    | 4    | 4    |
| Sodium         | ppm | <b>2</b>       | 3    | 0    | 6    |
| Potassium      | ppm | <b>0</b>       | 0    | <1   | 0    |



## WEAR METALS

|            |     |              |    |    |    |
|------------|-----|--------------|----|----|----|
| Iron       | ppm | <b>10</b>    | 4  | 6  | 7  |
| Copper     | ppm | <b>&lt;1</b> | 1  | 3  | 3  |
| Lead       | ppm | <b>0</b>     | 0  | <1 | 0  |
| Tin        | ppm | <b>0</b>     | <1 | <1 | 0  |
| Aluminum   | ppm | <b>1</b>     | <1 | 0  | 1  |
| Chromium   | ppm | <b>0</b>     | 0  | 0  | <1 |
| Molybdenum | ppm | <b>41</b>    | 37 | 45 | 43 |
| Nickel     | ppm | <b>&lt;1</b> | 0  | <1 | <1 |
| Titanium   | ppm | <b>0</b>     | 0  | 0  | 0  |
| Silver     | ppm | <b>0</b>     | 0  | 0  | 0  |
| Manganese  | ppm | <b>&lt;1</b> | <1 | <1 | <1 |
| Vanadium   | ppm | <b>0</b>     | 0  | 0  | 0  |



## ADDITIVES

|            |     |             |      |      |      |
|------------|-----|-------------|------|------|------|
| Calcium    | ppm | <b>1694</b> | 1572 | 1670 | 1733 |
| Magnesium  | ppm | <b>504</b>  | 487  | 493  | 536  |
| Zinc       | ppm | <b>1062</b> | 1060 | 1098 | 1109 |
| Phosphorus | ppm | <b>968</b>  | 926  | 966  | 909  |
| Barium     | ppm | <b>0</b>    | 0    | 0    | 0    |
| Boron      | ppm | <b>51</b>   | 44   | 72   | 58   |

## 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:** SAIBIR  
**Unique No:** 11021126  
**Signed:** Don Baldrige  
**Report Date:** 13 May 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS

