



# CONSTRUCTION EQUIPMENT

## VOLVO L180H 5785 - DIESEL ENGINE



**Sample No:** VCP437930  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:**



### SAMPLE INFORMATION

|               |                    |             |             |             |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | <b>VCP437930</b>   | VCP437926   | VCP440005   | VCP411600   |
| Sample Date   | <b>19 Mar 2024</b> | 18 Mar 2024 | 16 Jan 2024 | 16 Oct 2023 |
| Machine Hours | <b>4218</b>        | 4218        | 3171        | 1214        |
| Oil Hours     | <b>0</b>           | 0           | 0           | 500         |
| Oil Changed   | <b>Changed</b>     | Changed     | N/A         | Changed     |
| Sample Status | <b>NORMAL</b>      | ABNORMAL    | NORMAL      | ABNORMAL    |

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### OIL CONDITION

|                  |          |             |      |      |      |
|------------------|----------|-------------|------|------|------|
| Visc @ 100°C     | cSt      | <b>12.3</b> | 7.6  | 12.8 | 12.7 |
| Base Number (BN) | mg KOH/g | <b>9.7</b>  | 10.3 | 9.6  | 9.5  |
| Oxidation (PA)   | %        | <b>69</b>   | 36   | 75   | 79   |

### Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Fuel content negligible. 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>0.1</b>   | 0   | 0.1  | 0.1  |
| Nitration (PA) | %   | <b>49</b>    | 23  | 53   | 59   |
| Sulfation (PA) | %   | <b>57</b>    | 53  | 58   | 61   |
| Glycol         | %   | <b>NEG</b>   | NEG | NEG  | NEG  |
| Fuel           | %   | <b>0.4</b>   | 2.2 | <1.0 | <1.0 |
| Silicon        | ppm | <b>4</b>     | 12  | 3    | 9    |
| Sodium         | ppm | <b>&lt;1</b> | 0   | 0    | 3    |
| Potassium      | ppm | <b>1</b>     | 2   | 2    | 2    |



### WEAR METALS

|            |     |              |     |    |    |
|------------|-----|--------------|-----|----|----|
| Iron       | ppm | <b>4</b>     | 113 | 3  | 5  |
| Copper     | ppm | <b>1</b>     | 5   | <1 | 71 |
| Lead       | ppm | <b>&lt;1</b> | <1  | 0  | <1 |
| Tin        | ppm | <b>&lt;1</b> | 0   | 0  | <1 |
| Aluminum   | ppm | <b>2</b>     | 2   | 2  | 2  |
| Chromium   | ppm | <b>&lt;1</b> | 3   | <1 | <1 |
| Molybdenum | ppm | <b>40</b>    | 10  | 44 | 44 |
| Nickel     | ppm | <b>0</b>     | <1  | 0  | 0  |
| Titanium   | ppm | <b>&lt;1</b> | <1  | 0  | <1 |
| Silver     | ppm | <b>0</b>     | 0   | 0  | 0  |
| Manganese  | ppm | <b>&lt;1</b> | 3   | 0  | <1 |
| Vanadium   | ppm | <b>0</b>     | 0   | 0  | <1 |



### ADDITIVES

|            |     |             |      |      |      |
|------------|-----|-------------|------|------|------|
| Calcium    | ppm | <b>1518</b> | 3558 | 1492 | 1733 |
| Magnesium  | ppm | <b>580</b>  | 47   | 547  | 445  |
| Zinc       | ppm | <b>1115</b> | 1515 | 1104 | 1154 |
| Phosphorus | ppm | <b>959</b>  | 1293 | 838  | 937  |
| Barium     | ppm | <b>0</b>    | 0    | 5    | 0    |
| Boron      | ppm | <b>55</b>   | 141  | 40   | 35   |

**Depot:** VOLVO0093  
**Unique No:** 10940251  
**Signed:** Wes Davis  
**Report Date:** 26 Mar 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS

