



# CONSTRUCTION EQUIPMENT

## SWA528995 IAA JUP VOLVO L90H 625961 - DIESEL ENGINE



**Sample No:** VCP438856  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** SWA528995 IAA JUP



### SAMPLE INFORMATION

|               |                    |             |             |             |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | <b>VCP438856</b>   | VCP449015   | VCP383224   | VCP386091   |
| Sample Date   | <b>12 Apr 2024</b> | 16 Jan 2024 | 18 Sep 2023 | 26 Jun 2023 |
| Machine Hours | <b>3550</b>        | 3126        | 2502        | 2063        |
| 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>13.8</b> | 14.3 | 14.8 | 14.6 |
| Base Number (BN) | mg KOH/g | <b>9.5</b>  | 9.2  | 9.1  | 9.6  |
| Oxidation (PA)   | %        | <b>65</b>   | 66   | 61   | 65   |

### 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>0.3</b>     | 0.3  | 0.3  | 0.4  |
| Nitration (PA) | %   | <b>68</b>      | 73   | 65   | 67   |
| Sulfation (PA) | %   | <b>54</b>      | 54   | 53   | 55   |
| Glycol         | %   | <b>NEG</b>     | NEG  | NEG  | NEG  |
| Fuel           | %   | <b>&lt;1.0</b> | <1.0 | <1.0 | <1.0 |
| Silicon        | ppm | <b>5</b>       | 4    | 4    | 4    |
| Sodium         | ppm | <b>1</b>       | <1   | 1    | 1    |
| Potassium      | ppm | <b>2</b>       | 0    | <1   | <1   |



### WEAR METALS

|            |     |              |    |    |    |
|------------|-----|--------------|----|----|----|
| Iron       | ppm | <b>53</b>    | 77 | 89 | 98 |
| Copper     | ppm | <b>8</b>     | <1 | <1 | 1  |
| Lead       | ppm | <b>2</b>     | <1 | 0  | 0  |
| Tin        | ppm | <b>2</b>     | <1 | <1 | <1 |
| Aluminum   | ppm | <b>3</b>     | 4  | 4  | <1 |
| Chromium   | ppm | <b>2</b>     | 2  | 2  | 3  |
| Molybdenum | ppm | <b>63</b>    | 60 | 65 | 59 |
| Nickel     | ppm | <b>1</b>     | <1 | 0  | 0  |
| Titanium   | ppm | <b>&lt;1</b> | 0  | 0  | <1 |
| Silver     | ppm | <b>&lt;1</b> | 0  | 0  | 0  |
| Manganese  | ppm | <b>2</b>     | 1  | 2  | 1  |
| Vanadium   | ppm | <b>&lt;1</b> | <1 | 0  | 0  |



### ADDITIVES

|            |     |             |      |      |      |
|------------|-----|-------------|------|------|------|
| Calcium    | ppm | <b>1209</b> | 1092 | 1209 | 1233 |
| Magnesium  | ppm | <b>952</b>  | 987  | 1097 | 966  |
| Zinc       | ppm | <b>1262</b> | 1318 | 1406 | 1317 |
| Phosphorus | ppm | <b>1136</b> | 1058 | 1151 | 1040 |
| Barium     | ppm | <b>0</b>    | 0    | 0    | 14   |
| Boron      | ppm | <b>4</b>    | 3    | <1   | 2    |

**Depot:** VOLVO0095  
**Unique No:** 10982797  
**Signed:** Don Baldrige  
**Report Date:** 22 Apr 2024

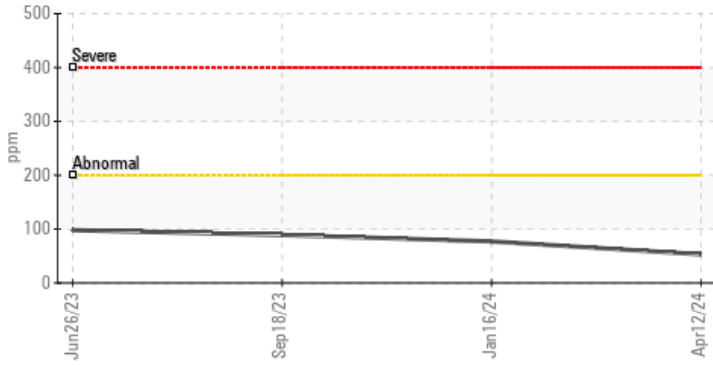


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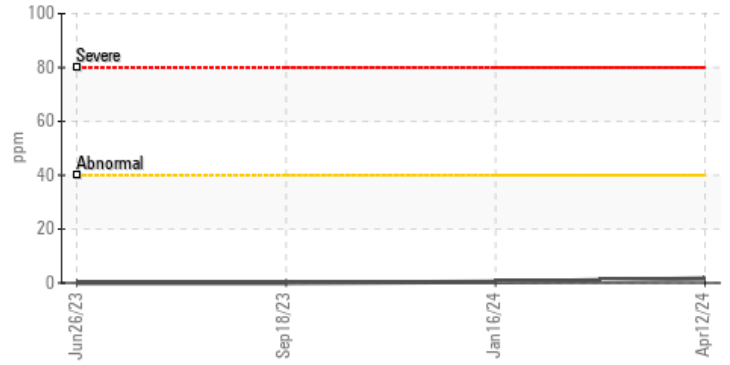


## GRAPHS

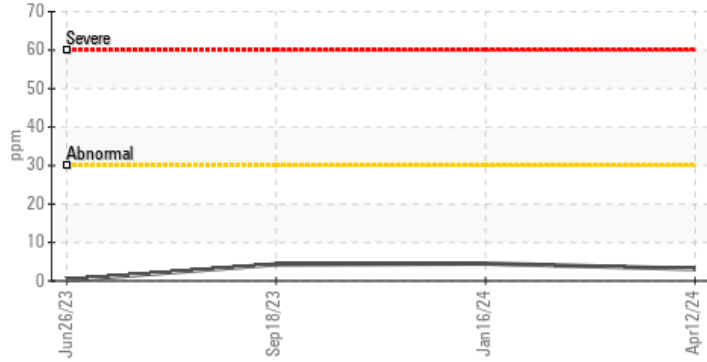
### Iron (ppm)



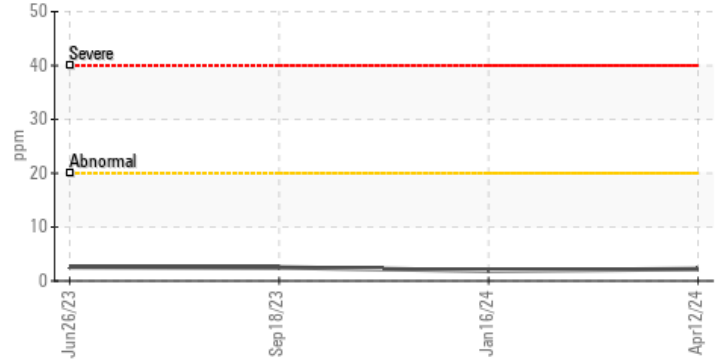
### Lead (ppm)



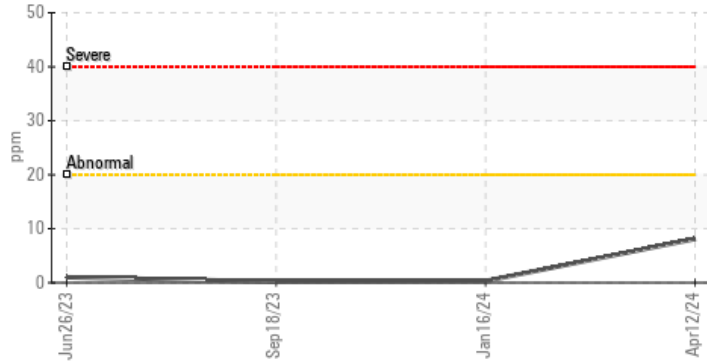
### Aluminum (ppm)



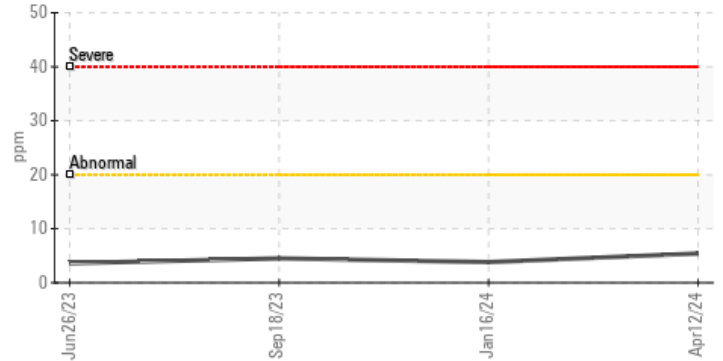
### Chromium (ppm)



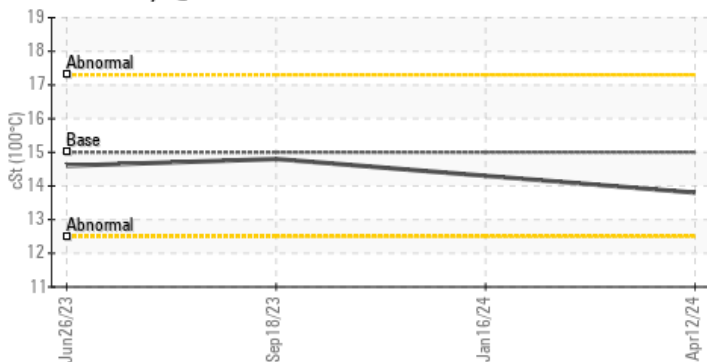
### Copper (ppm)



### Silicon (ppm)



### Viscosity @ 100°C



### Base Number

