## VOLTO

?

Sample No: VCP424415
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 607581 PRIMORIS


## OIL CONDITION

| Visc @ $100^{\circ} \mathrm{C}$ | cSt | $\triangle 10.1$ |
| :---: | :---: | :---: |
| Base Number (BN) | $\mathrm{mg} \mathrm{KOH} / \mathrm{g}$ | $\square 3.9$ |
| Oxidation (PA) | \% | 68 |
| Cow CONTAMINATION |  |  |
|  |  |  |
| Soot \% | \% | $\square 0.3$ |
| Nitration (PA) | \% | 93 |
| Sulfation (PA) | \% | 67 |
| Glycol | \% | NEG |
| Fuel | \% | $\square 1.9$ |
| Silicon | ppm | $\square 30$ |
| Sodium | ppm | $\square 5$ |
| Potassium | ppm | $\square 4$ |


| Iron | ppm | $\square 31$ | --- | --- | --- |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Copper | ppm | $\triangle 244$ | --- | --- | --- |
| Lead | ppm | $\square 2$ | --- | --- | --- |
| Tin | ppm | $\square 5$ | --- | --- | --- |
| Aluminum | ppm | $\square 3$ | --- | --- | --- |
| Chromium | ppm | $\square<1$ | --- | --- | --- |
| Molybdenum | ppm | $\square 85$ | --- | --- | --- |
| Nickel | ppm | $\square 3$ | --- | --- | --- |
| Titanium | ppm | 0 | --- | --- | --- |
| Silver | ppm | $\square 0$ | --- | --- | --- |
| Manganese | ppm | $\square 4$ | --- | --- | --- |
| Vanadium | ppm | 0 | --- | --- | --- |


| Calcium |  | $\square 2121$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Magnesium | ppm | 17 | --- | --- | --- |
| Zinc | ppm | $\square 1202$ | --- | --- | --- |
| Phosphorus | ppm | $\square 948$ | --- | --- | --- |
| Barium | ppm | $\square 0$ | --- | --- | --- |
| Boron | ppm | $\square 10$ | --- | --- | --- |

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## Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other metal levels are typical for a new component breaking in. Fuel content negligible. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

| Depot: | VOLVO0093 |
| :--- | :--- |
| Unique No: | 10708816 |
| Signed: | Don Baldridge |
| Report Date: | 25 Oct 2023 |

## VOLTO <br> CONSTRUCTION EQUPPMENT

## GRAPHS



Aluminum (ppm)





Chromium (ppm)


Silicon (ppm)


Base Number


