## WOLVO

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CONSTRUCTION EQUIPMENT SWA565009-IO VOLVOLISOH 7023-D|ESEL ENGINE

Sample No: VCP430309
Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40
Job No: SWA565009-10

SALvo SAMPLE INFORMATION

| Sample Number |  |
| :--- | :--- |
| Sample Date |  |
| Machine Hours |  |
| Oil Hours |  |
| Oil Changed |  |
| Sample Status |  |


| Visc @ $100^{\circ} \mathrm{C}$ | cSt |
| :--- | :--- |
| Base Number (BN) | mg KO |
| Oxidation (PA) | $\%$ |
|  |  |


| Water | \% | NEG | NEG | --- | -- |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Soot \% | \% | $\square 0.1$ | $\square 0.1$ | --- | --- |
| Nitration (PA) | \% | 53 | 73 | --- | --- |
| Sulfation (PA) | \% | 60 | 55 | --- | --- |
| Glycol | \% | NEG | NEG | --- | --- |
| Fuel | \% | <1.0 | $\square 0.4$ | --- | --- |
| Silicon | ppm | $\square 4$ | $\square 27$ | --- | --- |
| Sodium | ppm | $\square 3$ | $\square 2$ | --- | --- |
| Potassium | ppm | $\square<1$ | $\square 3$ | --- | --- |


|  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Iron | ppm | $\square 4$ | $\square 8$ | --- | --- |
| Copper | ppm | $\square<1$ | $\square 6$ | --- | --- |
| Lead | ppm | $\square<1$ | $\square 2$ | --- | --- |
| Tin | ppm | $\square<1$ | $\square 2$ | --- | --- |
| Aluminum | ppm | $\square<1$ | $\square 2$ | --- | --- |
| Chromium | ppm | $\square<1$ | $\square<1$ | --- | --- |
| Molybdenum | ppm | $\square 40$ | $\square 82$ | --- | --- |
| Nickel | ppm | $\square 0$ | $\square 0$ | --- | --- |
| Titanium | ppm | <1 | <1 | --- | --- |
| Silver | ppm | $\square 0$ | 0 | --- | --- |
| Manganese | ppm | $\square<1$ | $\square 2$ | --- | --- |
| Vanadium | ppm | <1 | 0 | --- | --- |


| Calcium | ppm | $\square 1732$ | $\square 2086$ | --- | --- |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Magnesium | ppm | $\square 532$ | $\square 46$ | --- | --- |
| Zinc | ppm | $\square 1130$ | $\square 1161$ | --- | --- |
| Phosphorus | ppm | $\square 995$ | $\square 934$ | --- | --- |
| Barium | ppm | $\square 0$ | $\square 0$ | --- | --- |
| Boron | ppm | $\square 54$ | $\square 71$ | --- | --- |


denali we care
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T:
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## 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.

## VOLTO

## GRAPHS



Aluminum (ppm)


Copper (ppm)


Viscosity @ $100^{\circ} \mathrm{C}$



Chromium (ppm)


Silicon (ppm)


Base Number


