



CONSTRUCTION EQUIPMENT

VOLVO EC300EL 317258 - DIESEL ENGINE



Sample No: VCP447738
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-----|-----|
| Sample Number | VCP447738 | VCP413431 | --- | --- |
| Sample Date | 22 May 2024 | 21 Aug 2023 | --- | --- |
| Machine Hours | 1265 | 502 | --- | --- |
| Oil Hours | 0 | 0 | --- | --- |
| Oil Changed | Changed | Changed | --- | --- |
| Sample Status | ABNORMAL | ABNORMAL | --- | --- |

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OIL CONDITION

| | | | | | |
|------------------|----------|-------------|------|-----|-----|
| Visc @ 100°C | cSt | 12.2 | 10.7 | --- | --- |
| Base Number (BN) | mg KOH/g | 8.8 | 6.8 | --- | --- |
| Oxidation (PA) | % | 80 | 61 | --- | --- |



CONTAMINATION

| | | | | | |
|----------------|-----|----------------|-----|-----|-----|
| Water | % | NEG | NEG | --- | --- |
| Soot % | % | 0.1 | 0.1 | --- | --- |
| Nitration (PA) | % | 69 | 74 | --- | --- |
| Sulfation (PA) | % | 60 | 53 | --- | --- |
| Glycol | % | NEG | NEG | --- | --- |
| Fuel | % | <1.0 | 0.3 | --- | --- |
| Silicon | ppm | 12 | 23 | --- | --- |
| Sodium | ppm | 6 | 5 | --- | --- |
| Potassium | ppm | 34 | 18 | --- | --- |



WEAR METALS

| | | | | | |
|------------|-----|--------------|-----|-----|-----|
| Iron | ppm | 16 | 11 | --- | --- |
| Copper | ppm | 705 | 560 | --- | --- |
| Lead | ppm | <1 | 5 | --- | --- |
| Tin | ppm | <1 | 0 | --- | --- |
| Aluminum | ppm | 13 | 6 | --- | --- |
| Chromium | ppm | 1 | <1 | --- | --- |
| Molybdenum | ppm | 71 | 81 | --- | --- |
| Nickel | ppm | 1 | 0 | --- | --- |
| Titanium | ppm | <1 | 0 | --- | --- |
| Silver | ppm | 2 | 1 | --- | --- |
| Manganese | ppm | 1 | 2 | --- | --- |
| Vanadium | ppm | <1 | <1 | --- | --- |



ADDITIVES

| | | | | | |
|------------|-----|-------------|------|-----|-----|
| Calcium | ppm | 2504 | 2099 | --- | --- |
| Magnesium | ppm | 707 | 118 | --- | --- |
| Zinc | ppm | 1701 | 1187 | --- | --- |
| Phosphorus | ppm | 1406 | 1026 | --- | --- |
| Barium | ppm | 0 | 0 | --- | --- |
| Boron | ppm | 40 | 72 | --- | --- |

Diagnosis

Oil and filter change at the time of sampling has been noted. 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 component wear rates are normal. 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: VOLVO0090
Unique No: 11050432
Signed: Don Baldrige
Report Date: 31 May 2024



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GRAPHS

