



CONSTRUCTION EQUIPMENT

VOLVO A40G 352449 - DIESEL ENGINE



Sample No: VCP421346
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | VCP421346 | VCP336706 | VCP337368 | VCP312124 |
| Sample Date | 21 Jul 2023 | 13 Jan 2022 | 16 Aug 2021 | 25 Jun 2021 |
| Machine Hours | 6888 | 3980 | 2952 | 6223 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | Changed | Changed | Changed | N/A |
| Sample Status | NORMAL | NORMAL | NORMAL | NORMAL |

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OIL CONDITION

| | | | | | |
|------------------|----------|-------------|------|------|------|
| Visc @ 100°C | cSt | 16.6 | 12.5 | 12.6 | 12.7 |
| Base Number (BN) | mg KOH/g | 8.8 | 10.9 | --- | --- |
| Oxidation (PA) | % | 61 | 87 | 84 | 88 |



CONTAMINATION

| | | | | | |
|----------------|-----|----------------|------|------|------|
| Soot % | % | 0.2 | 0.2 | 0.2 | 0.3 |
| Nitration (PA) | % | 73 | 70 | 62 | 75 |
| Sulfation (PA) | % | 52 | 65 | 65 | 66 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | <1.0 | <1.0 | <1.0 | <1.0 |
| Silicon | ppm | 4 | 5 | 4 | 4 |
| Sodium | ppm | 2 | 8 | 3 | 3 |
| Potassium | ppm | <1 | <1 | <1 | <1 |

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.



WEAR METALS

| | | | | | |
|------------|-----|--------------|----|----|----|
| Iron | ppm | 7 | 5 | 5 | 6 |
| Copper | ppm | 2 | 2 | <1 | 1 |
| Lead | ppm | <1 | <1 | <1 | <1 |
| Tin | ppm | <1 | <1 | <1 | <1 |
| Aluminum | ppm | 1 | <1 | 0 | 0 |
| Chromium | ppm | 0 | <1 | <1 | <1 |
| Molybdenum | ppm | 54 | 47 | 54 | 61 |
| Nickel | ppm | 2 | 2 | <1 | <1 |
| Titanium | ppm | 0 | <1 | 0 | <1 |
| Silver | ppm | 0 | <1 | 0 | 0 |
| Manganese | ppm | <1 | <1 | <1 | <1 |
| Vanadium | ppm | <1 | <1 | 0 | 0 |



ADDITIVES

| | | | | | |
|------------|-----|-------------|------|------|------|
| Calcium | ppm | 1635 | 1636 | 1907 | 1674 |
| Magnesium | ppm | 756 | 490 | 548 | 516 |
| Zinc | ppm | 1130 | 1093 | 1123 | 1084 |
| Phosphorus | ppm | 937 | 901 | 1035 | 926 |
| Barium | ppm | 0 | 0 | 0 | 0 |
| Boron | ppm | 49 | 39 | 57 | 55 |

Depot: VOLVO0090
Unique No: 10577346
Signed: Wes Davis
Report Date: 31 Jul 2023

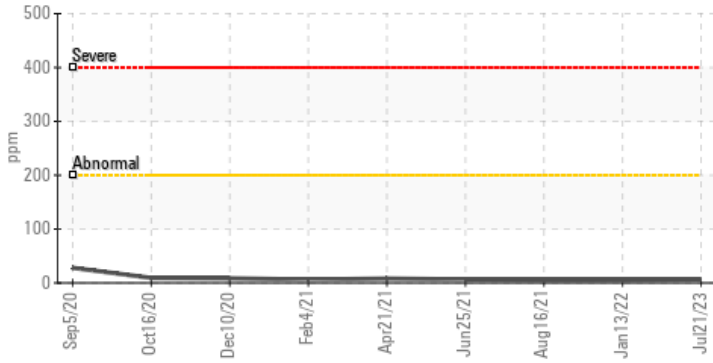


CONSTRUCTION EQUIPMENT

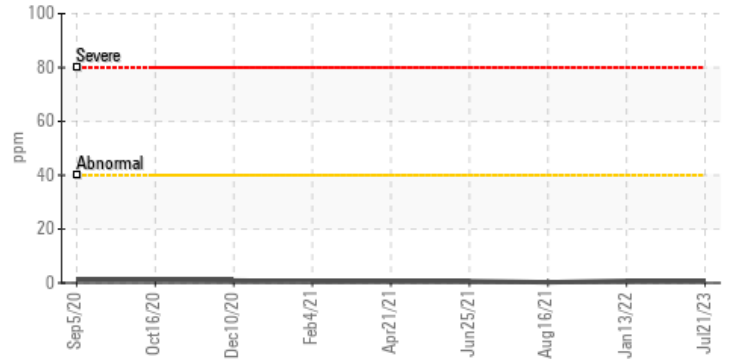


GRAPHS

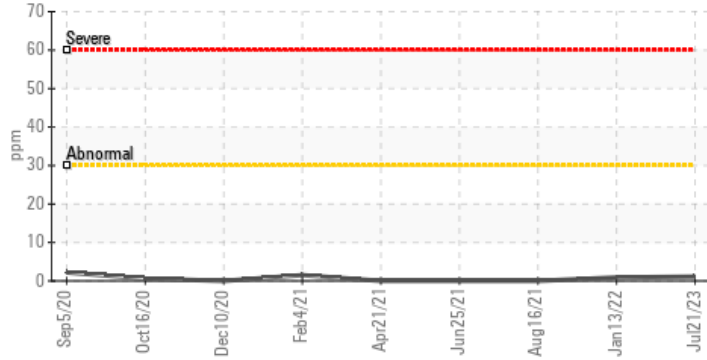
Iron (ppm)



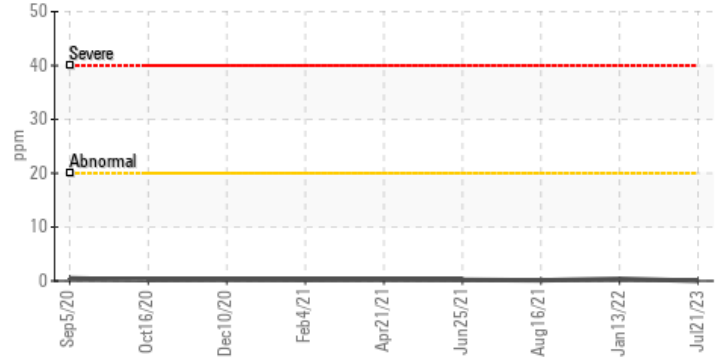
Lead (ppm)



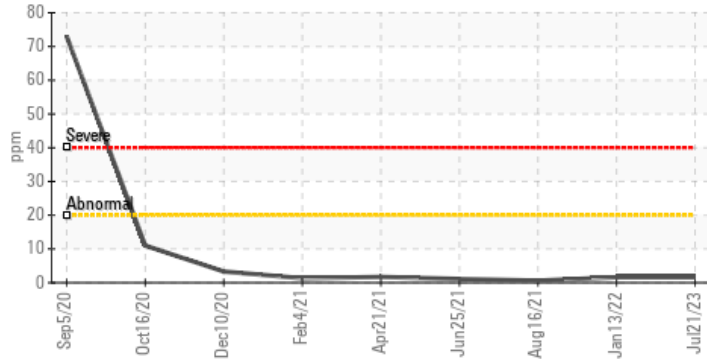
Aluminum (ppm)



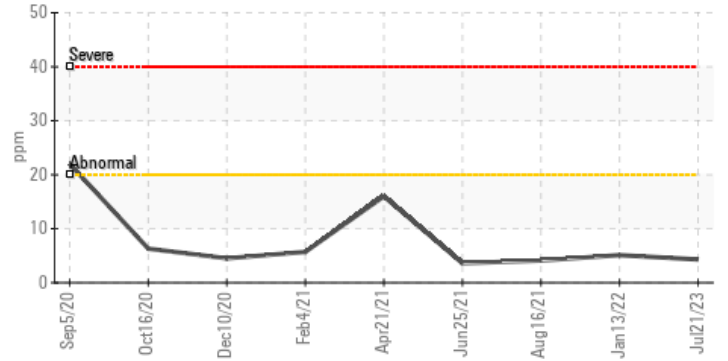
Chromium (ppm)



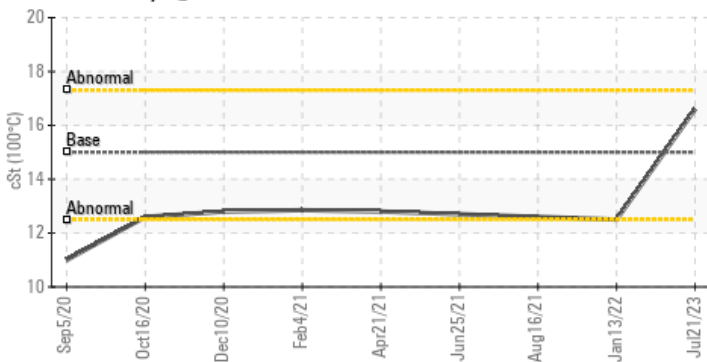
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number

