



CONSTRUCTION EQUIPMENT

659268 TOEBE VOLVO L150H 632757 - DIESEL ENGINE



Sample No: VCP452375
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 659268 TOEBE



SAMPLE INFORMATION

| Sample Number | VCP452375 | VCP431915 | VCP402584 | VCP402121 |
|---------------|-------------|-------------|-------------|-------------|
| Sample Date | 09 Jan 2024 | 10 Oct 2023 | 10 Mar 2023 | 21 Dec 2022 |
| Machine Hours | 7468 | 6938 | 5685 | 5163 |
| Oil Hours | 500 | 500 | 500 | 500 |
| Oil Changed | Changed | Changed | Changed | Changed |
| Sample Status | NORMAL | NORMAL | NORMAL | NORMAL |

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OIL CONDITION

| Visc @ 100°C | cSt | 13.6 | 14.0 | 14.6 | 13.9 |
|------------------|----------|------|------|------|------|
| Base Number (BN) | mg KOH/g | 8.1 | 9.4 | 9.6 | 10.0 |
| Oxidation (PA) | % | 61 | 65 | 59 | 63 |

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 acceptable for the time in service.



CONTAMINATION

| | | | | | |
|----------------|-----|------|------|------|------|
| Water | % | NEG | NEG | NEG | NEG |
| Soot % | % | 0.3 | 0.4 | 0.3 | 0.3 |
| Nitration (PA) | % | 63 | 69 | 60 | 67 |
| Sulfation (PA) | % | 52 | 54 | 52 | 55 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | <1.0 | <1.0 | <1.0 | <1.0 |
| Silicon | ppm | 3 | 3 | 1 | 2 |
| Sodium | ppm | 1 | 2 | 0 | <1 |
| Potassium | ppm | <1 | 2 | 2 | 0 |



WEAR METALS

| | | | | | |
|------------|-----|----|----|----|----|
| Iron | ppm | 10 | 10 | 10 | 4 |
| Copper | ppm | 1 | 1 | 1 | 2 |
| Lead | ppm | <1 | <1 | <1 | <1 |
| Tin | ppm | <1 | <1 | <1 | 1 |
| Aluminum | ppm | 3 | 4 | 5 | 4 |
| Chromium | ppm | <1 | <1 | <1 | <1 |
| Molybdenum | ppm | 57 | 59 | 61 | 61 |
| Nickel | ppm | 0 | 0 | <1 | <1 |
| Titanium | ppm | <1 | 0 | 0 | <1 |
| Silver | ppm | 0 | 0 | 0 | 0 |
| Manganese | ppm | <1 | <1 | <1 | <1 |
| Vanadium | ppm | 0 | 0 | 0 | 0 |



ADDITIVES

| | | | | | |
|------------|-----|------|------|------|------|
| Calcium | ppm | 1081 | 1101 | 1107 | 1116 |
| Magnesium | ppm | 970 | 1044 | 931 | 1006 |
| Zinc | ppm | 1220 | 1183 | 1249 | 1324 |
| Phosphorus | ppm | 985 | 1067 | 1039 | 1039 |
| Barium | ppm | 0 | 0 | 2 | 0 |
| Boron | ppm | 2 | 0 | 0 | <1 |

Depot: VOLVO2990
Unique No: 10845937
Signed: Sean Felton
Report Date: 26 Jan 2024

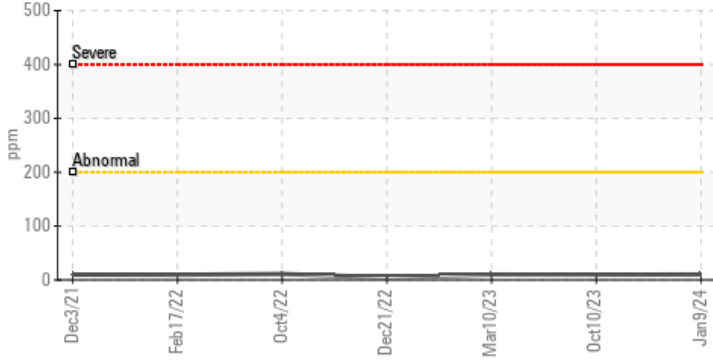


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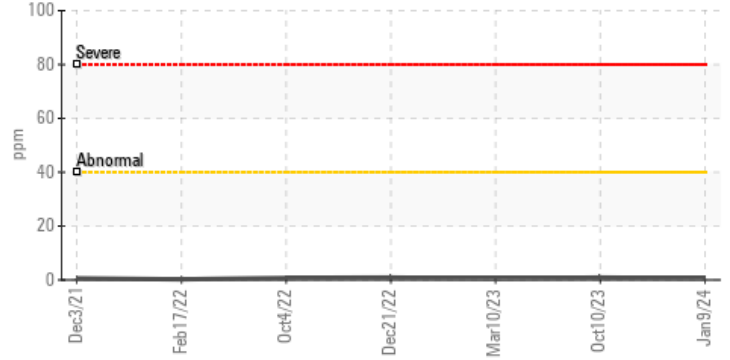


GRAPHS

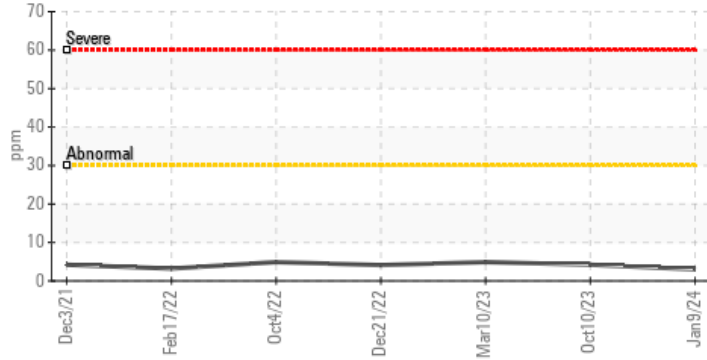
Iron (ppm)



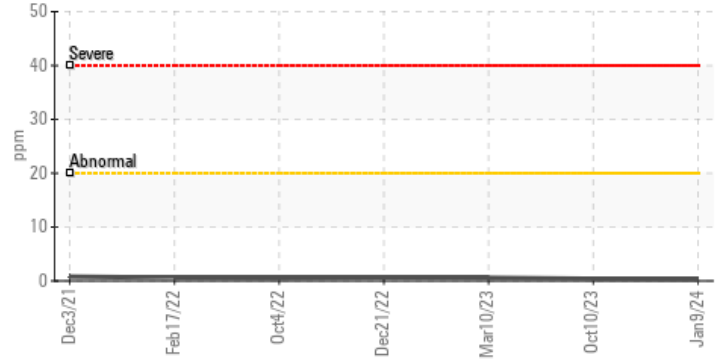
Lead (ppm)



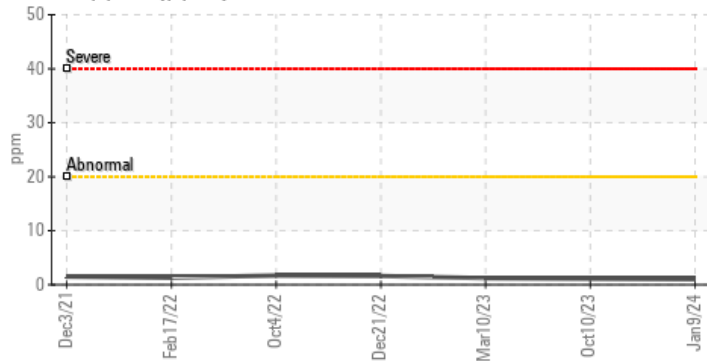
Aluminum (ppm)



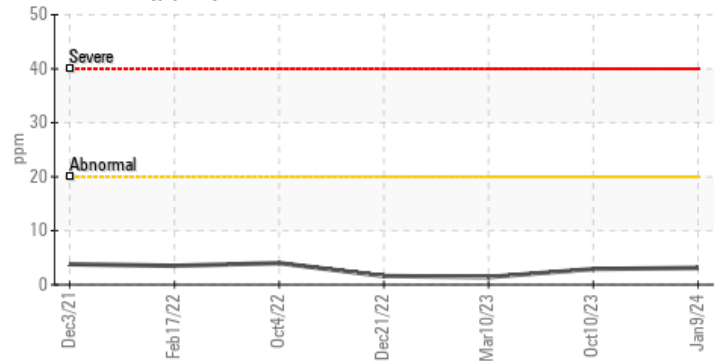
Chromium (ppm)



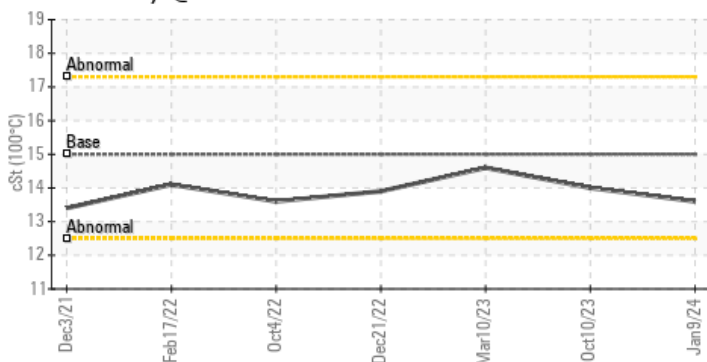
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number

