



CONSTRUCTION EQUIPMENT

IMPACT AUTO 390778 VOLVO L90H 623638 - DIESEL ENGINE



Sample No: VCP394152
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 390778



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | VCP394152 | VCP352615 | VCP352890 | VCP347047 |
| Sample Date | 10 Jan 2024 | 24 Jul 2023 | 17 Jan 2023 | 04 Apr 2022 |
| Machine Hours | 9661 | 0 | 8160 | 7016 |
| Oil Hours | 500 | 500 | 0 | 0 |
| Oil Changed | Changed | Changed | Changed | Changed |
| Sample Status | NORMAL | NORMAL | NORMAL | ABNORMAL |

STRONGCO EQUIPMENT-EDMONTON

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OIL CONDITION

| | | | | | |
|----------------|-----|-------------|------|------|------|
| Visc @ 100°C | cSt | 13.2 | 13.5 | 13.4 | 13.5 |
| Oxidation (PA) | % | 84 | 71 | 82 | 82 |



CONTAMINATION

| | | | | | |
|----------------|-----|----------------|------|------|------|
| Water | % | NEG | NEG | NEG | NEG |
| Soot % | % | 0.4 | 0.7 | 0.9 | 0.4 |
| Nitration (PA) | % | 63 | 56 | 67 | 65 |
| Sulfation (PA) | % | 64 | 61 | 68 | 70 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | <1.0 | <1.0 | <1.0 | <1.0 |
| Silicon | ppm | 5 | 5 | 6 | ▲ 21 |
| Sodium | ppm | 2 | 3 | 3 | 3 |
| Potassium | ppm | 2 | 0 | 0 | 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 condition of the oil is acceptable for the time in service.



WEAR METALS

| | | | | | |
|------------|-----|--------------|----|----|----|
| Iron | ppm | 11 | 12 | 16 | 39 |
| Copper | ppm | 1 | <1 | 1 | 3 |
| Lead | ppm | <1 | 0 | <1 | <1 |
| Tin | ppm | <1 | <1 | <1 | 1 |
| Aluminum | ppm | 4 | 4 | 4 | 7 |
| Chromium | ppm | <1 | <1 | <1 | 5 |
| Molybdenum | ppm | 43 | 39 | 40 | 36 |
| Nickel | ppm | <1 | <1 | <1 | <1 |
| Titanium | ppm | 0 | 0 | <1 | 0 |
| Silver | ppm | 0 | 0 | 0 | 0 |
| Manganese | ppm | 0 | <1 | <1 | <1 |
| Vanadium | ppm | 0 | 0 | 0 | 0 |



ADDITIVES

| | | | | | |
|------------|-----|-------------|------|------|------|
| Calcium | ppm | 1701 | 1688 | 1742 | 1617 |
| Magnesium | ppm | 513 | 528 | 494 | 547 |
| Zinc | ppm | 1072 | 1060 | 1096 | 1080 |
| Phosphorus | ppm | 941 | 967 | 997 | 963 |
| Barium | ppm | 0 | 0 | 0 | <1 |
| Boron | ppm | 35 | 29 | 31 | 44 |

Depot: VOLVO3908
Unique No: 5711012
Signed: Wes Davis
Report Date: 19 Jan 2024

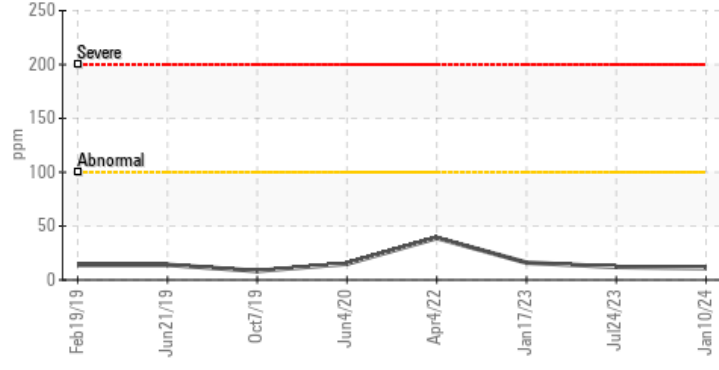


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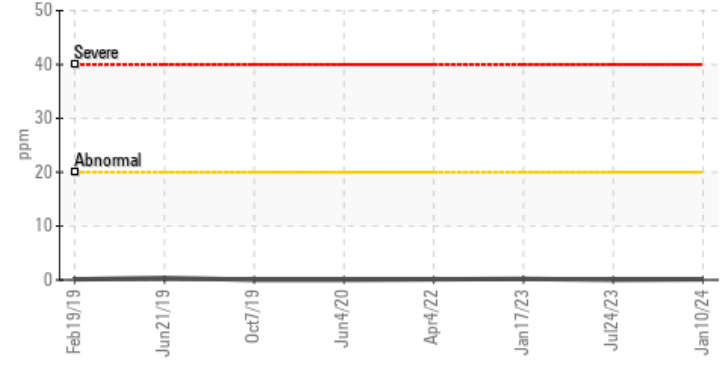


GRAPHS

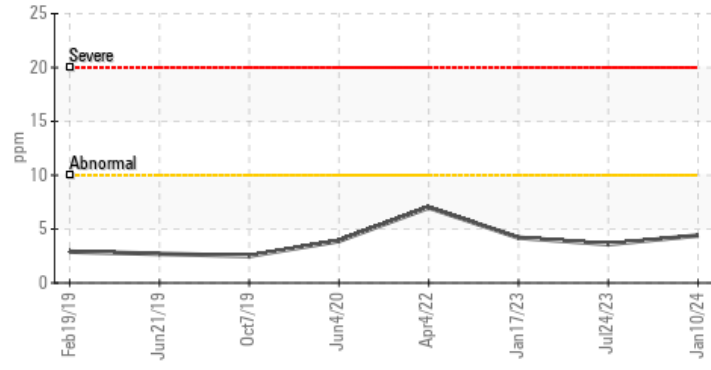
Iron (ppm)



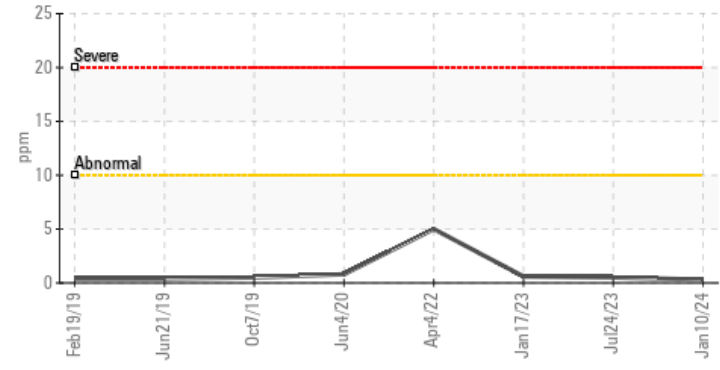
Lead (ppm)



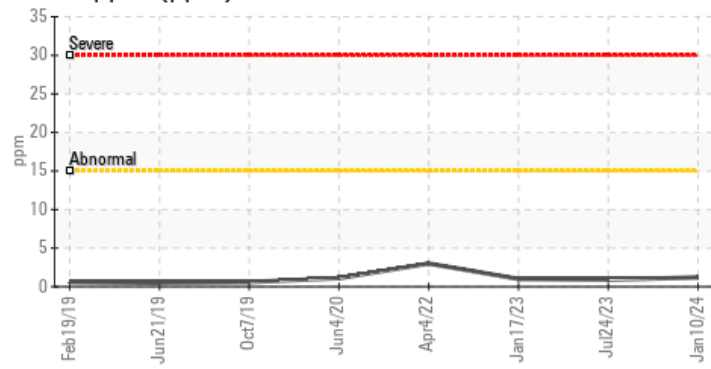
Aluminum (ppm)



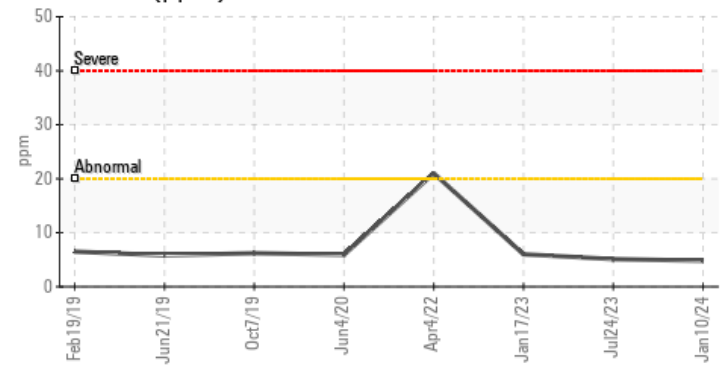
Chromium (ppm)



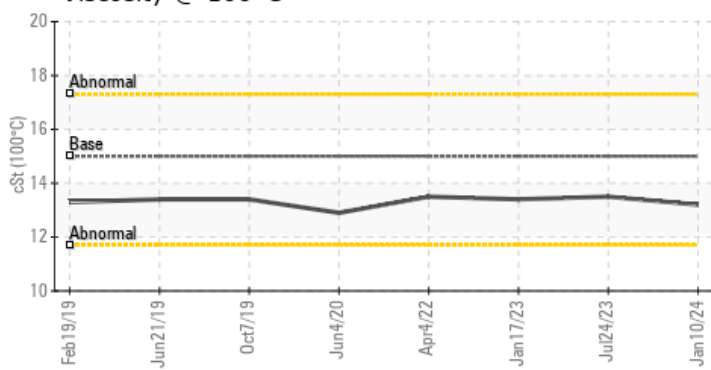
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Soot %

