



CONSTRUCTION EQUIPMENT

GFL 8-404168 VOLVO EC220E 310830 - DIESEL ENGINE



Sample No: VCP450368
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 8-404168



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | VCP450368 | VCP449283 | VCP221741 | VCP380381 |
| Sample Date | 10 May 2024 | 02 Feb 2024 | 15 Nov 2023 | 21 Jul 2023 |
| Machine Hours | 6494 | 6000 | 5815 | 5524 |
| Oil Hours | 0 | 2000 | 290 | 0 |
| Oil Changed | Changed | Changed | Not Changd | Changed |
| Sample Status | NORMAL | NORMAL | ABNORMAL | ABNORMAL |

STRONGCO EQUIPMENT INC.

1640 ENTERPRISE ROAD
 MISSISSAUGA, ON
 CA L4W 4L4

Contact: Janice Cripps
 jcripps@strongco.com
 T: (905)565-3876
 F: (905)670-2338



OIL CONDITION

| | | | | | |
|----------------|-----|-------------|------|-----|-----|
| Visc @ 100°C | cSt | 13.6 | 12.5 | 9.8 | 9.7 |
| Oxidation (PA) | % | 97 | 80 | 81 | 71 |



CONTAMINATION

| | | | | | |
|----------------|-----|----------------|-----|-----|-----|
| Water | % | NEG | NEG | NEG | NEG |
| Soot % | % | 0.1 | 0 | 0 | 0 |
| Nitration (PA) | % | 86 | 48 | 49 | 44 |
| Sulfation (PA) | % | 67 | 63 | 69 | 62 |
| Glycol | % | NEG | NEG | 0.0 | NEG |
| Fuel | % | <1.0 | 1.1 | 1.1 | 1 |
| Silicon | ppm | 9 | 7 | 8 | 5 |
| Sodium | ppm | 3 | 2 | 2 | 2 |
| 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 condition of the oil is acceptable for the time in service.



WEAR METALS

| | | | | | |
|------------|-----|--------------|----|----|----|
| Iron | ppm | 11 | 6 | 9 | 6 |
| Copper | ppm | <1 | <1 | 4 | 6 |
| Lead | ppm | <1 | <1 | <1 | <1 |
| Tin | ppm | 0 | 0 | 0 | 0 |
| Aluminum | ppm | 3 | 2 | 4 | 2 |
| Chromium | ppm | <1 | 0 | 1 | 2 |
| Molybdenum | ppm | 49 | 38 | 23 | 25 |
| Nickel | ppm | <1 | <1 | <1 | 0 |
| Titanium | ppm | <1 | 0 | 0 | 0 |
| Silver | ppm | 0 | 0 | <1 | 0 |
| Manganese | ppm | <1 | 0 | 0 | <1 |
| Vanadium | ppm | 0 | 0 | 0 | 0 |



ADDITIVES

| | | | | | |
|------------|-----|-------------|------|-----|------|
| Calcium | ppm | 1780 | 1683 | 971 | 1016 |
| Magnesium | ppm | 670 | 483 | 281 | 313 |
| Zinc | ppm | 1189 | 1011 | 805 | 813 |
| Phosphorus | ppm | 989 | 904 | 663 | 730 |
| Barium | ppm | 0 | 0 | <1 | 0 |
| Boron | ppm | 26 | 49 | 17 | 23 |

Depot: SHEMIS
Unique No: 5785488
Signed: Wes Davis
Report Date: 17 May 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS

