



CONSTRUCTION EQUIPMENT

VOLVO L120H 764 (S/N 632247) - DIESEL ENGINE



Sample No: VCP366444
Oil Type: CITGO CITGARD 700 15W40
Job No:



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | VCP366444 | VCP223891 | VCP230232 | VCP230234 |
| Sample Date | 14 Dec 2023 | 13 Jan 2022 | 26 Apr 2021 | 06 Jan 2020 |
| Machine Hours | 1050 | 3535 | 3077 | 2018 |
| Oil Hours | 0 | 500 | 500 | 500 |
| Oil Changed | Changed | Changed | Changed | Changed |
| Sample Status | ABNORMAL | NORMAL | NORMAL | NORMAL |

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OIL CONDITION

| | | | | | |
|------------------|----------|-------------|------|------|------|
| Visc @ 100°C | cSt | 13.8 | 14.2 | 14.1 | 14.2 |
| Base Number (BN) | mg KOH/g | 9.6 | 9.6 | --- | --- |
| Oxidation (PA) | % | 59 | 80 | 63 | 59 |

Diagnosis

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The aluminum level is abnormal. All other 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.



CONTAMINATION

| | | | | | |
|----------------|-----|----------------|------|------|------|
| Water | % | NEG | NEG | NEG | NEG |
| Soot % | % | 0.5 | 0.2 | 1 | 0.9 |
| Nitration (PA) | % | 55 | 86 | 68 | 63 |
| Sulfation (PA) | % | 53 | 66 | 58 | 54 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | <1.0 | <1.0 | <1.0 | <1.0 |
| Silicon | ppm | 8 | 4 | 3 | 8 |
| Sodium | ppm | 2 | 2 | 1 | 3 |
| Potassium | ppm | 2 | 0 | <1 | 0 |



WEAR METALS

| | | | | | |
|------------|-----|--------------|----|----|----|
| Iron | ppm | 28 | 4 | 20 | 29 |
| Copper | ppm | 5 | 2 | 4 | 6 |
| Lead | ppm | <1 | 2 | 1 | 2 |
| Tin | ppm | 1 | <1 | 2 | 0 |
| Aluminum | ppm | ▲ 12 | 2 | 7 | 9 |
| Chromium | ppm | 2 | <1 | 1 | 2 |
| Molybdenum | ppm | 60 | 38 | 62 | 60 |
| Nickel | ppm | 0 | 0 | 0 | <1 |
| Titanium | ppm | <1 | <1 | 0 | <1 |
| Silver | ppm | <1 | <1 | 0 | <1 |
| Manganese | ppm | <1 | <1 | <1 | <1 |
| Vanadium | ppm | 0 | 0 | 0 | 0 |



ADDITIVES

| | | | | | |
|------------|-----|-------------|------|------|------|
| Calcium | ppm | 1055 | 1748 | 1058 | 1106 |
| Magnesium | ppm | 908 | 538 | 976 | 1026 |
| Zinc | ppm | 1237 | 882 | 1282 | 1190 |
| Phosphorus | ppm | 899 | 769 | 1045 | 992 |
| Barium | ppm | 15 | 0 | 0 | 0 |
| Boron | ppm | 6 | 75 | 4 | 2 |

Depot: YELBIL
Unique No: 10882812
Signed: Sean Felton
Report Date: 16 Feb 2024



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GRAPHS

