



CONSTRUCTION EQUIPMENT

VOLVO L90H 5624326 - DIESEL ENGINE



Sample No: VCP454620
Oil Type: VALVOLINE 15W40
Job No:



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | VCP454620 | VCP437555 | VCP437217 | VCP438664 |
| Sample Date | 09 Jul 2024 | 04 May 2024 | 21 Mar 2024 | 24 Jan 2024 |
| Machine Hours | 9186 | 0 | 0 | 0 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | Changed | Changed | Changed | Changed |
| Sample Status | NORMAL | NORMAL | NORMAL | NORMAL |

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OIL CONDITION

| | | | | | |
|------------------|----------|-------------|------|------|------|
| Visc @ 100°C | cSt | 11.8 | 12.8 | 12.6 | 13.0 |
| Base Number (BN) | mg KOH/g | 6.7 | 8.3 | 6.9 | 7.0 |
| Oxidation (PA) | % | 36 | 50 | 36 | 37 |

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.



CONTAMINATION

| | | | | | |
|----------------|-----|----------------|------|------|------|
| Water | % | NEG | NEG | NEG | NEG |
| Soot % | % | 0.2 | 0.1 | 0.1 | 0.2 |
| Nitration (PA) | % | 52 | 48 | 51 | 53 |
| Sulfation (PA) | % | 44 | 48 | 44 | 45 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | <1.0 | <1.0 | <1.0 | <1.0 |
| Silicon | ppm | 7 | 4 | 5 | 6 |
| Sodium | ppm | <1 | 2 | 0 | <1 |
| Potassium | ppm | 3 | 0 | 0 | 4 |



WEAR METALS

| | | | | | |
|------------|-----|--------------|----|----|----|
| Iron | ppm | 5 | 1 | 4 | 3 |
| Copper | ppm | 0 | <1 | <1 | <1 |
| Lead | ppm | <1 | 0 | 0 | 1 |
| Tin | ppm | <1 | 0 | 0 | <1 |
| Aluminum | ppm | 4 | 1 | 2 | 3 |
| Chromium | ppm | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | 61 | 68 | 29 | 29 |
| Nickel | ppm | <1 | 0 | <1 | <1 |
| Titanium | ppm | 0 | 0 | 0 | 0 |
| Silver | ppm | 0 | 0 | 0 | 0 |
| Manganese | ppm | 0 | <1 | 0 | <1 |
| Vanadium | ppm | 0 | 0 | 0 | <1 |



ADDITIVES

| | | | | | |
|------------|-----|-------------|------|------|------|
| Calcium | ppm | 1868 | 1753 | 2087 | 2000 |
| Magnesium | ppm | 258 | 570 | 144 | 123 |
| Zinc | ppm | 1068 | 1184 | 1012 | 1029 |
| Phosphorus | ppm | 884 | 1005 | 881 | 891 |
| Barium | ppm | 0 | 0 | 0 | 0 |
| Boron | ppm | 35 | 82 | 28 | 17 |

Depot: CITMILCON
Unique No: 11123243
Signed: Wes Davis
Report Date: 12 Jul 2024



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VOLVO GRAPHS

