

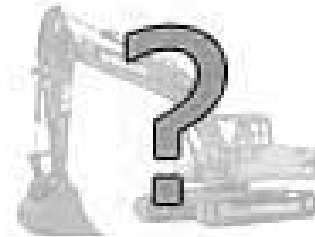


CONSTRUCTION EQUIPMENT

YALE FORKLIFT 4 - DIESEL ENGINE



Sample No: VCP416323
Oil Type: MOBIL DELVAC 1300 SUPER15W40
Job No:



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | VCP416323 | VCP399943 | VCP383681 | VCP366569 |
| Sample Date | 08 Aug 2023 | 13 Apr 2023 | 02 Jan 2023 | 19 Oct 2022 |
| Machine Hours | 2739 | 2504 | 2231 | 2002 |
| Oil Hours | 235 | 273 | 229 | 250 |
| Oil Changed | Changed | Changed | Changed | Changed |
| Sample Status | NORMAL | NORMAL | NORMAL | NORMAL |

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OIL CONDITION

| | | | | | |
|------------------|----------|-------------|------|------|------|
| Visc @ 100°C | cSt | 13.2 | 13.5 | 13.4 | 13.1 |
| Base Number (BN) | mg KOH/g | 10.5 | 10.6 | 10.2 | 11.5 |
| Oxidation (PA) | % | 78 | 82 | 80 | 90 |

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

| | | | | | |
|----------------|-----|----------------|------|------|------|
| Soot % | % | 0.7 | 0.5 | 0.1 | 0.1 |
| Nitration (PA) | % | 54 | 58 | 52 | 55 |
| Sulfation (PA) | % | 61 | 61 | 59 | 66 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | <1.0 | <1.0 | <1.0 | <1.0 |
| Silicon | ppm | 6 | 5 | 4 | 3 |
| Sodium | ppm | 2 | 3 | 2 | 1 |
| Potassium | ppm | <1 | 0 | 1 | 1 |



WEAR METALS

| | | | | | |
|------------|-----|--------------|----|----|----|
| Iron | ppm | 13 | 11 | 2 | 2 |
| Copper | ppm | 2 | 1 | <1 | <1 |
| Lead | ppm | 0 | 0 | 0 | 0 |
| Tin | ppm | <1 | 0 | 0 | <1 |
| Aluminum | ppm | 2 | 1 | <1 | <1 |
| Chromium | ppm | <1 | <1 | 0 | 0 |
| Molybdenum | ppm | 42 | 43 | 43 | 39 |
| Nickel | ppm | 0 | 0 | 0 | 0 |
| Titanium | ppm | 0 | 0 | 0 | 0 |
| Silver | ppm | 0 | 0 | 0 | 0 |
| Manganese | ppm | <1 | 1 | <1 | <1 |
| Vanadium | ppm | 0 | 0 | 0 | 0 |



ADDITIVES

| | | | | | |
|------------|-----|-------------|------|------|------|
| Calcium | ppm | 1747 | 1829 | 1604 | 1656 |
| Magnesium | ppm | 548 | 566 | 524 | 466 |
| Zinc | ppm | 992 | 964 | 917 | 898 |
| Phosphorus | ppm | 823 | 805 | 753 | 729 |
| Barium | ppm | 0 | 0 | 1 | 0 |
| Boron | ppm | 65 | 65 | 61 | 52 |

Depot: MARDIC
Unique No: 10602710
Signed: Wes Davis
Report Date: 14 Aug 2023



CONSTRUCTION EQUIPMENT



GRAPHS

