

OIL ANALYSIS REPORT

VOLVO PENTA

JIM MERGARD 6029/501781 VOLVO PENTA A310857 - CENTER DIESEL ENGINE

Sample No: VPA051968

Oil Type: CHEVRON DELO 400 MULTIGRADE 15W40

SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-----|
| Sample Number | VPA051968 | VPA048031 | VPA043518 | --- |
| Sample Date | 27 Sep 2023 | 05 Oct 2022 | 21 Dec 2021 | --- |
| Machine Hours | 238 | 230 | 224 | --- |
| Oil Hours | 0 | 0 | 0 | --- |
| Oil Changed | Changed | Not Changd | Changed | --- |
| Sample Status | NORMAL | NORMAL | NORMAL | --- |

OIL CONDITION

| | | | | | |
|------------------|----------|-------------|------|------|-----|
| Visc @ 100°C | cSt | 13.8 | 14.1 | 13.9 | --- |
| Base Number (BN) | mg KOH/g | 8.4 | 9.9 | 9 | --- |
| Oxidation (PA) | % | 55 | 61 | 51 | --- |

CONTAMINATION

| | | | | | |
|----------------|-----|----------------|------|------|-----|
| Soot % | % | 0.1 | 0.1 | 0.2 | --- |
| Nitration (PA) | % | 44 | 49 | 61 | --- |
| Sulfation (PA) | % | 55 | 62 | 49 | --- |
| Glycol | % | NEG | NEG | NEG | --- |
| Fuel | % | <1.0 | <1.0 | <1.0 | --- |
| Silicon | ppm | 7 | 7 | 8 | --- |
| Sodium | ppm | 1 | 2 | 1 | --- |
| Potassium | ppm | 2 | 2 | <1 | --- |

WEAR METALS

| | | | | | |
|------------|-----|--------------|----|----|-----|
| Iron | ppm | 11 | 14 | 21 | --- |
| Copper | ppm | 2 | 2 | 5 | --- |
| Lead | ppm | <1 | <1 | 2 | --- |
| Tin | ppm | <1 | <1 | <1 | --- |
| Aluminum | ppm | 3 | 4 | 2 | --- |
| Chromium | ppm | <1 | <1 | 1 | --- |
| Molybdenum | ppm | 81 | 82 | 8 | --- |
| Nickel | ppm | 1 | 2 | 3 | --- |
| Titanium | ppm | <1 | <1 | <1 | --- |
| Silver | ppm | <1 | 0 | 0 | --- |
| Manganese | ppm | <1 | <1 | <1 | --- |
| Vanadium | ppm | <1 | <1 | 0 | --- |

ADDITIVES

| | | | | | |
|------------|-----|-------------|------|------|-----|
| Calcium | ppm | 1472 | 1349 | 1211 | --- |
| Magnesium | ppm | 753 | 662 | 647 | --- |
| Zinc | ppm | 975 | 845 | 785 | --- |
| Phosphorus | ppm | 789 | 704 | 658 | --- |
| Barium | ppm | 0 | 0 | <1 | --- |
| Boron | ppm | 279 | 269 | 78 | --- |

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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.

Depot: VP179089
Unique No: 10675201
Signed: Angela Borella
Report Date: 06 Oct 2023

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GRAPHS

