

OIL ANALYSIS REPORT

**VOLVO
PENTA**

PAY MORE RECYCLING 7719499 VOLVO PENTA 7005324433 - CENTER DIESEL ENGINE

Sample No: VPA054014

Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40

SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-----|
| Sample Number | VPA054014 | VPA025547 | VPA022986 | --- |
| Sample Date | 08 Apr 2024 | 05 Nov 2020 | 15 Jul 2019 | --- |
| Machine Hours | 3926 | 1050 | 471 | --- |
| Oil Hours | 3926 | 0 | 0 | --- |
| Oil Changed | Changed | Changed | Changed | --- |
| Sample Status | NORMAL | NORMAL | ATTENTION | --- |

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OIL CONDITION

| | | | | | |
|------------------|----------|-------------|------|-------|-----|
| Visc @ 100°C | cSt | 12.6 | 12.3 | 12.69 | --- |
| Base Number (BN) | mg KOH/g | 8.8 | --- | --- | --- |
| Oxidation (PA) | % | 59 | 60 | 59 | --- |

CONTAMINATION

| | | | | | |
|----------------|-----|----------------|------|------|-----|
| Water | % | NEG | NEG | NEG | --- |
| Soot % | % | 0.1 | 0.1 | 0.1 | --- |
| Nitration (PA) | % | 58 | 61 | 57 | --- |
| Sulfation (PA) | % | 55 | 56 | 54 | --- |
| Glycol | % | NEG | NEG | NEG | --- |
| Fuel | % | <1.0 | <1.0 | <1.0 | --- |
| Silicon | ppm | 15 | 20 | 41 | --- |
| Sodium | ppm | 3 | 9 | 4 | --- |
| Potassium | ppm | 2 | 3 | 2 | --- |

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.

WEAR METALS

| | | | | | |
|------------|-----|--------------|----|----|-----|
| Iron | ppm | 6 | 10 | 15 | --- |
| Copper | ppm | 49 | 4 | 13 | --- |
| Lead | ppm | 0 | 3 | 1 | --- |
| Tin | ppm | <1 | 0 | 0 | --- |
| Aluminum | ppm | 3 | 3 | 3 | --- |
| Chromium | ppm | <1 | <1 | <1 | --- |
| Molybdenum | ppm | 68 | 58 | 57 | --- |
| Nickel | ppm | 0 | 0 | <1 | --- |
| Titanium | ppm | 0 | <1 | <1 | --- |
| Silver | ppm | 5 | 2 | 3 | --- |
| Manganese | ppm | <1 | <1 | 1 | --- |
| Vanadium | ppm | 0 | 0 | 0 | --- |

ADDITIVES

| | | | | | |
|------------|-----|-------------|------|------|-----|
| Calcium | ppm | 1113 | 1215 | 1370 | --- |
| Magnesium | ppm | 929 | 1076 | 948 | --- |
| Zinc | ppm | 1306 | 1202 | 1277 | --- |
| Phosphorus | ppm | 1080 | 988 | 1097 | --- |
| Barium | ppm | 0 | 0 | <1 | --- |
| Boron | ppm | 38 | 2 | 4 | --- |

Depot: VP99031103

Unique No: 10992757

Signed: Jonathan Hester

Report Date: 25 Apr 2024

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GRAPHS

