

OIL ANALYSIS REPORT

VOLVO PENTA

VOLVO PENTA A1072861 - PORT DIESEL ENGINE

Sample No: VPA059576

Oil Type: VOLVO PENTA SAE 15W40

SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-------------|-------------|-------------|
| Sample Number | VPA059576 | VPA036554 | VPA048223 | VPA040466 |
| Sample Date | 09 Jul 2024 | 29 Aug 2023 | 11 Apr 2022 | 05 Nov 2021 |
| Machine Hours | 868 | 768 | 538 | 455 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | N/A | N/A | N/A | Not Changd |
| Sample Status | NORMAL | NORMAL | NORMAL | NORMAL |

SUNCOAST DIESEL MARINE

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OIL CONDITION

| | | | | | |
|------------------|----------|---------|---------|--------|--------|
| Visc @ 100°C | cSt | █ 13.16 | █ 13.41 | █ 13.7 | █ 13.6 |
| Base Number (BN) | mg KOH/g | █ 9.7 | █ 9.9 | █ 11.6 | --- |
| Oxidation (PA) | % | 55 | 58 | 60 | 59 |

CONTAMINATION

| | | | | | |
|----------------|-----|-------|-------|-------|-------|
| Water | % | NEG | NEG | NEG | NEG |
| Soot % | % | █ 0.1 | █ 0.2 | █ 0.5 | █ 0.4 |
| Nitration (PA) | % | 43 | 53 | 68 | 55 |
| Sulfation (PA) | % | 50 | 54 | 57 | 56 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | <1.0 | <1.0 | <1.0 | <1.0 |
| Silicon | ppm | █ 4 | █ 5 | █ 6 | █ 4 |
| Sodium | ppm | █ <1 | █ 0 | █ 2 | █ 1 |
| Potassium | ppm | █ 2 | █ 1 | █ 0 | █ <1 |

WEAR METALS

| | | | | | |
|------------|-----|------|------|------|------|
| Iron | ppm | █ 10 | █ 15 | █ 17 | █ 12 |
| Copper | ppm | █ 5 | █ 7 | █ 9 | █ 6 |
| Lead | ppm | █ <1 | █ <1 | █ 1 | █ 2 |
| Tin | ppm | █ <1 | █ <1 | █ 1 | █ <1 |
| Aluminum | ppm | █ 2 | █ 2 | █ 2 | █ 1 |
| Chromium | ppm | █ <1 | █ <1 | █ <1 | █ <1 |
| Molybdenum | ppm | █ 65 | █ 64 | █ 62 | █ 61 |
| Nickel | ppm | █ 1 | █ 1 | █ <1 | █ <1 |
| Titanium | ppm | █ <1 | █ 0 | █ 0 | █ 0 |
| Silver | ppm | █ <1 | █ 0 | █ <1 | █ <1 |
| Manganese | ppm | █ <1 | █ <1 | █ <1 | █ <1 |
| Vanadium | ppm | <1 | 0 | 0 | 0 |

ADDITIVES

| | | | | | |
|------------|-----|--------|--------|--------|--------|
| Calcium | ppm | █ 1094 | █ 1142 | █ 1152 | █ 1108 |
| Magnesium | ppm | █ 933 | █ 956 | █ 1000 | █ 970 |
| Zinc | ppm | █ 1237 | █ 1271 | █ 1211 | █ 1240 |
| Phosphorus | ppm | █ 924 | █ 1084 | █ 1105 | █ 1050 |
| Barium | ppm | █ 1 | █ 2 | █ 0 | █ 0 |
| Boron | ppm | █ 13 | █ <1 | █ 8 | █ 9 |

Diagnosis

No corrective action is recommended at this time. 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 condition of the oil is acceptable for the time in service.

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PENTA**

GRAPHS

