

OIL ANALYSIS REPORT

VOLVO PENTA

MINI NEHUR PASCAL 502429 VOLVO PENTA 4012034211 - STARBOARD GASOLINE ENGINE

Sample No: VPA059165

Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-----|-----|-----|
| Sample Number | VPA059165 | --- | --- | --- |
| Sample Date | 17 Oct 2023 | --- | --- | --- |
| Machine Hours | 0 | --- | --- | --- |
| Oil Hours | 0 | --- | --- | --- |
| Oil Changed | N/A | --- | --- | --- |
| Sample Status | SEVERE | --- | --- | --- |

OIL CONDITION

| | | | | | |
|------------------|----------|--------|-----|-----|-----|
| Visc @ 100°C | cSt | ▲ 8.1 | --- | --- | --- |
| Base Number (BN) | mg KOH/g | ■ 16.4 | --- | --- | --- |
| Oxidation (PA) | % | ■ 13 | --- | --- | --- |

CONTAMINATION

| | | | | | |
|----------------|-----|--------|-----|-----|-----|
| Water | % | ◆ 1.47 | --- | --- | --- |
| Soot % | % | ■ 0.1 | --- | --- | --- |
| Nitration (PA) | % | ■ 12 | --- | --- | --- |
| Sulfation (PA) | % | ■ 8 | --- | --- | --- |
| Glycol | % | NEG | --- | --- | --- |
| Fuel | % | ▲ 4.7 | --- | --- | --- |
| Silicon | ppm | ▲ 46 | --- | --- | --- |
| Sodium | ppm | ▲ 475 | --- | --- | --- |
| Potassium | ppm | ▲ 135 | --- | --- | --- |

WEAR METALS

| | | | | | |
|------------|-----|-------|-----|-----|-----|
| Iron | ppm | ◆ 591 | --- | --- | --- |
| Copper | ppm | ■ 23 | --- | --- | --- |
| Lead | ppm | ■ 34 | --- | --- | --- |
| Tin | ppm | ■ 10 | --- | --- | --- |
| Aluminum | ppm | ▲ 37 | --- | --- | --- |
| Chromium | ppm | ■ 6 | --- | --- | --- |
| Molybdenum | ppm | ■ 32 | --- | --- | --- |
| Nickel | ppm | ■ 4 | --- | --- | --- |
| Titanium | ppm | ■ 26 | --- | --- | --- |
| Silver | ppm | ■ 0 | --- | --- | --- |
| Manganese | ppm | ■ 5 | --- | --- | --- |
| Vanadium | ppm | <1 | --- | --- | --- |

ADDITIVES

| | | | | | |
|------------|-----|--------|-----|-----|-----|
| Calcium | ppm | ■ 1436 | --- | --- | --- |
| Magnesium | ppm | ■ 36 | --- | --- | --- |
| Zinc | ppm | ■ 729 | --- | --- | --- |
| Phosphorus | ppm | ■ 592 | --- | --- | --- |
| Barium | ppm | ■ 0 | --- | --- | --- |
| Boron | ppm | ■ 65 | --- | --- | --- |

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Diagnosis

We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the fuel injection system. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. Cylinder, crank, or cam shaft wear is indicated. Sodium and/or potassium levels are high. There is a high concentration of water present in the oil. There is a moderate amount of fuel present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Depot: VP794951
Unique No: 10701302
Signed: Jonathan Hester
Report Date: 24 Oct 2023

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GRAPHS

