

# OIL ANALYSIS REPORT

# VOLVO PENTA

**MICHAEL FIORE DANIEL/502250 ONAN/CUMMINS A070007852 - GENSET**

**Sample No:** VPA036898

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

## SAMPLE INFORMATION

|               |             |             |     |     |
|---------------|-------------|-------------|-----|-----|
| Sample Number | VPA036898   | VPA047439   | --- | --- |
| Sample Date   | 23 Aug 2023 | 13 Feb 2023 | --- | --- |
| Machine Hours | 202         | 200         | --- | --- |
| Oil Hours     | 0           | 0           | --- | --- |
| Oil Changed   | Not Changd  | N/A         | --- | --- |
| Sample Status | NORMAL      | NORMAL      | --- | --- |

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## OIL CONDITION

|                  |          |        |        |     |     |
|------------------|----------|--------|--------|-----|-----|
| Visc @ 100°C     | cSt      | █ 12.9 | █ 12.9 | --- | --- |
| Base Number (BN) | mg KOH/g | █ 9.4  | █ 9.8  | --- | --- |
| Oxidation (PA)   | %        | █ 61   | 59     | --- | --- |

## 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 acceptable for the time in service.

## CONTAMINATION

|                |     |        |       |     |     |
|----------------|-----|--------|-------|-----|-----|
| Soot %         | %   | █ 0.1  | █ 0.1 | --- | --- |
| Nitration (PA) | %   | █ 37   | 43    | --- | --- |
| Sulfation (PA) | %   | █ 51   | 51    | --- | --- |
| Glycol         | %   | █ NEG  | NEG   | --- | --- |
| Fuel           | %   | █ <1.0 | <1.0  | --- | --- |
| Silicon        | ppm | █ 11   | █ 8   | --- | --- |
| Sodium         | ppm | █ 3    | █ 2   | --- | --- |
| Potassium      | ppm | █ <1   | █ <1  | --- | --- |

## WEAR METALS

|            |     |      |      |     |     |
|------------|-----|------|------|-----|-----|
| Iron       | ppm | █ 3  | █ 5  | --- | --- |
| Copper     | ppm | █ <1 | █ 2  | --- | --- |
| Lead       | ppm | █ <1 | █ <1 | --- | --- |
| Tin        | ppm | █ <1 | █ 1  | --- | --- |
| Aluminum   | ppm | █ 0  | █ <1 | --- | --- |
| Chromium   | ppm | █ 0  | █ <1 | --- | --- |
| Molybdenum | ppm | █ 56 | █ 56 | --- | --- |
| Nickel     | ppm | █ 0  | █ 0  | --- | --- |
| Titanium   | ppm | █ 0  | █ 0  | --- | --- |
| Silver     | ppm | █ 0  | █ 0  | --- | --- |
| Manganese  | ppm | █ 0  | █ <1 | --- | --- |
| Vanadium   | ppm | █ <1 | █ 0  | --- | --- |

## ADDITIVES

|            |     |        |        |     |     |
|------------|-----|--------|--------|-----|-----|
| Calcium    | ppm | █ 1169 | █ 1042 | --- | --- |
| Magnesium  | ppm | █ 990  | █ 915  | --- | --- |
| Zinc       | ppm | █ 1293 | █ 1221 | --- | --- |
| Phosphorus | ppm | █ 1056 | █ 981  | --- | --- |
| Barium     | ppm | █ 0    | █ 0    | --- | --- |
| Boron      | ppm | █ <1   | █ 5    | --- | --- |

**Depot:** VP794951  
**Unique No:** 10619881  
**Signed:** Sean Felton  
**Report Date:** 28 Aug 2023

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## GRAPHS

