

# OIL ANALYSIS REPORT

# VOLVO PENTA

**AUTO WORLD 354004 MAN 66029118012920 - PORT DIESEL ENGINE**

**Sample No:** VPA052228

**Oil Type:** CHEVRON DELO 400 SYNTHETIC 5W40

## SAMPLE INFORMATION

|               |             |     |     |     |
|---------------|-------------|-----|-----|-----|
| Sample Number | VPA052228   | --- | --- | --- |
| Sample Date   | 30 Jan 2024 | --- | --- | --- |
| Machine Hours | 774         | --- | --- | --- |
| Oil Hours     | 64          | --- | --- | --- |
| Oil Changed   | Changed     | --- | --- | --- |
| Sample Status | NORMAL      | --- | --- | --- |

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## OIL CONDITION

|                  |          |        |     |     |     |
|------------------|----------|--------|-----|-----|-----|
| Visc @ 100°C     | cSt      | █ 13.1 | --- | --- | --- |
| Base Number (BN) | mg KOH/g | █ 6.6  | --- | --- | --- |
| Oxidation (PA)   | %        | 166    | --- | --- | --- |

## 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

|                |     |       |     |     |     |
|----------------|-----|-------|-----|-----|-----|
| Water          | %   | NEG   | --- | --- | --- |
| Soot %         | %   | █ 0.2 | --- | --- | --- |
| Nitration (PA) | %   | 61    | --- | --- | --- |
| Sulfation (PA) | %   | 99    | --- | --- | --- |
| Glycol         | %   | NEG   | --- | --- | --- |
| Fuel           | %   | < 1.0 | --- | --- | --- |
| Silicon        | ppm | █ 4   | --- | --- | --- |
| Sodium         | ppm | █ < 1 | --- | --- | --- |
| Potassium      | ppm | █ 2   | --- | --- | --- |

## WEAR METALS

|            |     |       |     |     |     |
|------------|-----|-------|-----|-----|-----|
| Iron       | ppm | █ 15  | --- | --- | --- |
| Copper     | ppm | █ 16  | --- | --- | --- |
| Lead       | ppm | █ < 1 | --- | --- | --- |
| Tin        | ppm | █ < 1 | --- | --- | --- |
| Aluminum   | ppm | █ 2   | --- | --- | --- |
| Chromium   | ppm | █ < 1 | --- | --- | --- |
| Molybdenum | ppm | █ 40  | --- | --- | --- |
| Nickel     | ppm | █ < 1 | --- | --- | --- |
| Titanium   | ppm | █ 0   | --- | --- | --- |
| Silver     | ppm | █ 0   | --- | --- | --- |
| Manganese  | ppm | █ < 1 | --- | --- | --- |
| Vanadium   | ppm | 0     | --- | --- | --- |

## ADDITIVES

|            |     |        |     |     |     |
|------------|-----|--------|-----|-----|-----|
| Calcium    | ppm | █ 977  | --- | --- | --- |
| Magnesium  | ppm | █ 823  | --- | --- | --- |
| Zinc       | ppm | █ 1194 | --- | --- | --- |
| Phosphorus | ppm | █ 1020 | --- | --- | --- |
| Barium     | ppm | █ 0    | --- | --- | --- |
| Boron      | ppm | █ 99   | --- | --- | --- |

**Depot:** VP494046

**Unique No:** 10860013

**Signed:** Don Baldrige

**Report Date:** 05 Feb 2024

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## GRAPHS

