

# OIL ANALYSIS REPORT

# VOLVO PENTA

**RONNIE HOLLIS PAC514191 VOLVO PENTA 2013503881 - STARBOARD DIESEL ENGINE**

**Sample No:** VPA060495

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

## SAMPLE INFORMATION

|               |             |     |     |     |
|---------------|-------------|-----|-----|-----|
| Sample Number | VPA060495   | --- | --- | --- |
| Sample Date   | 21 Sep 2023 | --- | --- | --- |
| Machine Hours | 1232        | --- | --- | --- |
| Oil Hours     | 34          | --- | --- | --- |
| Oil Changed   | Not Changd  | --- | --- | --- |
| Sample Status | NORMAL      | --- | --- | --- |

**FLORIDA DETROIT DIESEL - 531006 - 1125774**  
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## OIL CONDITION

|                  |          |        |     |     |     |
|------------------|----------|--------|-----|-----|-----|
| Visc @ 100°C     | cSt      | █ 13.3 | --- | --- | --- |
| Base Number (BN) | mg KOH/g | █ 9.4  | --- | --- | --- |
| Oxidation (PA)   | %        | 51     | --- | --- | --- |

## 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 %         | %   | █ 0.3 | --- | --- | --- |
| Nitration (PA) | %   | 42    | --- | --- | --- |
| Sulfation (PA) | %   | 50    | --- | --- | --- |
| Glycol         | %   | NEG   | --- | --- | --- |
| Fuel           | %   | <1.0  | --- | --- | --- |
| Silicon        | ppm | █ 4   | --- | --- | --- |
| Sodium         | ppm | █ 4   | --- | --- | --- |
| Potassium      | ppm | █ 4   | --- | --- | --- |

## WEAR METALS

|            |     |      |     |     |     |
|------------|-----|------|-----|-----|-----|
| Iron       | ppm | █ 31 | --- | --- | --- |
| Copper     | ppm | █ 3  | --- | --- | --- |
| Lead       | ppm | █ <1 | --- | --- | --- |
| Tin        | ppm | █ <1 | --- | --- | --- |
| Aluminum   | ppm | █ 16 | --- | --- | --- |
| Chromium   | ppm | █ 1  | --- | --- | --- |
| Molybdenum | ppm | █ 61 | --- | --- | --- |
| Nickel     | ppm | █ 0  | --- | --- | --- |
| Titanium   | ppm | █ 0  | --- | --- | --- |
| Silver     | ppm | █ 0  | --- | --- | --- |
| Manganese  | ppm | █ 1  | --- | --- | --- |
| Vanadium   | ppm | 0    | --- | --- | --- |

## ADDITIVES

|            |     |        |     |     |     |
|------------|-----|--------|-----|-----|-----|
| Calcium    | ppm | █ 1103 | --- | --- | --- |
| Magnesium  | ppm | █ 1006 | --- | --- | --- |
| Zinc       | ppm | █ 1305 | --- | --- | --- |
| Phosphorus | ppm | █ 1105 | --- | --- | --- |
| Barium     | ppm | █ 0    | --- | --- | --- |
| Boron      | ppm | █ 4    | --- | --- | --- |

**Depot:** VPFLOPAN  
**Unique No:** 10662238  
**Signed:** Don Baldrige  
**Report Date:** 27 Sep 2023

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## GRAPHS

