

# OIL ANALYSIS REPORT



## FANCY VOLVO PENTA 2013524813 - STARBOARD DIESEL ENGINE

**Sample No:** VPA051114  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

### SAMPLE INFORMATION

|               |             |             |     |     |
|---------------|-------------|-------------|-----|-----|
| Sample Number | VPA051114   | VPA028928   | --- | --- |
| Sample Date   | 13 Mar 2024 | 02 Apr 2021 | --- | --- |
| Machine Hours | 877         | 0           | --- | --- |
| Oil Hours     | 0           | 0           | --- | --- |
| Oil Changed   | N/A         | N/A         | --- | --- |
| Sample Status | NORMAL      | NORMAL      | --- | --- |

**Marine International Diesels Inc.**  
 3600 HACIENDA BLVD UNIT G  
 DAVIE, FL  
 US 33314  
 Contact: ASHANTI BURKE  
 aburke@midiflorida.com  
 T: (954)761-1086  
 F: (954)761-1186

### OIL CONDITION

|                  |          |        |        |     |     |
|------------------|----------|--------|--------|-----|-----|
| Visc @ 100°C     | cSt      | █ 13.2 | █ 13.2 | --- | --- |
| Base Number (BN) | mg KOH/g | █ 9.1  | ---    | --- | --- |
| Oxidation (PA)   | %        | 55     | 57     | --- | --- |

### CONTAMINATION

|                |     |       |       |     |     |
|----------------|-----|-------|-------|-----|-----|
| Water          | %   | NEG   | NEG   | --- | --- |
| Soot %         | %   | █ 0.5 | █ 0.1 | --- | --- |
| Nitration (PA) | %   | 52    | 43    | --- | --- |
| Sulfation (PA) | %   | 54    | 55    | --- | --- |
| Glycol         | %   | NEG   | NEG   | --- | --- |
| Fuel           | %   | <1.0  | <1.0  | --- | --- |
| Silicon        | ppm | █ 5   | █ 3   | --- | --- |
| Sodium         | ppm | █ 19  | █ <1  | --- | --- |
| Potassium      | ppm | █ 2   | █ 2   | --- | --- |

### 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 suitable for further service.

### WEAR METALS

|            |     |      |      |     |     |
|------------|-----|------|------|-----|-----|
| Iron       | ppm | █ 23 | █ 6  | --- | --- |
| Copper     | ppm | █ 6  | █ <1 | --- | --- |
| Lead       | ppm | █ 0  | █ <1 | --- | --- |
| Tin        | ppm | █ 0  | █ <1 | --- | --- |
| Aluminum   | ppm | █ 2  | █ 8  | --- | --- |
| Chromium   | ppm | █ <1 | █ <1 | --- | --- |
| Molybdenum | ppm | █ 55 | █ 56 | --- | --- |
| Nickel     | ppm | █ 0  | █ <1 | --- | --- |
| Titanium   | ppm | █ <1 | █ <1 | --- | --- |
| Silver     | ppm | █ 0  | █ <1 | --- | --- |
| Manganese  | ppm | █ <1 | █ <1 | --- | --- |
| Vanadium   | ppm | <1   | 0    | --- | --- |

### ADDITIVES

|            |     |        |        |     |     |
|------------|-----|--------|--------|-----|-----|
| Calcium    | ppm | █ 1193 | █ 1004 | --- | --- |
| Magnesium  | ppm | █ 928  | █ 888  | --- | --- |
| Zinc       | ppm | █ 1320 | █ 1210 | --- | --- |
| Phosphorus | ppm | █ 1109 | █ 999  | --- | --- |
| Barium     | ppm | █ 0    | █ 0    | --- | --- |
| Boron      | ppm | █ 9    | █ 4    | --- | --- |

**Depot:** VP694356  
**Unique No:** 10937044  
**Signed:** Jonathan Hester  
**Report Date:** 22 Mar 2024

# OIL ANALYSIS REPORT

# VOLVO PENTA

## GRAPHS

