## **OIL ANALYSIS REPORT**

### BILL SHIELDS SAM VOLVO PENTA A 1111410 - STARBOARD DIESEL ENGINE

Sample No: VPA053214

Oil Type: VOLVO PENTA SAE 15W40

#### SAMPLE INFORMATION VPA053214 VPA035127 Sample Number Sample Date 02 Apr 2024 04 Oct 2021 Machine Hours 0 239 106 **Oil Hours** 0 Oil Changed Not Changd Not Changd NORMAL Sample Status NORMAL **OIL CONDITION** Visc @ 100°C cSt 13.6 13.48 Base Number (BN) mg KOH/g 10.4 Oxidation (PA) % 55 65 CONTAMINATION % NEG Water 0.112 % Soot % 0.1 0.3 Nitration (PA) % 39 48 % Sulfation (PA) 51 64 Glycol % NEG NFG % Fuel <1.0 <1.0 Silicon 4 8 ppm Sodium ppm **||** <1 2 Potassium 0 🔲 < 1 ppm WEAR METALS Iron 3 11 ppm 2 7 Copper ppm Lead 0 🔲 3 ppm Tin 0 1 ppm Aluminum **||** <1 4 ppm Chromium ppm <1 < 1 64 Molybdenum 123 ppm Nickel 2 ppm ■ <1</p> Titanium ppm 0 🔲 < 1 Silver 0 <1 ppm Manganese 0 🔲 < 1 ppm Vanadium ppm <1 <1

| WDDILLAE2  |     |          |      |      |
|------------|-----|----------|------|------|
| Calcium    | ppm | 1166     | 1556 | <br> |
| Magnesium  | ppm | 1051     | 638  | <br> |
| Zinc       | ppm | 1385     | 841  | <br> |
| Phosphorus | ppm | 1125     | 628  | <br> |
| Barium     | ppm | 0        | 0    | <br> |
| Boron      | ppm | <b>4</b> | 392  | <br> |

Endor Marine LLC - Coastal Marine - 152124 4300 11th Ave. NW SEATTLE, WA US 98107 Contact: WILLOW YANARELLA service@coastalmarineengine.com T: (206)784-3703 F: (206)784-8823

### 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.

 Depot:
 VP794951

 Unique No:
 10956670

 Signed:
 Don Baldridge

 Report Date:
 05 Apr 2024

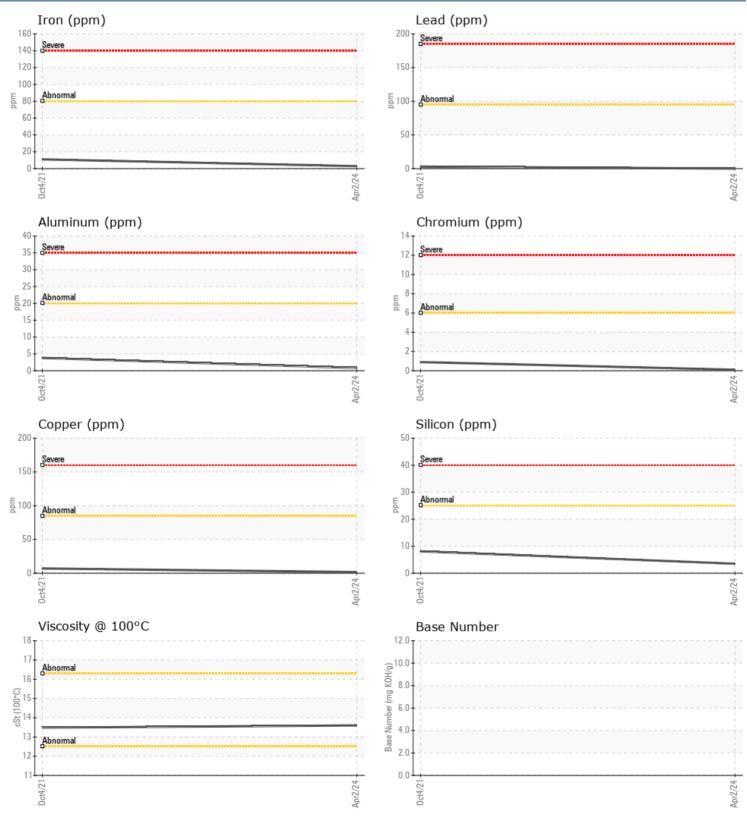
Contact/Location: WILLOW YANARELLA - VP794951



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#### GRAPHS



Report Id: VP794951 [WUSCAR] 06137205 (Generated: 04/09/2024 10:15:08) Rev: 1

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