OIL ANALYSIS REPORT

NADINE URCIUOLI PHIL SLACK-2300516 VOLVO PENTA A164024 - CENTER DIESEL ENGINE

Sample No: VPA060176

Oil Type: VOLVO PENTA SAE 15W40

SAMPLE INFORMATION VPA060176 VPA038547 Sample Number Sample Date 16 Oct 2023 23 Sep 2021 Machine Hours 333 296 **Oil Hours** 333 0 Oil Changed Changed Changed NORMAL Sample Status NORMAL **OIL CONDITION** 13.2 Visc @ 100°C cSt 13.4 Base Number (BN) mg KOH/g 10.4 Oxidation (PA) % 57 59 CONTAMINATION 0.1 Soot % % 0.1 % Nitration (PA) 46 48 Sulfation (PA) % 52 54 % Glycol NEG NEG Fuel % <1.0 < 1.0 Silicon ppm 9 7 Sodium 2 3 ppm Potassium ppm 2 <1 WEAR METALS 10 14 Iron ppm 3 Copper 2 ppm 3 Lead ppm 0 Tin ■ <1 <1 ppm 36 Aluminum 36 ppm 2 Chromium 1 ppm Molybdenum 60 57 ppm Nickel ■ <1 < 1 ppm Titanium 0 🔲 < 1 ppm Silver ppm 0 <1 Manganese **||** <1 < ppm Vanadium 0 0 ppm **ADDITIVES** Calcium 1028 1028 ppm 980 Magnesium 915 ppm 1312 Zinc ppm 1128 Phosphorus ppm 1006 1002 Barium ppm 0 0 Boron ppm 3 5

Helmuts Marine Service

619 Canal Street SAN RAFAEL, CA US 94901-3545 Contact: NADINE URCIUOLI SERVICE@HELMUTSMARINE.COM T: x: F: x:

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:
 VP152741

 Unique No:
 10711572

 Signed:
 Sean Felton

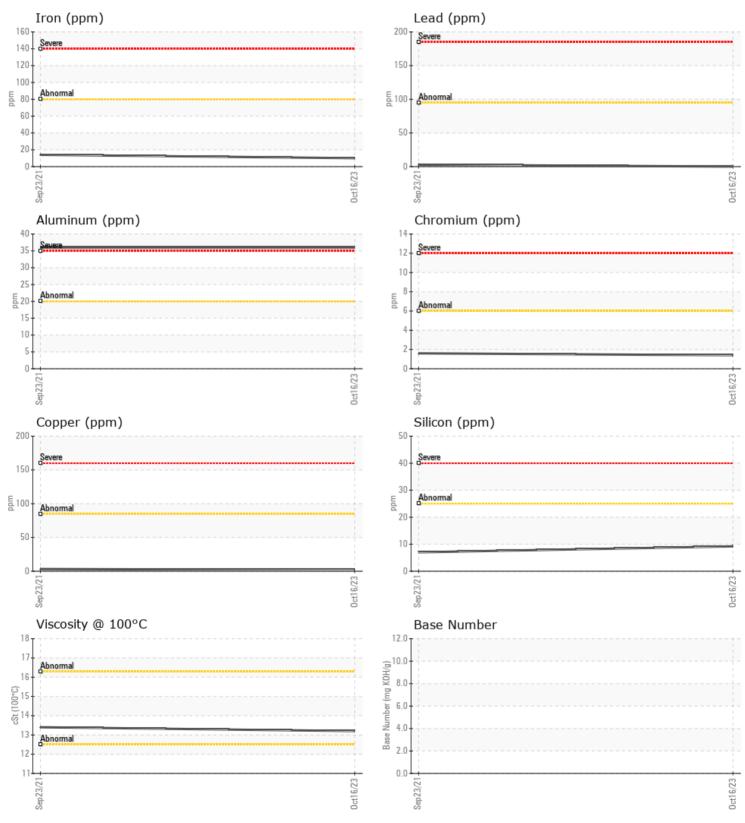
 Report Date:
 27 Oct 2023



OIL ANALYSIS REPORT



GRAPHS



Report Id: VP152741 [WUSCAR] 05988910 (Generated: 10/27/2023 15:37:15) Rev: 1

Contact/Location: NADINE URCIUOLI - VP152741