OIL ANALYSIS REPORT

502689 VOLVO PENTA A511777 - STARBOARD DIESEL ENGINE

Sample No: VPA058198

Oil Type: DIESEL ENGINE OIL SAE 15W40

SAMPLE INFORMATION VPA058198 VPA031095 Sample Number Sample Date 09 Feb 2024 20 Jan 2023 Machine Hours 1024 898 **Oil Hours** 126 0 Oil Changed Changed Changed NORMAL Sample Status NORMAL **OIL CONDITION** 13.8 Visc @ 100°C 14.0 cSt Base Number (BN) mg KOH/g 8.5 8.8 Oxidation (PA) % 53 60 CONTAMINATION Water % NEG NFG % Soot % 0.5 0.5 Nitration (PA) % 66 56 Sulfation (PA) % 52 61 Glycol % NEG NEG Fuel % <1.0 <1.0 Silicon 5 7 ppm Sodium 2 2 ppm Potassium 3 2 ppm WEAR METALS 21 28 Iron ppm **4** 5 Copper ppm Lead 2 ppm 2 Tin <1 ppm ■ <1 Aluminum 55 ppm 42 Chromium 3 4 ppm 20 110 Molybdenum ppm Nickel 2 2 ppm Titanium ppm **||** <1 0 Silver 0 0 ppm Manganese 0 🔲 < 1 ppm Vanadium 0 ppm 0 **ADDITIVES** 1459 Calcium 1172 ppm 645 638 Magnesium ppm Zinc ppm 727 861 Phosphorus ppm 710 706 Barium 10 0 ppm Boron ppm 105 342

North Harbor Diesel Inc

720 30Th Street ANACORTES, WA US 98221 Contact: ROBBIN MURDOCK robbin@northharbordiesel.com T: (360)299-1904 F:

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.

 Depot:
 VP179089

 Unique No:
 10885572

 Signed:
 Don Baldridge

 Report Date:
 20 Feb 2024

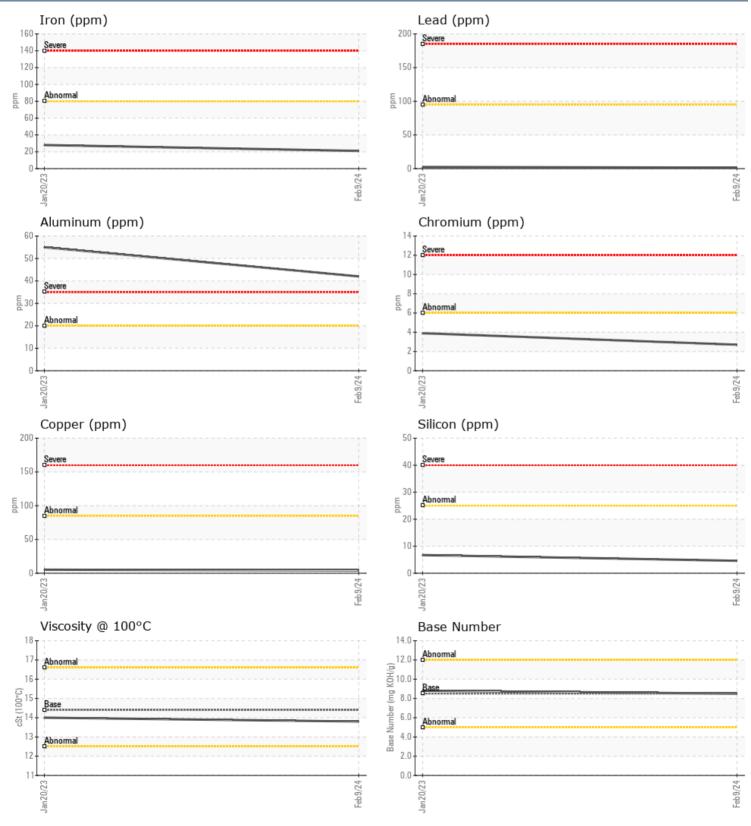
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GRAPHS



Report Id: VP179089 [WUSCAR] 06092719 (Generated: 02/20/2024 20:42:19) Rev: 1

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