

OIL ANALYSIS REPORT

VOLVO PENTA

NADINE URUIOLI KLEIN VOLVO PENTA 7008509107 - DIESEL ENGINE

Sample No: VPA056430

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

SAMPLE INFORMATION

Sample Number	VPA056430	VPA037829	---	---
Sample Date	23 Aug 2023	15 Aug 2022	---	---
Machine Hours	318	200	---	---
Oil Hours	318	200	---	---
Oil Changed	Not Changd	Not Changd	---	---
Sample Status	NORMAL	NORMAL	---	---

Helmut's Marine Service

619 Canal Street
SAN RAFAEL, CA
US 94901-3545
Contact: NADINE URUIOLI
SERVICE@HELMUTSMARINE.COM

T: x:

F: x:

OIL CONDITION

Visc @ 100°C	cSt	█ 13.1	█ 13.2	---	---
Base Number (BN)	mg KOH/g	█ 9.9	█ 11.1	---	---
Oxidation (PA)	%	55	61	---	---

CONTAMINATION

Soot %	%	█ 0.1	█ 0.1	---	---
Nitration (PA)	%	43	48	---	---
Sulfation (PA)	%	51	56	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	█ 11	█ 12	---	---
Sodium	ppm	█ 1	█ 2	---	---
Potassium	ppm	█ 1	█ 1	---	---

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	█ 7	█ 4	---	---
Copper	ppm	█ 14	█ 11	---	---
Lead	ppm	█ 0	█ 0	---	---
Tin	ppm	█ <1	█ 0	---	---
Aluminum	ppm	█ 2	█ <1	---	---
Chromium	ppm	█ <1	█ <1	---	---
Molybdenum	ppm	█ 63	█ 63	---	---
Nickel	ppm	█ <1	█ <1	---	---
Titanium	ppm	█ 0	█ 0	---	---
Silver	ppm	█ <1	█ <1	---	---
Manganese	ppm	█ <1	█ <1	---	---
Vanadium	ppm	0	0	---	---

ADDITIVES

Calcium	ppm	█ 1170	█ 1061	---	---
Magnesium	ppm	█ 1048	█ 902	---	---
Zinc	ppm	█ 1417	█ 1245	---	---
Phosphorus	ppm	█ 1161	█ 1047	---	---
Barium	ppm	█ 0	█ 0	---	---
Boron	ppm	█ 3	█ 6	---	---

Depot: VP152741

Unique No: 10628661

Signed: Don Baldrige

Report Date: 31 Aug 2023

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GRAPHS

