

OIL ANALYSIS REPORT

**VOLVO
PENTA**

PHILIP HASBROUCK VOLVO PENTA A865013 - PORT DIESEL ENGINE

Sample No: VPA056115
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

SAMPLE INFORMATION

Sample Number	VPA056115	VPA023746	---	---
Sample Date	13 Oct 2023	16 Apr 2019	---	---
Machine Hours	554	85	---	---
Oil Hours	0	85	---	---
Oil Changed	Not Changd	Not Changd	---	---
Sample Status	NORMAL	NORMAL	---	---

OIL CONDITION

Visc @ 100°C	cSt	13.4	13.38	---	---
Base Number (BN)	mg KOH/g	10.1	---	---	---
Oxidation (PA)	%	55	37	---	---

CONTAMINATION

Soot %	%	0.4	0.1	---	---
Nitration (PA)	%	52	39	---	---
Sulfation (PA)	%	53	40	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	8	14	---	---
Sodium	ppm	2	3	---	---
Potassium	ppm	0	3	---	---

WEAR METALS

Iron	ppm	16	10	---	---
Copper	ppm	9	10	---	---
Lead	ppm	1	2	---	---
Tin	ppm	1	<1	---	---
Aluminum	ppm	2	4	---	---
Chromium	ppm	<1	<1	---	---
Molybdenum	ppm	58	43	---	---
Nickel	ppm	2	<1	---	---
Titanium	ppm	0	0	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	<1	2	---	---
Vanadium	ppm	0	0	---	---

ADDITIVES

Calcium	ppm	1036	1071	---	---
Magnesium	ppm	929	921	---	---
Zinc	ppm	1235	1202	---	---
Phosphorus	ppm	898	1013	---	---
Barium	ppm	0	0	---	---
Boron	ppm	2	7	---	---

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Diagnosis

Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. 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: VP288530
Unique No: 10696634
Signed: Sean Felton
Report Date: 17 Oct 2023

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GRAPHS

