

# OIL ANALYSIS REPORT

# VOLVO PENTA

## VOLVO PENTA D4-300I-F A250799 - CENTER DIESEL ENGINE

**Sample No:** VPA050943

**Oil Type:** CHEVRON DELO 400 MULTIGRADE 15W40

### SAMPLE INFORMATION

Sample Number	<b>VPA050943</b>	VPA037768	VPA025772	VPA025515
Sample Date	<b>13 Oct 2023</b>	29 Sep 2022	17 Nov 2021	28 Oct 2020
Machine Hours	<b>1327</b>	1264	1094	985
Oil Hours	<b>63</b>	170	109	70
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>13.7</b>	13.5	13.37	13.5
Base Number (BN)	mg KOH/g	<b>8.2</b>	10.9	---	---
Oxidation (PA)	%	<b>50</b>	67	62	60

### CONTAMINATION

Soot %	%	<b>0.2</b>	0.4	0.4	0.3
Nitration (PA)	%	<b>61</b>	69	60	55
Sulfation (PA)	%	<b>49</b>	59	57	56
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>4</b>	5	4	6
Sodium	ppm	<b>2</b>	3	0	2
Potassium	ppm	<b>3</b>	1	<1	0

### WEAR METALS

Iron	ppm	<b>19</b>	21	18	15
Copper	ppm	<b>4</b>	7	7	6
Lead	ppm	<b>&lt;1</b>	1	2	2
Tin	ppm	<b>&lt;1</b>	<1	<1	<1
Aluminum	ppm	<b>5</b>	5	4	7
Chromium	ppm	<b>&lt;1</b>	1	<1	1
Molybdenum	ppm	<b>14</b>	60	57	57
Nickel	ppm	<b>2</b>	3	2	1
Titanium	ppm	<b>0</b>	0	0	0
Silver	ppm	<b>0</b>	0	<1	<1
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	0	0	0

### ADDITIVES

Calcium	ppm	<b>1229</b>	1170	1127	1113
Magnesium	ppm	<b>790</b>	1003	978	948
Zinc	ppm	<b>930</b>	1300	1227	1253
Phosphorus	ppm	<b>782</b>	1101	1101	1049
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>65</b>	10	10	11

### 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:** VPTHOREN

**Unique No:** 10714611

**Signed:** Don Baldrige

**Report Date:** 31 Oct 2023

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## GRAPHS

