

OIL ANALYSIS REPORT



NADINE URUIOLI VOLVO PENTA 510216660A - CENTER DIESEL ENGINE

Sample No: VPA049570
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

SAMPLE INFORMATION

Sample Number	VPA049570	VPA042321	VPA042360	VPA025711
Sample Date	14 Sep 2023	27 Sep 2022	26 Sep 2022	19 May 2020
Machine Hours	185	159	0	46
Oil Hours	185	159	0	0
Oil Changed	Changed	Not Changd	Not Changd	Not Changd
Sample Status	NORMAL	NORMAL	ATTENTION	NORMAL

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

Visc @ 100°C	cSt	13.8	13.3	10.8	13.4
Base Number (BN)	mg KOH/g	9.1	11.1	11.3	---
Oxidation (PA)	%	63	61	56	59

CONTAMINATION

Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	41	46	41	43
Sulfation (PA)	%	61	56	54	55
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	0.4	<1.0
Silicon	ppm	6	6	8	3
Sodium	ppm	<1	2	5	2
Potassium	ppm	<1	<1	0	0

WEAR METALS

Iron	ppm	5	6	4	11
Copper	ppm	1	2	3	3
Lead	ppm	<1	3	<1	0
Tin	ppm	0	<1	<1	<1
Aluminum	ppm	<1	<1	<1	3
Chromium	ppm	<1	<1	0	<1
Molybdenum	ppm	122	55	58	56
Nickel	ppm	0	1	<1	0
Titanium	ppm	<1	<1	<1	0
Silver	ppm	0	<1	<1	0
Manganese	ppm	<1	1	<1	<1
Vanadium	ppm	<1	2	2	0

ADDITIVES

Calcium	ppm	1537	994	1044	1097
Magnesium	ppm	744	915	960	840
Zinc	ppm	897	1167	1197	1068
Phosphorus	ppm	730	998	1030	999
Barium	ppm	0	0	0	0
Boron	ppm	371	0	0	25

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: VP152741
Unique No: 10661540
Signed: Doug Bogart
Report Date: 26 Sep 2023

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VOLVO PENTA

GRAPHS

