

OIL ANALYSIS REPORT



NADINE URUIOLI MICHELLE ZEDLITZ VOLVO PENTA D6-435D-F A395383 - PORT DIESEL ENGINE

Sample No: VPA021857
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

SAMPLE INFORMATION

Sample Number	VPA021857	VPA024049	VPA014138	---
Sample Date	11 Dec 2023	14 May 2019	20 Nov 2017	---
Machine Hours	732	0	0	---
Oil Hours	732	0	0	---
Oil Changed	Changed	Not Changd	Not Changd	---
Sample Status	NORMAL	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	15.2	13.8	14.54	---
Base Number (BN)	mg KOH/g	7.5	---	---	---
Oxidation (PA)	%	72	55	48	---

CONTAMINATION

Water	%	NEG	NEG	NEG	---
Soot %	%	1.1	0.1	0.1	---
Nitration (PA)	%	86	44	42	---
Sulfation (PA)	%	63	51	47	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	8	7	9	---
Sodium	ppm	4	2	2	---
Potassium	ppm	6	6	2	---

Diagnosis

No corrective action is recommended at this time. 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 acceptable for the time in service.

WEAR METALS

Iron	ppm	72	16	12	---
Copper	ppm	17	3	6	---
Lead	ppm	5	2	2	---
Tin	ppm	2	0	2	---
Aluminum	ppm	32	2	4	---
Chromium	ppm	4	<1	<1	---
Molybdenum	ppm	14	64	69	---
Nickel	ppm	2	1	2	---
Titanium	ppm	0	<1	0	---
Silver	ppm	0	0	0	---
Manganese	ppm	1	<1	1	---
Vanadium	ppm	0	0	0	---

ADDITIVES

Calcium	ppm	1951	1183	1428	---
Magnesium	ppm	251	992	316	---
Zinc	ppm	1237	1208	980	---
Phosphorus	ppm	932	1037	945	---
Barium	ppm	0	0	0	---
Boron	ppm	50	43	359	---

Depot: VP152741
Unique No: 10792783
Signed: Doug Bogart
Report Date: 20 Dec 2023

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VOLVO PENTA

GRAPHS

