

OIL ANALYSIS REPORT



NADINE URUIOLI SAM MVIR VOLVO PENTA 7008516938 - STARBOARD DIESEL ENGINE

Sample No: VPA058336
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

SAMPLE INFORMATION

Sample Number	VPA058336	VPA056088	---	---
Sample Date	25 Mar 2024	28 Apr 2023	---	---
Machine Hours	274	160	---	---
Oil Hours	274	160	---	---
Oil Changed	Changed	Not Changd	---	---
Sample Status	NORMAL	NORMAL	---	---

Helmuts 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	13.4	13.2	---	---
Base Number (BN)	mg KOH/g	10.1	8.3	---	---
Oxidation (PA)	%	63	64	---	---

CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	0.4	0.3	---	---
Nitration (PA)	%	58	55	---	---
Sulfation (PA)	%	57	58	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	13	23	---	---
Sodium	ppm	5	2	---	---
Potassium	ppm	1	<1	---	---

Diagnosis

Oil and filter change at the time of sampling has been noted. 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.

WEAR METALS

Iron	ppm	32	27	---	---
Copper	ppm	113	64	---	---
Lead	ppm	0	0	---	---
Tin	ppm	<1	0	---	---
Aluminum	ppm	3	4	---	---
Chromium	ppm	1	1	---	---
Molybdenum	ppm	67	108	---	---
Nickel	ppm	2	2	---	---
Titanium	ppm	<1	<1	---	---
Silver	ppm	<1	1	---	---
Manganese	ppm	<1	2	---	---
Vanadium	ppm	<1	<1	---	---

ADDITIVES

Calcium	ppm	1183	1472	---	---
Magnesium	ppm	897	815	---	---
Zinc	ppm	1123	994	---	---
Phosphorus	ppm	956	829	---	---
Barium	ppm	0	0	---	---
Boron	ppm	32	261	---	---

Depot: VP152741
Unique No: 10963032
Signed: Don Baldrige
Report Date: 06 Apr 2024

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**VOLVO
PENTA**

GRAPHS

