

OIL ANALYSIS REPORT



NADINE URUIOLI ROBERT MIROS VOLVO PENTA A868140 - PORT DIESEL ENGINE

Sample No: VPA051572

Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

SAMPLE INFORMATION

Sample Number	VPA051572	VPA034703	---	---
Sample Date	18 Jan 2024	09 Jul 2020	---	---
Machine Hours	317	124	---	---
Oil Hours	317	0	---	---
Oil Changed	Changed	Not Changd	---	---
Sample Status	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	█ 13.1	13.9	---	---
Base Number (BN)	mg KOH/g	█ 9.8	---	---	---
Oxidation (PA)	%	57	55	---	---

CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	█ 0.2	█ 0.4	---	---
Nitration (PA)	%	49	57	---	---
Sulfation (PA)	%	52	51	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	█ 6	█ 19	---	---
Sodium	ppm	█ 0	█ 4	---	---
Potassium	ppm	█ 0	█ 0	---	---

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 acceptable for the time in service.

WEAR METALS

Iron	ppm	█ 14	█ 20	---	---
Copper	ppm	█ 6	█ 14	---	---
Lead	ppm	█ 1	█ 4	---	---
Tin	ppm	█ <1	█ 0	---	---
Aluminum	ppm	█ 2	█ 11	---	---
Chromium	ppm	█ <1	█ 2	---	---
Molybdenum	ppm	█ 58	█ 48	---	---
Nickel	ppm	█ 2	█ 2	---	---
Titanium	ppm	█ 0	█ <1	---	---
Silver	ppm	█ 0	█ 0	---	---
Manganese	ppm	█ <1	█ 1	---	---
Vanadium	ppm	0	0	---	---

ADDITIVES

Calcium	ppm	█ 1019	█ 2116	---	---
Magnesium	ppm	█ 949	█ 564	---	---
Zinc	ppm	█ 1215	█ 1208	---	---
Phosphorus	ppm	█ 1033	█ 1093	---	---
Barium	ppm	█ 0	█ <1	---	---
Boron	ppm	█ 2	█ 55	---	---

Depot: VP152741

Unique No: 10846859

Signed: Don Baldrige

Report Date: 26 Jan 2024

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VOLVO PENTA

GRAPHS

