

OIL ANALYSIS REPORT

VOLVO PENTA

NADINE URUIOLI LUKAS SIMMONS VOLVO PENTA 2300038104 - CENTER DIESEL ENGINE

Sample No: VPA051582

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

SAMPLE INFORMATION

Sample Number	VPA051582	---	---	---
Sample Date	05 Feb 2024	---	---	---
Machine Hours	915	---	---	---
Oil Hours	917	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	SEVERE	---	---	---

OIL CONDITION

Visc @ 100°C	cSt	█ 12.5	---	---	---
Base Number (BN)	mg KOH/g	█ 7.8	---	---	---
Oxidation (PA)	%	63	---	---	---

CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	█ 0.1	---	---	---
Nitration (PA)	%	79	---	---	---
Sulfation (PA)	%	55	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	<1.0	---	---	---
Silicon	ppm	█ 14	---	---	---
Sodium	ppm	█ 7	---	---	---
Potassium	ppm	█ <1	---	---	---

WEAR METALS

Iron	ppm	▲ 242	---	---	---
Copper	ppm	█ 9	---	---	---
Lead	ppm	█ 10	---	---	---
Tin	ppm	█ 1	---	---	---
Aluminum	ppm	▲ 36	---	---	---
Chromium	ppm	◆ 58	---	---	---
Molybdenum	ppm	█ 50	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	█ <1	---	---	---
Silver	ppm	█ 0	---	---	---
Manganese	ppm	█ 2	---	---	---
Vanadium	ppm	<1	---	---	---

ADDITIVES

Calcium	ppm	█ 2236	---	---	---
Magnesium	ppm	█ 249	---	---	---
Zinc	ppm	█ 1280	---	---	---
Phosphorus	ppm	█ 1121	---	---	---
Barium	ppm	█ 0	---	---	---
Boron	ppm	304	---	---	---

Helmut's Marine Service

619 Canal Street
SAN RAFAEL, CA
US 94901-3545
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SERVICE@HELMUTSMARINE.COM

T: x:

F: x:

Diagnosis

Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Gear wear is indicated. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: VP152741

Unique No: 10874363

Signed: Jonathan Hester

Report Date: 14 Feb 2024

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GRAPHS

