

OIL ANALYSIS REPORT



KATIE MITCH VOLVO PENTA 1013932213 - PORT DIESEL ENGINE

Sample No: VPA023262
Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40

SAMPLE INFORMATION

Sample Number	VPA023262	VPA038787	VPA038824	---
Sample Date	18 Jul 2023	03 Oct 2022	14 Apr 2022	---
Machine Hours	2702	1972	1181	---
Oil Hours	500	688	1181	---
Oil Changed	Not Changd	Not Changd	Changed	---
Sample Status	ABNORMAL	ABNORMAL	SEVERE	---

NEWT MARINE
 5 JONES ST
 DUBUQUE, IA
 US 52001
 Contact: DON LEIK
 service@newtmarine.com
 T:
 F:

OIL CONDITION

Visc @ 100°C	cSt	▲ 11.9	▲ 11.3	▲ 10.9	---
Base Number (BN)	mg KOH/g	■ 8.7	■ 10.1	■ 8.5	---
Oxidation (PA)	%	54	63	84	---

CONTAMINATION

Soot %	%	■ 0.2	■ 0.2	■ 0.3	---
Nitration (PA)	%	48	63	78	---
Sulfation (PA)	%	51	59	65	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	▲ 5.0	▲ 6.0	■ 10.1	---
Silicon	ppm	■ 10	▲ 40	■ 99	---
Sodium	ppm	■ <1	■ <1	■ 4	---
Potassium	ppm	■ 2	■ 7	■ 17	---

Diagnosis

We advise that you check the fuel injection system. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

WEAR METALS

Iron	ppm	■ 7	■ 13	■ 33	---
Copper	ppm	■ 3	■ 27	▲ 146	---
Lead	ppm	■ 0	■ <1	■ 1	---
Tin	ppm	■ <1	■ 1	■ 2	---
Aluminum	ppm	■ <1	■ 3	■ 6	---
Chromium	ppm	■ 0	■ <1	■ <1	---
Molybdenum	ppm	■ 57	■ 53	■ 53	---
Nickel	ppm	■ 0	■ <1	■ 0	---
Titanium	ppm	■ <1	■ 0	■ 0	---
Silver	ppm	■ 0	■ 0	■ <1	---
Manganese	ppm	■ <1	■ <1	■ 2	---
Vanadium	ppm	<1	0	0	---

ADDITIVES

Calcium	ppm	1096	■ 1056	1127	---
Magnesium	ppm	1014	■ 934	831	---
Zinc	ppm	■ 1284	■ 1146	■ 1028	---
Phosphorus	ppm	■ 996	■ 950	■ 934	---
Barium	ppm	■ 0	■ 0	■ 0	---
Boron	ppm	■ 2	■ 8	11	---

Depot: VP99298099
Unique No: 10593017
Signed: Don Baldrige
Report Date: 11 Aug 2023

OIL ANALYSIS REPORT

**VOLVO
PENTA**

GRAPHS

