

OIL ANALYSIS REPORT

VOLVO PENTA

VOLVO PENTA 2204404067 - DIESEL ENGINE

Sample No: VPA021966

Oil Type: DIESEL ENGINE OIL SAE 15W40

SAMPLE INFORMATION

Sample Number	VPA021966	---	---	---
Sample Date	19 Nov 2023	---	---	---
Machine Hours	0	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Changd	---	---	---
Sample Status	SEVERE	---	---	---

OIL CONDITION

Visc @ 100°C	cSt	█ 13.8	---	---	---
Base Number (BN)	mg KOH/g	█ 10.5	---	---	---
Oxidation (PA)	%	85	---	---	---

CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	█ 1	---	---	---
Nitration (PA)	%	95	---	---	---
Sulfation (PA)	%	61	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	<1.0	---	---	---
Silicon	ppm	● 90	---	---	---
Sodium	ppm	▲ 257	---	---	---
Potassium	ppm	▲ 17	---	---	---

WEAR METALS

Iron	ppm	● 743	---	---	---
Copper	ppm	▲ 106	---	---	---
Lead	ppm	█ 22	---	---	---
Tin	ppm	█ 7	---	---	---
Aluminum	ppm	● 2511	---	---	---
Chromium	ppm	● 47	---	---	---
Molybdenum	ppm	█ 214	---	---	---
Nickel	ppm	● 61	---	---	---
Titanium	ppm	█ 1	---	---	---
Silver	ppm	█ 0	---	---	---
Manganese	ppm	█ 7	---	---	---
Vanadium	ppm	<1	---	---	---

ADDITIVES

Calcium	ppm	█ 1244	---	---	---
Magnesium	ppm	█ 853	---	---	---
Zinc	ppm	█ 1297	---	---	---
Phosphorus	ppm	█ 962	---	---	---
Barium	ppm	█ 0	---	---	---
Boron	ppm	█ 23	---	---	---

OCEANIC YACHT SALES

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Diagnosis

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. The copper level is abnormal. Piston, ring and cylinder wear is indicated. Valve wear is indicated. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). Sodium and/or potassium levels are high. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. 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: VPOCESAU
Unique No: 10762477
Signed: Jonathan Hester
Report Date: 29 Nov 2023

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GRAPHS

