

# VOLVO PENTA

**Declaration of Conformity for Recreational Craft Propulsion Engines with the exhaust emission requirements of Directive 94/25/EC as amended by 2003/44/EC**

## D4, D6

**Engine manufacturer:**

AB Volvo Penta  
Gropegårdsgatan  
405 08 Göteborg  
Sweden

**Body for exhaust emission assessment**

International Marine Certification Institute  
Rue Abbé Cuypres 3  
B-1040 Bruxells  
Belgium  
ID Number:0609

**Module used for exhaust emission assessment** .....B+C

**Other Community Directives applied** .....EMC 89/336/EEC

**Description of engine(s) and essential requirements**

Engine type.....4 stroke diesel engine with stern drive with integral exhaust

**Engine model(s) covered by this declaration**                      **EC Type certificate number**

D4-180.....	EXVOLT001
D4-210.....	EXVOLT001
D4-225.....	EXVOLT001
D4-260.....	EXVOLT001
D4-300.....	EXVOLT001
D6-280.....	EXVOLT001
D6-310.....	EXVOLT001
D6-330.....	EXVOLT001
D6-350.....	EXVOLT001
D6-370.....	EXVOLT001
D6-435.....	EXVOLT001

Essential requirements	Standards Used	Other normative document used
<b>Annex I.B – Exhaust Emissions</b>		
Engine identification	Volvo Penta std	Annex 1.B.1
Exhaust emission requirements	EN ISO 8178-1:1996	Annex 1.B.2
Durability	Volvo Penta std	Annex 1.B.3
Operator's manual	ISO 10240:2004	Annex 1.B.4
<b>EMC Directive</b>	EN 61000-3-2, EN 61000-3-3, CISPR 25	

This declaration of conformity is issued under the sole responsibility of the manufacturer. I declare on behalf of the engine manufacturer that the engine(s) mentioned above comply(ies) with all applicable essential requirements in the way specified and is in conformity with the type for which above mentioned EC type examination certificate(s) has been issued.

**Name and function: Sam Behrmann, Laws and Regulations**  
(identification of the person empowered to sign on behalf of the engine manufacturer or his authorised representative)

**Signature and title:**  
(or an equivalent marking)

*Sam Behrmann*

Date and place of issue: (yr/month/day) 2007/04/26 Göteborg

PL-99/07

**TYPE APPROVAL CERTIFICATE**

**No. MAC205504CS/1**

**Enclosure - Page 2 of 2**

**D4-225**

**Fields of application**

The engine may be intended for the following **Propulsion** services:

**Tests carried out**

According to requirements of Part C Chapter 1 Section 2 of the RINA Rules on engine type D4-210 having No. 4 cylinders and Serial No. 4312.

**Engine Electronic Management System**

**Remarks**

Crankshaft conforming to drawings approved with No.:

MAC-7274 and MAC-7275 on 02/09/2005

Maximum allowable alternating torsional stress (referred to the crankpin) [N/mm<sup>2</sup>]

48 N/mm<sup>2</sup>

Control, alarm and safety electrical devices are to be RINA Type Approved.

The electronic governor is to be tested according to the provisions of Part C, Chapter 3, Section 6 of RINA Rules.

It is intended that the minimum required monitoring equipment as per Part C Chapter 1 Section ; Table 2 and/or Table 3 as applicable, are to be fitted to all engines intended to classified ships, unless otherwise agreed for restricted navigation.

The approval is intended for propulsion of classed ships having a multiple engine propulsion plant and with the following restrictions:

1. passenger ships of very small size and having a partial deck only, navigating only in harbours and internal waters, and Cargo ships navigating up to 20 miles from shore, having engine below 375 kW but enclosures are to be fitted to contain fuel sprays from a high pressure pipe failure (not only in way of connections);
2. cargo ships below 200 GT navigating up to 6 miles from shore;
3. fishing ships up to 24 m in length navigating within 20 miles from shore;
4. fishing ships up to 24 m in length navigating outside 20 miles from shore, but enclosures are to be fitted to contain fuel sprays from a high pressure pipe failure (not only in way of connections).

On the engines which will be installed on non-classed ships below 200 GT having: single propulsion plant, sea worthiness or safety certificate and restricted navigation, a spare electronic governor ready for a fast connection to the engine is to be fitted.

Genoa 03/04/2006



**TYPE APPROVAL CERTIFICATE**No. **MAC205504CS/1**

Enclosure - Page 1 of 2

**D4-225****Reference documents**

File and Test Report no.

Test report 47870-CL0460 relevant to the type approval test carried out on 14-15/06/2004

**Technical characteristics**

Type approved MCR(s) [kW/cyl] - rpm	41,38 kW/cyl. at 3500 rpm		
Declared Time Between Overhaul	3000	Hours	
Cycle	Diesel	2 or 4 stroke	4 stroke
Cooling	Water	Swept volume [l/cyl]	0.925
Cylinder bore [mm]	103	Stroke [mm]	110
Numbers of cylinders (In line)	4	Numbers of cylinders (Vee type)	-
Supercharged (yes or no)	yes	Air cooling (yes or no)	yes
Reversible (yes or no)	no	Compression ratio	17.5 : 1
Max firing pressure [N/mm <sup>2</sup> ]	16	Mean effective pressure [N/mm <sup>2</sup> ]	1.55
Specific fuel consumption [g/kWh]	235		

Manufacturer of injection pumps

Bosch

Type of injection pumps

Bosch 889635 P02 (PUMP)  
Bosch 3587680 P01  
(INJECTORS)Plunger  
bore [mm]

-

Manufacturer of the turboblowers

KKK

Number and type of turboblowers:

1 x K26 6.71



**TYPE APPROVAL CERTIFICATE**  
**No. MAC205504CS/1**



**This is to certify that the product identified below is in compliance with the regulations herewith specified.**

<i>Description</i>	<b>Reciprocating internal combustion engine</b>
<i>Type</i>	<b>D4-225</b>
<i>Applicant</i>	<b>AB VOLVO PENTA</b>
	<b>S</b>
	<b>405 08 GOTEORG</b>
	<b>SVEZIA</b>
<i>Manufacturer</i>	<b>AB VOLVO PENTA</b>
<i>Place of manufacture</i>	<b>S</b>
	<b>405 08 GOTEORG</b>
	<b>SVEZIA</b>
<i>Reference standards</i>	<b>Part C, Chapter 1, Section 2 of RINA Rules for the classification of ships</b>

**Issued in Genoa on April 3, 2006**

  
\_\_\_\_\_  
RINA  
  
**Andrea Cogliolo**

**This certificate consists of this page and 1 enclosure**

