

TYPE APPROVAL CERTIFICATE

Certificate No:
TAM00000JF

This is to certify:

That the Diesel Engine

with type designations
D4 and D6

Issued to

AB Volvo Penta
Göteborg, Sweden

is found to comply with

**DNV GL Rules for classification, High speed and light craft - DNVGL-RU-HSLC-Pt4 Ch3 Sec1,
Reciprocating Internal Combustion Engines**

Application :

Mechanical propulsion, multi engine plant

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **26th June, 2022**.

Issued at **Høvik** on **27th June, 2017**

DNV GL local station: **Gothenburg**

for **DNV GL**

Approval Engineer: **Tin Nguyen**

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Oddvar Deinboll
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Job Id: **262.1-006462-4**
Certificate No: **TAM00000JF**

Product description

Four stroke, in-line engine, non-reversible, trunk-piston, with supercharging, with charge air cooling, constant-pressure charging system, direct injection, injection operation electronically controlled, valve operation by cams, liquid fuel.

Cylinder bore : 103
Piston stroke : 110
No. of cylinders : 4 and 6

Application/Limitation

Rated power [kW]	132	165	191	221	243
Rated speed [rpm]	2800	3500	3500	3500	3500
Mean effective pressure [bar]	15.4	15.5	17.9	13.8	15.1
Max. firing pressure [bar]	150	180	190	160	160
Definition	D4-180	D4-225	D4-260	D4-300	D6-330

Type Approval documentation

Tests carried out

Documentation:

Test report titel Type Approval Test Report no. 47870-CL0462
Place of test AB Volvo Penta, Gothenburg, Sweden
Date of test 2004-06-03

Test engine:

Model D6-310
Serial no. 2006001200
No. of cylinders 6
Power [kW/cyl.] 38
Speed [rpm] 3500

Marking of product

The product to be marked with manufacturer's name or trademark and type number identification.

Periodical assessment

For retention of the Type Approval, a DNV GL surveyor shall perform an assessment after 2 years and after 3.5 years to verify that the conditions of the type approval are complied with. A renewal assessment will be performed at renewal of the certificate.

In cases where the Type Approved product is manufactured at other companies, the Periodical Assessment shall verify that the Type Approval applicant has a quality control system for consistent production at their licensees/subcontractors. Furthermore Periodical Assessment shall be carried out randomly at these companies.

Other Conditions

Flexible hoses for flammable fluids to be Type Approved by DNV GL.

END OF CERTIFICATE