



POTVRDA O TIPNOM ODOBRENJU
TYPE APPROVAL CERTIFICATE

Br / No 03-001256/030904

Potvrđuje se da je ovaj proizvod, u skladu s Pravilima za klasifikaciju brodova, Dio 1. - Opći propisi, Odjeljak 3. - Tipno odobrenje proizvoda, odobren za ugradnju na brodove i postrojenja pod nadzorom Hrvatskog registra brodova.
 This is to certify that this product on the basis of the Rules for the classification of ships, Part 1 - General requirements, Chapter 3 - Type approval of products, is approved for use on board ships and installations under supervision of the Croatian Register of Shipping.

TIP I OPIS PROIZVODA:

TYPE AND DESCRIPTION OF PRODUCT:

Engine Control and Monitoring System for Multiple Propulsion – EMS

EMS	- Engine Management System	EVC	- Electronic Vessel Control
CIU	- Control Interface Unit	PCU	- Powertrain Control Unit
MCC	- Marine Commercial Control System	HCU	- Helm Station Control Unit
PM	- Power Module	LCD	- Display Unit
SDU	- Shut Down Unit	CAN	- Bus communication

PROIZVOĐAČ:
 MANUFACTURER:

AB Volvo Penta
405 08 Göteborg

SWEDEN

PROIZVOD UDOVOLJAVA SLIJEDEĆIM PRAVILIMA/PROPISIMA:
 THE PRODUCT MEETS FOLLOWING RULES/REGULATIONS:

Hrvatski registar brodova: **Pravila za klasifikaciju brodova,**
Dio 9. – Strojevi, Dio 13. – Automatizacija
Croatian Register of Shipping: *Rules for the classification of ships,*
Part 9. – Machinery, Part 13. – Automation

IACS UR E10:

DETALJI O PROIZVODU I UVJETIMA CERTIFIKACIJE DANI SU NA POLEĐINI.
 FURTHER DETAILS OF THE PRODUCT AND CONDITIONS FOR CERTIFICATION ARE GIVEN OVERLEAF.

ODOBRENJE VRIJEDI DO: **2015-09-05**
 APPROVAL IS VALID UNTIL:

Mjesto i datum Split, 2011-09-05
 Place and date

M.P.
 (Seal)

Goran Begović, dipl.ing.

Napomena: Ova potvrda nije valjana ako se proizvod ili način njegove proizvodnje promijenio u odnosu na tipno ispitani proizvod. Proizvođač treba obavijestiti Hrvatski registar brodova o bilo kojoj izmjeni na proizvodu kako bi ishodio valjanu potvrdu.

Note: This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Croatian Register of Shipping of any modification or changes to the product in order to obtain a valid certificate.

PODROBNIJI OPIS PROIZVODA:*DETAIL PRODUCT DESCRIPTION:***Osnovne funkcije:***Basic functionalities:*

Start Stop of Engine
 Engine speed control
 Engine alarm and monitoring
 Engine protection
 Station control
 Gear control

Zaštitne karakteristike:*Safety characteristics:*

Safety shutdown - independent
 Duplicated power supply
 Duplicated CAN bus communication

PODRUČJE PRIMJENE / POSEBNI I GRANIČNI UVJETI:*APPLICATIONS / LIMITATIONS:*

Sustav je primjenjiv na slijedeće motore – D9/12/16

System is applicable on the following engines – D9/12/16

DOKUMENTACIJA ZA TIPNO ODOBRENJE:*TYPE APPROVAL DOCUMENTATION:***Tehnička dokumentacija***Technical documentation***Tipno ispitivanje EMS sustava i PM modula***Type Testing of EMS System and PM module*

- DnV Technical Report No. 2002-0707 Rev. 01

Tipno ispitivanje CIU i Display jedinice*Type Testing of CIU and Display unit*

- DnV Technical Report No. 2003-3172 Rev. 01

Tipno ispitivanje EMS2 sustava i PM modula*Type Testing of EMS2 System and PM module*

- DnV Technical Report No. 2004-3217 Rev. 01

Tipno ispitivanje EVC-B sustava*Type Testing of EVC-B System*

- DnV Technical Report No. 2004-3347 Rev. 02

EMC test kompletnog D12 motora*EMC tests on complete D12 engine*

- SP Report F203181

OZNAČAVANJE PROIZVODA:*MARKING OF PRODUCT:***Engine Control and Monitoring System - EMS****UVJETI ZA CERTIFIKACIJU:***CONDITIONS OF CERTIFICATION:*

Bitne izmjene u hardveru i softveru moraju se odobriti prije instalacije na brod.

Sve hardverske i softverske promjene sustava moraju biti zapisane tijekom primjene na brodu.

Zapisi o izmjenama moraju se dostaviti HRB-u radi provjere i odobrenja.

Major changes in the hardware and software are to be approved before being installed on the vessel.

All changes in hardware or software are to be recorded as long as the system is in use on board.

The records of all changes are to be forwarded to CRS for evaluation and approval.

Raščlana

13.01.01

Zamjenjuje potvrdu

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