



POTVRDA O TIPNOM ODOBRENJU
TYPE APPROVAL CERTIFICATE

Br/No **03-001161 / 030808**

Potvrđuje se da je ovaj proizvod, u skladu s Pravilima za klasifikaciju pomorskih 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 sea-going 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:

Electronic Engine Control and Monitoring System for Caterpillar Engines

C7 ACERT, C9, C9 ACERT, C32 ACERT, MaK M32 CR

ADEM IV (A4E4)

CATERPILLAR Inc.

PROIZVOĐAČ:
MANUFACTURER:

3701 State Road 26 East
 LAFAYETTE, Indiana 47905-4856

UNITED STATES OF AMERICA

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

Hrvatski registar brodova : **Pravila za tehnički nadzor pomorskih brodova, Dio 13 i Dio 9**
Croatian Register of Shipping: Rules for the Technical Supervision of Sea-Going Ships, Part 13 and Part 9

PODRUČJE PRIMJENE/POSEBNI GRANIČNI UVJETI:
FIELD OF APPLICATION/SPECIAL OPERATIONAL LIMITS:

Correct configuration and set up for each delivery to be tested during commissioning, after installation, under the supervision of a Society Surveyor.

Approval also valid for ships to be granted with class notations: AUT 1, AUT 2 and AUT 3.

ODOBRENJE VRIJEDI DO: **2013-03-18**
APPROVAL IS VALID UNTIL:

UZ UVJETE NAVEDENE NA POLEĐINI
SUBJECT TO CONDITION OVERLEAF

Mjesto i datum Split, 2009-03-18
Place and date

M.P.
(Seal)

Goran Begović, dipl.ing.

Odobrenje je valjano ako je ovaj proizvod izveden prema slijedećoj dokumentaciji:
The approval is valid if this product is manufactured in accordance with the following documentation:

PRODUCT DESCRIPTION:

ADEM IV Control and Monitoring System	C7 & C9 ACERT (Prop.)	C32 ACERT (Prop.)	C9 (Aux.)	MaK M32 CR (Prop/Aux)
System level schematics (with sensors and I/O)	256-7835	243-0451	TBD	
Control Gp. - ADEM IV		274-1955		274-1955
Air Cooled ECM Assembly Drawing		28018069		
<i>Air Cooled Housing</i>		23003128		
<i>Schematic</i>		28018074		
<i>Schematic - Power Supply</i>		28018081		
<i>Board Assembly</i>		ph3main_sig1.pdf -and- ph3maintop.pdf		
<i>Board Assembly - Power Supply</i>		ph3pwdbottom.pdf -and- ph3pwrbdtop.pdf		
Associated Sensors/Components (Governing function only)				
Primary Speed Timing	109-7194	201-6616	245-4630	338-0839
Secondary Speed Timing	109-7195	201-6615		338-0840
Engine Oil Pressure		194-6725	161-1705	
Boost Pressure/ Inlet Air Pressure		218-3840	161-1704	
Exhaust Temperature Sensor		163-7882		
Other Temperature sensors: Coolant Temperature, Fuel Temperature, Intake Air Temperature		130-9811		
Injectors	267-9710	253-0597	241-9595	
ECM Software Version	A4E4v2 (Version 2), June 2005	A4E4v2 (Version 2), June 2005	A4E4v2 (Version 2), June 2005	
ECM Suffix Code	JV	JV	JV	
Fuel Pressure sensors				338-0842
				338-0843

TYPE APPROVAL DOCUMENTATION:

- ADEM IV – A4:E4v2 Electronic Control Module - Product Information Sheet
- EC-29 Marine Society Test Plan for ADEM IV, Ver. 1.1, September 27,2005.
- EC-29 Marine Society Testing Procedure For A4E4v2 System, Ver. 1.1, September 30, 2005.
- EMC Test Report of the A4E4v2 Marine Engine Controller (1083), October 04, 2005.
- IP Enclosure Test Reports 33260-1/33260-2, September 27-28,2005.
- Functional Test Report, C32 ACERT, September 28,2005.
- Witness Test Summary Report, Ver1.0, October 24,2005.

CLAUSE FOR APPLICATION SOFTWARE CONTROL:

All changes in 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. Major changes in the software are to be approved before being installed in the computer.

NOTES:

- ◆ **The ADEM IV control for propulsion engine, with single engine application, is acceptable in combination with an additional back-up ECM as an approved means for independent operation and safety protection.**
- ◆ **Gensets and propulsion engines, in dual or multi engine applications, can be operated with a single ADEM IV control module.**
- ◆ **An auxiliary engine used for emergency genset power, must use ADEM IV with back-up ECM as an approved means for independent operation and over-speed protection only.**
- ◆ **Any relaxation from a.m. applications may be accepted after consideration by the Class Society.**

Ovo odobrenje ne isključuje zahtjev za nadzorom tijekom izradbe proizvoda kod proizvođača, u skladu s gore navedenim Pravilima.
This approval does not eliminate the need for inspection during manufacturing of the product into manufacturers shop in compliance with a.m. Rules.

Raščlana

13.01.00

Zamjenjuje potvrdu

03-000970/030600