Certificate No: LR23228665TA
Issue Date: 21/07/2025
Expiry Date: 06/05/2028

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	**Caterpillar Inc (Indiana)**
Address	3701 State Road 26 East, Lafayette, Indiana, 47905, United States
Place of Production	BorgWarner Morse Systems México, S.A. de C.V. Calle 2 N° 10543Parque Industrial El Salto, El Salto, Jalisco, JAL, 45680, Mexico
Type	Electronic Control Module
Description	Electronic Engine Control Module for Caterpillar Engines ECM Part Number: 478-7926, 372-2900
Trade Name	ADEM IV (A4E4v2)
Application	For use in environmental categories ENV1, ENV2, ENV3 and ENV4 as defined in Lloyd's Register Test Specification Number 1, 2018.
Specified Standard	Lloyd's Register Test Specification Number 1, 2018. IACS UR E27 Rev. 1, 2023.
Other Conditions	See manufacturer's literature for details. Installation of this equipment for marine applications is to be in accordance with current Lloyd's Register Rules and Regulations.

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Peter Huntley-Hawkins
Electrical & Control Technical Manager - UK & America to Lloyd's Register EMEA
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

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Validity of this Type Approval is conditional upon a valid Lloyd's Register Software Conformity Assessment Certificate.

A separate, independent safety system is to be provided.

Communications with the Engine Control Modules are via CAN J1939 and CAT Data Link (CDL) network connections. Access from untrusted network is not allowed. There are no security configuration guidelines available as the ADEM IV (A4E4v2) does not have Ethernet and wireless network connections that need network and security parameters. Information supporting the intended ship owner's incident response and recovery plan is to be made available when required by the system integrator.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: 08/60006(E2)

The Design Appraisal Document LR23228665TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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