

DATE: 2024-02-10

AD #: 2024-01

Emergency Airworthiness Directive (AD) 2024-01 is sent to teams from the regular class of the SAE BRASIL AeroDesign competition 2024.

Background

This emergency AD was prompted by the discovery, during inspections by the Technical Committee, of wattmeter units approved for use in regular class aircraft assembled with resistors incapable of continuously withstanding the maximum electrical current specified by the wattmeters themselves. The commission is issuing this AD to address the potential loss of the wattmeter main electrical circuit under high power conditions, which could result in loss of engine propulsion, loss of aircraft control, and/or fire caused by short-circuiting the propulsion battery.

Technical Committee's Determination

The Technical Committee is issuing this AD because the committee has determined the unsafe condition described previously is likely to exist or develop in other units of the same part.

AD Requirements

This AD prohibits further projects and flights with ESC power supplied by voltages lower than the equivalent of 4S batteries. Future versions of the competition regulations will reflect this requirement for 2024 projects for the regular class.

Interim Action

The Technical Committee considers this AD to be an interim action. If final action is later identified, the Technical Committee might consider further rulemaking then.

Presentation of the Actual AD

(a) Effective Date

This Emergency AD is effective from 2024-02-10.

(b) Affected ADs

None.

(c) Applicability

This AD applies to regular class aircraft of any team.

(d) Subject

SAE BRASIL AeroDesign Competition 2024 Regulations, Revision 0, Requirement R7.3.1.3.

(e) Unsafe Condition

This emergency AD was prompted by the discovery, during inspections by the Technical Committee, of wattmeter units approved for use in regular class aircraft assembled with resistors incapable of continuously withstanding the maximum electrical current specified by the wattmeters themselves. The commission is issuing this AD to address the potential loss of the wattmeter main electrical circuit under high power conditions, which could result in

loss of engine propulsion, loss of aircraft control, and/or fire caused by short-circuiting the propulsion battery.

(f) Compliance

This emergency AD must be complied with immediately.

(g) Inspection or Other Action

This AD prohibits additional projects and flights with ESC power supplied by voltages lower than the equivalent of 4S batteries.

(h) Special Flight Permits

There are no exceptions to this AD.

(i) Alternative Methods of Compliance (AMOCs)

There are no alternative methods for this AD.

(j) Related Information

For more information about this AD, contact the Technical Committee through the logged in area at <https://www.aeroct.com.br>.

Issued on February 10, 2024.

SAE BRASIL AeroDesign 2024 Technical Comitee