

Notification of a Proposal to issue a Certification Memorandum

To define a means to address CS-25 Subpart H Electrical Wiring Interconnection System (EWIS) during Engine Certification using CS-E

EASA Proposed CM No.: Proposed CM-PIFS-016 Issue 01 issued 11 July 2019

Regulatory requirement(s): See table in Paragraph 1.2

In accordance with the EASA Certification Memorandum procedural guideline, the European Union Aviation Safety Agency proposes to issue an EASA Certification Memorandum (CM) on the subject identified above. All interested persons may send their comments, referencing the EASA Proposed CM Number above, to the e-mail address specified in the “Remarks” section, prior to the indicated closing date for consultation.

EASA Certification Memoranda clarify the European Union Aviation Safety Agency’s general course of action on specific certification items. They are intended to provide guidance on a particular subject and, as non-binding material, may provide complementary information and guidance for compliance demonstration with current standards. Certification Memoranda are provided for information purposes only and must not be misconstrued as formally adopted Acceptable Means of Compliance (AMC) or as Guidance Material (GM). Certification Memoranda are not intended to introduce new certification requirements or to modify existing certification requirements and do not constitute any legal obligation.

EASA Certification Memoranda are living documents into which either additional criteria or additional issues can be incorporated as soon as a need is identified by EASA.

Log of issues

Issue	Issue date	Change description
01	11.07.2019	First issue.

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1. Introduction

1.1. Purpose and scope

This Certification Memorandum describes a means by which CS-25 Subpart H – EWIS for engine wiring components may be addressed as part of CS-E compliance, by an applicant for an engine Type Certificate (TC), Major Change/Repair, Minor Change/Repair, or Supplemental Type Certificate (STC).

1.2. References

It is intended that the following reference materials be used in conjunction with this Certification Memorandum:

Reference	Title	Code	Issue	Date
CS-25 Subpart H	Electrical Wiring Interconnection System	CS-25	22	6 Nov 2018
CS-E 20	Engine Configuration and Interfaces	CS-E	5	14 Dec 2018
CS-E 25	Instructions For Continued Airworthiness	CS-E	5	14 Dec 2018
CS-E 30	Assumptions	CS-E	5	14 Dec 2018
CS-E 50	Engine Control Systems	CS-E	5	14 Dec 2018
CS-E 70	Materials and Manufacturing Methods	CS-E	5	14 Dec 2018
CS-E 80	Equipment	CS-E	5	14 Dec 2018
CS-E 120	Identification	CS-E	5	14 Dec 2018
CS-E 130	Fire Protection	CS-E	5	14 Dec 2018
CS-E 135	Electrical Bonding	CS-E	5	14 Dec 2018
CS-E 170	Engine Systems and Component Verification	CS-E	5	14 Dec 2018
CS-E 510	Safety Analysis	CS-E	5	14 Dec 2018
CS-E 650	Vibration Surveys	CS-E	5	14 Dec 2018
CS-E 740	Endurance Tests	CS-E	5	14 Dec 2018



1.3. Abbreviations

Abbreviation	Meaning
EWIS	Electrical Wiring Interconnection System
TC	Type Certificate
TCDS	Type Certificate Data Sheet

1.4. Definitions

Abbreviation	Meaning
EWIS	See CS 25.1701

2. Background

The CS-25 Subpart H Electrical Wiring Interconnection System (EWIS) requirements were introduced following two major accidents (TWA 800 in 1996 and Swissair Flight 111 in 1998). Investigations showed that the condition of the wiring components in these ageing aircraft had deteriorated. The harmonised rulemaking effort which followed led to the introduction of a dedicated subpart that brought together new and existing wiring regulations in CS-25 / 14 CFR Part 25 Subpart H - EWIS.

Although these accidents were not caused by engine wiring, which is readily accessible for regular maintenance, and CS-E already contains requirements that are applicable to EWIS components because they are part of the engine equipment, it was determined that the intent of the EWIS requirements is applicable to engine EWIS components.

Therefore, in order to reduce duplication of certification effort, and to avoid issues during the installation of engines on a CS-25 aircraft, the following EASA policy was developed to establish a means to address the EWIS requirements during engine certification activities. This involves correlating the EWIS requirements with the equivalent CS-E paragraphs to ensure that the EWIS requirements are satisfied for the engine Type Design.

3. EASA Certification Policy

3.1. CS-E EWIS Requirements

The CS-E provisions that are equivalent to each EWIS requirement are detailed in Appendix 1.

For engines to be installed on a CS-25 aircraft, an applicant may elect to address the EWIS requirements during the engine certification. In such a case, a Certification Review Item (CRI) will be established which refers to each of the CS-25 EWIS requirements in Table 1. The applicant will detail the means by which all engine EWIS components will comply with the equivalent CS-E paragraphs, in a way that addresses the intent of CS-25.

Where the applicant has addressed the EWIS requirements using the approach outlined above, this will be documented in the instructions for installation that are required by CS-E 20(d).



3.2. Who this Certification Memorandum affects

This Certification Memorandum affects the TCs of engines and large aeroplanes, Major Changes / Repairs, Minor Changes / Repairs, and STC applications that require a compliance demonstration in accordance with CS-25 Subpart H - EWIS.

4. Remarks

1. This EASA Proposed Certification Memorandum will be closed for public consultation on the 1st of August 2019. Comments received after the indicated closing date for consultation might not be taken into account.
2. Comments regarding this EASA Proposed Certification Memorandum should be referred to the Certification Policy and Safety Information Department, Certification Directorate, EASA. E-mail CM@easa.europa.eu.
3. For any question concerning the technical content of this EASA Proposed Certification Memorandum, please contact:

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