



CIVIL AVIATION GUIDANCE MATERIAL – 8105



SUPPLEMENTAL TYPE CERTIFICATE

CAAM PART 21 SUBPART E

CIVIL AVIATION AUTHORITY OF MALAYSIA

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Introduction

This Civil Aviation Guidance Material 8105 (CAGM – 8105) is issued by the Civil Aviation Authority of Malaysia (CAAM) to provide guidance for procedure for the approval of supplemental type certificate pursuant to Civil Aviation Directives 8105 – Supplemental Type Certificate (CAAM Part 21 Subpart E).

Organisations may use these guidelines to demonstrate compliance with the provisions of the relevant CAD's issued. Notwithstanding Regulation 204 and Regulation 205 of the Malaysian Civil Aviation Regulations 2016 (MCAIR 2016), when the CAGMs issued by the CAAM are used, the related requirements of the CAD's are considered as met, and further demonstration may not be required.



(Captain Chester Voo Chee Soon)
Chief Executive Officer
Civil Aviation Authority of Malaysia

Civil Aviation Guidance Material components and Editorial practices

This Civil Aviation Guidance Material is made up of the following components and are defined as follows:

Standards: Usually preceded by words such as “*shall*” or “*must*”, are any specification for physical characteristics, configuration, performance, personnel or procedure, where uniform application is necessary for the safety or regularity of air navigation and to which Operators must conform. In the event of impossibility of compliance, notification to the CAAM is compulsory.

Recommended Practices: Usually preceded by the words such as “*should*” or “*may*”, are any specification for physical characteristics, configuration, performance, personnel or procedure, where the uniform application is desirable in the interest of safety, regularity or efficiency of air navigation, and to which Operators will endeavour to conform.

Appendices: Material grouped separately for convenience, but forms part of the Standards and Recommended Practices stipulated by the CAAM.

Definitions: Terms used in the Standards and Recommended Practices which are not self-explanatory in that they do not have accepted dictionary meanings. A definition does not have an independent status but is an essential part of each Standard and Recommended Practice in which the term is used, since a change in the meaning of the term would affect the specification.

Tables and Figures: These add to or illustrate a Standard or Recommended Practice, and which are referred to therein, form part of the associated Standard or Recommended Practice and have the same status.

Notes: Included in the text, where appropriate, Notes give factual information or references bearing on the Standards or Recommended Practices in question but not constituting part of the Standards or Recommended Practices;

Attachments: Material supplementary to the Standards and Recommended Practices or included as a guide to their application.

It is to be noted that some Standards in this Civil Aviation Guidance Material incorporates, by reference, other specifications having the status of Recommended Practices. In such cases, the text of the Recommended Practice becomes part of the Standard.

The units of measurement used in this document are in accordance with the International System of Units (SI) as specified in CAD 5. Where CAD 5 permits the use of non-SI alternative units, these are shown in parentheses following the basic units. Where two sets of units are quoted it must not be assumed that the pairs of values are equal and interchangeable. It may, however, be inferred that an equivalent level of safety is achieved when either set of units is used exclusively.

Any reference to a portion of this document, which is identified by a number and/or title, includes all subdivisions of that portion.

Throughout this Civil Aviation Guidance Material, the use of the male gender should be understood to include male and female persons



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1 General

1.1 Purpose

1.1.1 This CAGM provides guidance and information to demonstrate compliance with the requirements pertaining to supplemental type certificate.

1.2 Abbreviations

CS	=	Certification Specification
EASA	=	European Aviation Safety Agency
FAR	=	Federal Aviation Regulations
OSD	=	Operational Suitability Data
STC	=	Supplemental Type Certificate
TC	=	Type Certificate



2 Application (CAD 8105 4)

2.1 CAD 8105 4.1 – Form and Manner

- 2.1.1 The applicant should file an application using the Application for Supplemental Type Certificate form (CAAM/AW/8105-02) which may be downloaded from CAAM website, together with prescribed fees in Civil Aviation (Fees and Charges) Regulations 2016.
- 2.1.2 The form should be completed in accordance with the instructions embedded at the bottom of the application form, and sent to CAAM by in-person or regular mail. During certain special circumstances (e.g. travel restriction order, urgent cases, etc.) the form can be submitted to CAAM Head of Initial Airworthiness Section via e-mail. However, the physical copy of the form should be submitted as soon as possible.
- 2.1.3 The guidance specified in CAGM 8104 paragraphs 3.1.3 to 3.7.1 applies to the applicant of an STC by taking into context the requirements for application for the design of major modification.

3 Requirements for Approval of an STC (CAD 8105 5)

3.1 CAD 8105 5.1 – Compliance Demonstration Process

3.1.1 Paragraph 10 of CAD 8102 applies to the compliance demonstration process for design of major modification and an STC. Applicant for design of major modification or an STC are required to apply paragraph 10 of CAD 8102 as applicable to the change.

3.1.2 ‘As applicable to the change’ means that:

- a) the certification programme to be followed is the one prepared for the major modification or STC in accordance with paragraph 5 of CAD 8104, as accepted by CAAM; and
- b) the certification basis (consisting of the type-certification basis, operational suitability data (OSD) certification basis, and the environmental protection requirements) is the one established by CAAM in accordance with paragraph 8 of CAD 8104 and notified to the applicant accordingly.

3.2 CAD 8105 5.1 – Reporting on the compliance demonstration process

3.2.1 The applicant should report to CAAM any unexpected difficulty or event encountered during the compliance demonstration that invalidates or appreciably affects the assumptions previously made, for example:

- a) an increase in the severity of the consequences of a certain condition (e.g. failure mode) of the product;
- b) significantly reduced margin(s) for the ‘pass–fail’ criteria of the compliance demonstration;
- c) changes to the test sequences and conditions that are not in line with the certification specifications or guidance;
- d) an unusual interpretation of the results of the compliance demonstration; and
- e) any significant failure or finding resulting from the tests performed as per paragraphs 11 and 12 of CAD 8102.

The applicant should also evaluate whether the unexpected difficulty or event encountered will impact on the certification programme and, if necessary, amend it.

3.3 CAD 8105 5.3 – Compliance with the operational suitability data certification basis

3.3.1 For an applicant under paragraph 5.3 of CAD 8105, see GM 21.A.21(b) of EASA Part-21 dated March 2021 or later published revisions, paragraphs 7.4 of CAD 8104 and paragraph 5.3 of CAD 8105.



- 3.3.2 In accordance with paragraph 5.4 of CAD 8105, the compliance demonstration process must always cover the specific configuration(s) in the type certificate (TC) to which the STC under approval is applied. These configurations should be defined by the change to the type certificate considering the type certificate data sheet (TCDS) and the relevant optional installations. The demonstration of compliance should cover these specific applicable configurations. Consequently, the approval of the STC excludes any other configurations, in particular those that already existed, but were not considered in the compliance demonstration process, and those that may be certified in future.



4 Availability of Operational Suitability Data (CAD 8105 12)

4.1 CAD 8105 12.1 – Availability of Operational Suitability Data

- 4.1.1 When making data available, the holder of the design approval (TC, modification / change approval, STC) should take into account the applicable security laws.
- 4.1.2 When making data available, the holder of the design approval can impose conditions addressing the intellectual property nature of the data.



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