

A stylized paper airplane icon in shades of blue and grey is shown flying over a dashed grey line that represents a flight path, curving upwards and then downwards.

CIVIL AVIATION DIRECTIVE – 8105

# SUPPLEMENTAL TYPE CERTIFICATE (CAAM PART 21 SUBPART E)

CIVIL AVIATION AUTHORITY OF MALAYSIA

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## Introduction

In exercise of the powers conferred by regulations 24O of the Civil Aviation Act 1969 [Act 3], the Chief Executive Officer Makes this Civil Aviation Directive (CAD) 8105 – Supplemental Type Certificate (CAAM Part 21 Subpart E), pursuant to Regulation 21, 23, 24, 189 and 193 of the Malaysia Civil Aviation Regulation (MCAIR) 2016..

This CAD provides the procedure for the approval of supplemental type certificate, and establishes the rights and obligations of the applicants for, and holders of, those approvals.

This CAD 8105 – Supplemental Type Certificate (CAAM Part 21 Subpart E) is published by the Chief Executive Officer under section 24O of the Civil Aviation Act 1969 [Act 3] and come into operation on 1<sup>st</sup> May 2021.

### Non-compliance with this CAD

Any person who contravenes any provision in this CAD commits an offence and shall on conviction be liable to the punishment under section 24O of the Civil Aviation Act 1969 [Act 3].

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

## Civil Aviation Directive components and Editorial practices

This Civil Aviation Directive 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.

**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 Directive 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 Directive, the use of the male gender should be understood to include male and female persons



## Record of Revisions

Revisions to this CAD shall be made by authorised personnel only. After inserting the revision, enter the required data in the revision sheet below. The '*Initials*' has to be signed off by the personnel responsible for the change.

Rev No.	Revision Date	Revision Details	Initials

## 1 General

### 1.1 Citation

1.1.1 These Directives are the Civil Aviation Directives 8105 – Supplemental Type Certificate (CAAM Part 21 Subpart E) [CAD 8105], Issue 01/Revision 00, and comes into operation on 1<sup>st</sup> May 2021.

1.1.2 This CAD 8105 Issue 01/Revision 00 will remain current until withdrawn or superseded.

### 1.2 Applicability

1.2.1 This CAD shall be applicable to—

- a) a holder of certificate of approval issued under regulation 21 of the MCAR and CAD 8401;
- b) a holder of type certificate issued under regulation 23(1)(a) of the MCAR;
- c) an applicant for an approval for supplemental type certificate under regulation 24 of the MCAR; or
- d) a holder of a supplemental type certificate under regulation 24 of the MCAR.

### 1.3 Revocation

1.3.1 This CAD, in conjunction with CAD 8104 – Design of Modifications read together with CAD 8109 – Installation of Modification revokes Airworthiness Notice 78 issue 2 dated 15 May 2005.

### 1.4 Definition

1.4.1 In this CAD, unless the context otherwise requires:

**aeronautical product** means any aircraft, aircraft engine, aircraft propeller or a part to be installed thereon;

**large aeroplane** means aeroplanes with maximum certified take-off mass of more than 5 700 kg;

**large rotorcraft** means a rotorcraft with maximum weights of more than 3 175 kg;

**MCAR** means Civil Aviation Regulations 2016;

**modification** means a change to the type design of an aeronautical product which is not a repair;

**STC** means supplemental type certificate;

**supplemental type certificate** means an approval of major modification covering those areas or aspects of an aeronautical product that were modified;

**type certificate** means a Type Certificate issued by the director General under regulation 23; and

**type design** means set of data and information necessary to define an aeronautical product type for the purpose of airworthiness determination to any later aeronautical product of the same type.

## **2 Eligibility [21.112A]**

2.1 Any Malaysian person that has demonstrated its capability in accordance with paragraph 3 of this CAD may apply for approval of an STC in accordance with the conditions laid down in this CAD.

## **3 Demonstration of Capability [21.112B]**

3.1 An applicant for an approval of an STC shall demonstrate its capability by holding a design organisation approval or a provisional design organisation approval, issued by CAAM in accordance with CAD 8401.

3.2 (reserved)

3.3 (reserved)

## **4 Application [21.113]**

4.1 An application for approval of an STC shall be made in a form and manner established by CAAM.

4.2 When applying for an STC, the applicant shall:

- a) include in the application the information required by paragraph 5.2 of CAD 8104;
- b) specify whether the certification data has been or will be prepared completely by the applicant or on the basis of an arrangement with the owner of the type certification data.

4.3 Paragraph 5.3 of CAD 8104 applies to the requirements for the time limits of the application effectivity as well as the requirements related to the need to update the type certification basis, operational suitability data certification basis and environmental protection requirements, when the change has not been approved or it is evident that it will not be approved within the time limit established.

## **5 Requirements for Approval of an STC [21.115]**

- 5.1 An STC shall only be approved when:
- a) submitting the declaration referred to in paragraph 10 of CAD 8102;
  - b) the applicant has demonstrated its capability in accordance with paragraph 3 of this CAD;
  - c) it has been demonstrated that the modification and areas affected by the modification comply with the type certification basis and the environmental protection requirements, as established by CAAM in accordance with paragraph 8 of CAD 8104;
  - d) in the case of an STC affecting the operational suitability data, it has been demonstrated that the necessary changes to the operational suitability data meet the operational suitability data certification basis, as established by CAAM in accordance with paragraph 8 of CAD 8104;
  - e) compliance with paragraphs c) and d) of this CAD has been demonstrated in accordance with paragraph 10 of CAD 8102, as applicable to the modification; and
  - f) in case the applicant has specified that it provided certification data on the basis of an arrangement with the owner of the type certification data in accordance with paragraph 4.2 of this CAD:
    - 1) the type certificate holder has indicated that it has concurred to the information submitted under paragraph 5 of CAD 8104; and
    - 2) the type certificate holder has agreed to collaborate with the STC holder to ensure discharge of all obligations for continued airworthiness of the changed product through compliance with paragraph 16 of CAD 8102 and paragraph 8 of this CAD.
- 5.2 The applicant shall submit to CAAM the substantiation data for the change and a statement that compliance has been demonstrated in accordance with paragraph e) of this CAD.
- 5.3 By derogation from paragraphs d) and e) of this CAD, at the applicant's request included in the declaration referred to in paragraph 10.4 of CAD 8102, the applicant is entitled to have a STC for an aircraft issued before the applicant has demonstrated compliance with the operational suitability data certification basis, provided that the applicant demonstrates such compliance before the date at which those data are to be actually used.
- 5.4 An STC shall be limited to the specific configuration(s) in the type certificate to which the related major modification relates.



## **6 Transferability [21.116]**

- 6.1 An STC shall only be transferred to a person that is able to undertake the obligations of paragraph 8 of this CAD and for this purpose has demonstrated its ability to qualify under the criteria of paragraph 3 of this CAD.

## **7 Changes to That Part of a Product Covered by an STC [21.117]**

- 7.1 Minor modifications to that part of a product covered by an STC shall be classified and approved in accordance with CAD 8104.
- 7.2 Each major modification to that part of a product covered by an STC shall be approved as a separate STC in accordance with this CAD.
- 7.3 By way of derogation from paragraph 7.2 of this CAD, a major modification to that part of a product covered by an STC submitted by the STC holder itself may be approved as a change to the existing STC.
- 7.4 When a modification to that part of a product covered by an STC is performed in accordance with paragraph 7.1 and 7.2 of this CAD, concurrence shall be obtained from the STC holder on the design of the modification.

## **8 Obligations and Marking [21.118A]**

- 8.1 Each holder of an STC shall:
- a) undertake the obligations:
    - 1) laid down in paragraphs 2, 3 and 4 of CAD 8101, paragraph 9 of CAD 8104 and paragraphs 10, 11 and 12 of this CAD;
    - 2) implicit in the collaboration with the type certificate holder under paragraph f) of this CAD;and for this purpose continue to meet the criteria of paragraph 3 of this CAD;
  - b) specify the marking, in accordance with paragraph 4.1 of CAD 8206.
- 8.2 The STC holder remains responsible for the continued integrity of the design change to approved type design and it or its representative must continue to be CAAM's contact point for resolving issues that may require corrective action. To fulfil this responsibility, the holder shall have the continued capability, or access to a capability, of providing appropriate technical solutions for service difficulties when service experience warrants it, or when CAAM requires mandatory corrective action.

## **9 Duration and Continued Validity [21.118B]**

- 9.1 An STC shall be issued for an unlimited duration. It shall remain valid subject to:
- (a) the holder remaining in compliance with applicable CADs; and
  - (b) the certificate not being surrendered or revoked under the applicable administrative procedures established by CAAM.
- 9.2 Upon surrender or revocation, the STC shall be returned to CAAM.

## **10 Manuals [21.119]**

- 10.1 The holder of the STC shall produce, maintain, and update master copies of variations in the manuals required by the applicable type certification basis, the applicable operational suitability data certification basis and environmental protection requirements for the product, necessary to cover the changes introduced under the STC, and furnish copies of these manuals to CAAM on request.

## **11 Instructions for Continued Airworthiness [21.120A]**

- 11.1 The holder of the STC for an aircraft, engine, or propeller, shall furnish at least one set of the associated variations to the instructions for continued airworthiness, prepared in accordance with the applicable type certification basis, to each known owner of one or more aircraft, engine, or propeller incorporating the features of the STC, upon its delivery, or upon issuance of the first certificate of airworthiness for the affected aircraft, whichever occurs later, and thereafter make those variations in instructions available, on request, to any other person required to comply with any of the terms of those instructions. Availability of some manual or portion of the variations to the instructions for continued airworthiness, dealing with overhaul or other forms of heavy maintenance, may be delayed until after the product has entered into service, but shall be available before any of the products reaches the relevant age or flight-hours/cycles.
- 11.2 In addition, changes to those variations of the instructions for continued airworthiness shall be made available to all known operators of a product incorporating the STC and shall be made available, on request, to any person required to comply with any of those instructions. A programme showing how changes to the variations to the instructions for continued airworthiness are distributed shall be submitted to CAAM.

## 12 Availability of Operational Suitability Data [21.120B]

- 12.1 In the case of a modification affecting the operational suitability data, the holder of the STC shall make available:
- (a) at least one set of changes to the operational suitability data prepared in accordance with the applicable operational suitability certification basis, to all known operators of the modified aircraft, before the operational suitability data must be used by a training organisation or an operator; and
  - (b) any further change to the affected operational suitability data, to all known operators of the modified aircraft; and
  - (c) on request, the relevant parts of the modification in paragraph 1.1(a) and 1.1(b) of this CAD, to:
    - (i) CAAM; and
    - (ii) any person required to comply with one or more elements of this set of operational suitability data.

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