Civil Aviation Guidance Material (CAGM)

Civil Aviation Guidance Material – 8110

Installation of Repairs

CAAM Part 21 Subpart M-1

Civil Aviation Authority of Malaysia

Issue 02
Revision 01 – 24th November 2026

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Introduction

This Civil Aviation Guidance Material 8110 (CAGM – 8110) is issued by the Civil Aviation Authority of Malaysia (CAAM) to provide guidance for embodiment of repairs on Malaysian aircraft pursuant to Civil Aviation Directives 8110 – Installation of Repairs (CAAM Part 21 Subpart M-1) (CAD 8110 – CAAM Part 21 Subpart M-1).

These guidelines may be used to ensure compliance with the respective provisions of the relevant CAD's issued. Notwithstanding the Regulation 204 and Regulation 205 of the Malaysian Civil Aviation Regulations 2016 (MCAR 2016), when the CAGMs issued by the CAAM are complied with, the related requirements of the CAD's may be deemed as being satisfied and further demonstration of compliance may not be required.



(Dato' Captain Norazman Bin Mahmud)
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.

Record of Revisions

Revisions to this CAGM shall be made by authorised personnel only. After inserting the revision, enter the required data in the revision sheet below.

Rev No.	Revision Date	Revision Details
ISS02/REV00	15th November 2022	-
ISS02/REV01	24th November 2026	Refer to summary of changes

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Summary of Changes

ISS/REV no.	Item no.	Revision Details
ISS02/REV01	Para 1.2	Added abbreviations ICA and TCCA
	Para 4.1.2 – Table 1	Added the following repair design approval documents (Items 8 to 12): 1. Diamond Aircraft Industries Inc. (Canada) – Repair Design Approval (RDA) 2. Elbe Flugzeugwerke GmbH (EFW) – Repair Design Approval Sheet 3. Dassault Aviation – Change Approval Sheet 4. CFM International S.A. – Departure Record (DR) CFM International S.A. – Deviation to ICA (DICA)

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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 installation of repairs on Malaysian aircraft.

1.2 Abbreviations

CAMO	=	Continuing Airworthiness Management Organisation
EASA	=	European Union Aviation Safety Agency
FAA	=	Federal Aviation Administration
ICA	=	Instructions for Continued Airworthiness
STC	=	Supplemental Type Certificate
TC	=	Type Certificate
TCCA	=	Transport Canada Civil Aviation
TSO	=	Technical Standard Order

2 Production or Fabrication of Repair Parts (CAD 8110 3)

2.1 CAD 8110 3.1 b) – Maintenance Organisation

2.1.1 A maintenance organisation may fabricate parts for its own repair purposes when explicitly authorised in the maintenance organisation exposition or manual in accordance with CAD 8601 or CAD 8602 accordingly.

3 Repair Embodiment (CAD 8110 4)

3.1 CAD 8110 4.1 – Repair Installation Organisations

3.1.1 Repairs should be accomplished by an organisation in accordance with the relevant CADs.

3.1.2 The holder of a production organisation approval under CAD 8201 may accomplish repairs to new aircraft, within its terms of approval, under the privilege of paragraph 17.1 (d) of CAD 8201.

4 Aeronautical Product Manufacturer's Repair Design (CAD 8110 5)

4.1 CAD 8110 5.1 – Qualified Repair Design Documents

4.1.1 For a repair design data originating from the holder of the TC, STC, TSO authorisation or other aeronautical product design approval holder to be considered approved by CAAM, the aeronautical product design approval holder should furnish to CAAM the information and documents specified in paragraph 5.2 of CAD 8110. Upon acceptance by CAAM, the repair design approval document will be specified in Table 1 of this CAGM.

4.1.2 The repair design approval documents which are considered approved by CAAM are specified in Table 1 below:

Table 1. Aeronautical Product Design Approval Holder's Repair Design Approval Documents Considered Approved by CAAM

ITEM	AERONAUTICAL PRODUCT DESIGN APPROVAL HOLDER	REPAIR DESIGN APPROVAL DOCUMENT	APPROVAL	ADDITIONAL CONDITION(S)
1	AIRBUS	REPAIR AND DESIGN APPROVAL FORM	EASA DESIGN ORGANISATION APPROVAL NO: EASA.21J.031	Nil
2	BOEING	REPAIR DEVIATION RECORD (RDR) FORM	BOEING	Nil
3	FAA TC, STC, TSO AUTHORIZATION AND OTHER AERONAUTICAL PRODUCT DESIGN APPROVAL HOLDERS	FAA FORM 8100-9 AND FAA FORM 8110-3	FAA	Nil
4	SAFRAN NACELLES	REPAIR DESIGN APPROVAL SHEET	EASA DESIGN ORGANISATION APPROVAL NO: EASA.21J.413	Nil
5	ATR	STRUCTURAL REPAIR APPROVAL SHEET	EASA DESIGN ORGANISATION APPROVAL NO: EASA.21J.044	Nil

ITEM	AERONAUTICAL PRODUCT DESIGN APPROVAL HOLDER	REPAIR DESIGN APPROVAL DOCUMENT	APPROVAL	ADDITIONAL CONDITION(S)
6	LEONARDO HELICOPTERS (LH)	REPAIR ENGINEERING	EASA DESIGN ORGANISATION APPROVAL NO: EASA.21J.005	1. The repair design shall be accompanied with LH Repair Classification Form (RCF) ref: RCF-2022-01/XXX 2. The RCF shall specify the Technical Query (TQ) reference number which specifies the damage and repair description. 3. The RCF shall specify the LH NTR – Nota Tecnica di Riparazione (Repair Technical Report) reference number. 4. LH DOA ref: EASA.21J.005 approval stamp shall be visible on the repair design data.
7	AIRBUS HELICOPTERS	REPAIR DESIGN APPROVAL SHEET	EASA DESIGN ORGANISATION APPROVAL NO: EASA.21J.700	Nil

ITEM	AERONAUTICAL PRODUCT DESIGN APPROVAL HOLDER	REPAIR DESIGN APPROVAL DOCUMENT	APPROVAL	ADDITIONAL CONDITION(S)
8	DIAMOND AIRCRAFT INDUSTRIES INC. (CANADA)	REPAIR DESIGN APPROVAL (RDA)	APPROVAL UNDER CANADIAN AVIATION REGULATION PART V, SUBPART 21 (DAO APPROVAL NO. 17-O-01) OR TCCA APPROVAL	The following information shall be specified in the RDA or in a supplementary written confirmation by the TC holder: 1. availability of ICA (clearly specifying applicable or not applicable) 2. availability of any repair limitations (clearly specifying applicable or not applicable) 3. repair category (clearly specifying permanent or temporary) 4. repair classification (clearly specifying major or minor) The operator of the aircraft shall ensure the availability of the above information for each RDA issued by the TC holder. Any supplementary written confirmation provided by the TC holder must be attached together with the RDA as part of aircraft records.
9	ELBE FLUGZEUGWERKE GMBH (EFW)	REPAIR DESIGN APPROVAL SHEET	EASA DESIGN ORGANISATION APPROVAL NO: EASA.21J.054	Limited to area covered by applicable EFW STC(s) validated by CAAM under CAD 8108 only.
10	DASSAULT AVIATION	CHANGE APPROVAL SHEET	EASA DESIGN ORGANISATION APPROVAL NO: EASA.21J.051	Nil

ITEM	AERONAUTICAL PRODUCT DESIGN APPROVAL HOLDER	REPAIR DESIGN APPROVAL DOCUMENT	APPROVAL	ADDITIONAL CONDITION(S)
11	CFM INTERNATIONAL S.A.	DEPARTURE RECORD (DR)	EASA DESIGN ORGANISATION APPROVAL NO: EASA.21J.086	1. The repair classification (major/minor) shall be specified in the DR. 2. When applicable to the repair design, the TC holder shall explicitly specify in the DR on information pertaining to the repair limitation, the nature of temporary category of the repair and any impact to ICA.
12	CFM INTERNATIONAL S.A.	DEVIATION TO ICA (DICA)	EASA DESIGN ORGANISATION APPROVAL NO: EASA.21J.086	When applicable to the repair design, the TC holder shall explicitly specify in the DICA on information pertaining to the repair limitation, the nature of temporary category of the repair and any impact to ICA.

4.1.3 In order to utilise the repair design approval documents specified in Table 1, the CAMO should specify the repair design approval document it intends to use in its exposition. The CAMO should establish procedures:

a) to ensure the accuracy of information supplied to the aeronautical product manufacturer in developing the repair solution;

b) to evaluate the accuracy of information in the repair design approval document together with its associated reference documents (if applicable);

c) to transcribe the information in repair design approval accurately into a common work card or worksheet system; and

d) to ensure the repair design requirements and limitations (if applicable) specified by the aeronautical product manufacturer are complied with.

4.1.4 Any deviations to the repair design data occurring while installing the repair should be brought to attention of the aeronautical product manufacturer and covered under the appropriate approval specified in Table 1.

4.2 CAD 8110 5.2 c) – Minimum Level of Information in the Repair Design Data Transmittal

4.2.1 The below minimum level of information should be specified in the repair design data transmittal:

a) damage description;

b) repair description;

c) applicable certification requirement or product qualification basis, if applicable;

d) availability of instructions of continued airworthiness;

e) availability of any repair limitations;

f) repair classification (i.e. major or minor);

g) repair category (permanent / temporary); and

h) repair design approval.