CIVIL AVIATION DIRECTIVE – 8301

CERTIFICATE OF AIRWORTHINESS

CIVIL AVIATION AUTHORITY OF MALAYSIA

ISSUE 01
REVISION 00 – 1ST MAY 2021

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Introduction

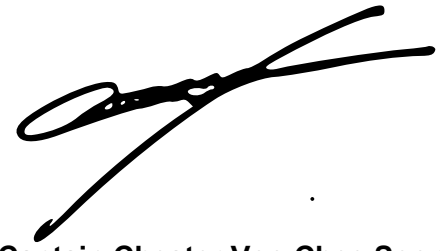
In exercise of the powers conferred by section 24O of the Civil Aviation Act 1969 [Act 3], the Chief Executive Officer makes this Civil Aviation Directive (CAD) 8301 – Certificate of Airworthiness pursuant to regulation 26, 27, 43, 43A, 189 and 193 of Malaysian Civil Aviation Regulations (MCAR) 2016.

This CAD provides the requirement pertaining to the Certificate of Airworthiness and for any matters connected herewith.

This Civil Aviation Directive 8301 – Certificate of Airworthiness is published by the Chief Executive Officer under Section 24O of the Civil Aviation Act 1969 [Act 3] and come into operation on 1st 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*] and/or under Malaysia Civil Aviation Regulation 2016.



(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.

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 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

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1 General

1.1 Citation

1.1.1 These Directives are the Civil Aviation Directives 8301 – Certificate of Airworthiness, Issue 01/Revision 00, and comes into operation on 1st May 2021.

1.1.2 This CAD 8301 – Certificate of Airworthiness, issue 01/Revision 00 will remain current until withdrawn or superseded.

1.2 Applicability

1.2.1 The following persons shall be subject to this CAD:

a) an applicant or holder of a Certificate of Airworthiness issued under MCAR; and

b) an organisation approved to manage continuing airworthiness.

1.3 Revocation

1.3.1 This CAD 8301, revokes Notice 8301 issue 2 dated 16 April 2019.

1.4 Definitions

In this CAD, unless the context otherwise requires:

Aircraft means a machine that can derive support in the atmosphere from reactions of the air, other than reactions of the air against the surface of the earth;

Component means any engine, propeller, part or appliance of an aircraft;

Certificate of Airworthiness means a certificate issued under Regulation 26 of the MCAR;

Large Aircraft means:

a) an aeroplane with a maximum certificated take-off mass exceeding 5,700 kg;

b) an aeroplane equipped with turbojet engine(s) or more than one turboprop engine;

c) a rotorcraft with a maximum certificated take-off mass exceeding 3,175 kg; or

d) a rotorcraft with more than one engine.

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2 Application for the Issuance of a Certificate of Airworthiness

2.1 CAAM may issue a certificate of airworthiness, if CAAM is satisfied that the applicant has fulfilled the following requirements and any other requirements under this CAD:

a) submission of an application form CAAM/AW/8301-01 to CAAM together with an airworthiness review report in accordance with chapter 9 of CAD 6802 and accompanied by the prescribed fee;

b) holds a valid certificate of registration issued under the MCAR or in the case of lease, the applicant is stipulated on the registration document or detailed in the leasing contract;

c) comply with the identification plate and markings requirements as specified in CAD 7;

d) the flight manual for that aircraft is compatible with the aircraft configuration;

e) comply with all applicable airworthiness directives issued by CAAM and certifying authority of the State of Design of the aircraft, engine and propeller.

f) comply with all applicable requirements issued by CAAM including CADs and Circulars;

g) evidence on the appointment of organisation managing the: -

1) continuing airworthiness; and

2) maintenance

of its aircraft and component;

h) a maintenance programme for that aircraft has been approved by CAAM;

i) submission weight and balance report together with equipment list and weight schedule for that aircraft has been approved by CAAM or any organisation approved by CAAM under regulation 31 of MCAR 2016;

j) submission latest aircraft damage chart or dent and buckle chart;

k) the assigned Mode S code, as applicable, has been installed;

l) in the case of:

1) new aircraft, a production test flight report or any flight test attestation report which is issued by the manufacturer is satisfactory; or

2) imported used aircraft, a flight test report is satisfactory;

m) in the case of:

1) new aircraft, a statement of attestation by the manufacturer for the Flight Data Recorder and Cockpit Voice Recorder is satisfactory; or

2) imported used aircraft, the Flight Data Recorder and Cockpit Voice Recorder data readout is satisfactory;

n) in the case of imported used aircraft, a used aircraft report is acceptable to CAAM (refer to Appendix 1 of this CAD);

o) in the case of imported used aircraft and imported new aircraft, a certificate of airworthiness for export has been submitted to CAAM; and

p) in the case of new aircraft which is designed, manufactured and constructed by an organisation which holds a valid certificate of approval under Regulation 21 of MCAR 2016, a Statement of Conformity has been submitted to CAAM.

2.2 For the purpose of paragraphs 2.1 o) and 2.1 p) of this CAD, the applicant shall submit a certificate of airworthiness for export and Statement of Conformity, respectively to CAAM not more than sixty days from the date of its issue, unless otherwise agreed.

3 Application for Renewal of a Certificate of Airworthiness

3.1 CAAM may renew a certificate of airworthiness if CAAM is satisfied that the applicant has fulfilled the applicable requirements in paragraph 2.1 a) to 2.1 k) of this CAD.

3.2 Where the application is made for the renewal of Certificate of Airworthiness which has expired, CAAM may impose additional requirements which include airworthiness flight test and/or specific maintenance task.

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4 Additional Requirements for Certificate of Airworthiness

4.1 The operator shall make available the aircraft and aircraft records for inspection at the agreed date, time and place.

4.2 The operator shall provide the necessary personnel and equipment to facilitate the inspections by CAAM.

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5 Validity of a Certificate of Airworthiness

5.1 The certificate of airworthiness shall be valid for a period as specified in the certificate which shall not be more than one (1) year.

5.2 The validity period of a certificate of airworthiness is subject to:

a) regulation 27 of MCAR 2016; and

b) the certificate of airworthiness not being surrendered, suspended, varied or revoked under MCAR 2016.

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6 Appendices

6.1 Appendix 1 – Production of Used Aircraft Report For Imported Used Aircraft

1 Introduction

1.1 Applicant is required to provide a comprehensive report declaring the technical status of the aircraft (including all modifications, alterations, design changes and repairs) and to certify that the airworthiness and design standard of a particular aircraft conforms to a standard approved by CAAM, for the issuance of a certificate of airworthiness, for that aircraft type, or, differs in a defined manner from that approved standard.

Note. – The report regarding the condition of an aircraft shall reflect the information detailed in this CAD and include a declaration that, apart from any exceptions stated, compliance with the approved standard has been established.

1.2 The records of technical investigations performed shall be such as to provide proper correlation with the aircraft technical records and an adequate record of the basis and substantiation of the report and Certificates of Design Conformity issued. An example of the format of such a report is given in this CAD.

2 Purpose of an Aircraft Report

2.1 **Series aircraft:** an aircraft, including engines and equipment, the design of which is similar in every essential respect to the design of an aircraft for which a Malaysian certificate of airworthiness has previously been issued. Such an aircraft is eligible for a certificate of airworthiness.

2.2 **Series modified aircraft:** an aircraft that incorporates modifications or repairs classified as major, relative to the Malaysian certified aircraft build standard, that require CAAM approval for the issue of a certificate of airworthiness.

2.3 The aircraft report will assist the applicant in recording the approval status of the aircraft build standard, and hence in substantiating to CAAM a series or series modified classification for the aircraft according to the above definitions. It will also assist the applicant in recording details on the continued airworthiness of the aircraft and the inspection of the aircraft, and hence in providing to CAAM a Certificate of Design Conformity for series aircraft.

2.4 The report will propose and substantiate the series/series modified classification, and will assist CAAM when conducting an appropriate survey of the aircraft and its records, for the purposes of issuing a certificate of airworthiness.
NOTE: Reference to 'aircraft' herein, includes its engines, auxiliary power unit (APU), transmission, propellers, systems and equipment, etc. (as applicable), and its documentation, such as its records, logs, maintenance documents, and operational documents, etc.

3 Development of the Aircraft Report

3.1 In order to classify whether the aircraft is **series** or **series modified**, the approval status of the aircraft build standard must be determined. This can be achieved by identifying whether any modifications or repairs have been embodied relative to CAAM certified aircraft build standard. The repairs should be considered against applicable CAD relating to repairs which provides guidance for identifying any repairs that require CAAM approval.

3.2 When this process is complete, the applicant may then propose a series/series modified classification and provide the report to CAAM for agreement.

3.3 Details on the continued airworthiness of the aircraft and the inspection of the aircraft should be incorporated in Section B of the report.

3.4 The Certificate of Design Conformity should be provided to CAAM for series aircraft in the final report, when the applicant has completed its investigations.

Notes. –

a) The report should address the power plant, APU, transmission, and propellers, in addition to the airframe, systems, and equipment.

b) Modifications may include additional requirement for import or additional national design requirements embodied during build.

c) The aircraft inspection should confirm that the aircraft build standard conforms with its documented build standard.

d) The report will be considered to be part of the inspection records, and as such must not be destroyed unless authorised by CAAM.

4 Submission of Aircraft Report to CAAM

4.1 The report must be provided to CAAM to enable the series/series modified classification to be agreed.

5 Aircraft Report

5.1 This section provides guidance on the expected format and content of the aircraft report, as follows:

Note. – This shall not be considered as a definitive check list of the issues to be addressed during the investigations.

Aircraft Report

Organisation:

Organisation Approval Reference:

Report Reference No:

Aircraft Type:

Type Certificate Data Sheet:

Aircraft Serial Number:

Flight Hours:

Flight Cycles:

Current Aircraft Registration:

Allocated Aircraft Registration:

Section B of the Aircraft Report is included.

Author:

Date:

Approved:

Date:

Aircraft Report – Contents

1 Introduction

1.1 This section should include:

a) A brief statement outlining the objectives of the report.

b) The current Type Certificate Holders.

c) The aircraft manufacturer.

d) The countries in which the aircraft has previously been registered along with the Certificate of Airworthiness category under which it operated.

e) Basic aircraft details as follows:

(i) Aircraft Type: …… Manufacturer's Serial Number:……

(ii) Engine Type: ..... Manufacturer's Serial Number: .....

(iii) APU Type: ..... Manufacturer's Serial Number: .....

(iv) Propeller Type: ..... Manufacturer's Serial Number: .....

(v) Certificate of Airworthiness: ……

Section A: Status of the Aircraft Build Standard

1 Build Standard

1.1 General

1.1.1 This section should include:

a) A reference to the Type Certificate Data Sheet numbers (Airframe, Engine and Propeller as applicable) issued by the State of Design.

b) The Type Acceptance / Type Validation number issued by CAAM under which the Aircraft Type was certified.

1.2 Additional Requirements for Validated Aircraft

1.2.1 This paragraph should incorporate a statement against the applicable Additional Requirement for type certification and the certificate of airworthiness. The statements should identify how compliance with each of the additional requirement has been achieved. When a modification previously approved by CAAM is embodied as the means of compliance with an additional requirement, the modification title, number, and approval reference should be included in the statement. If a modification which is not approved by CAAM is embodied as the means of compliance with the additional requirement, the modification should be referenced in the statement and addressed in paragraph 2 below.

1.2.2 Additional requirement is specified for type certification, certificate of airworthiness, and operational approval. Additional requirements for type certification are not currently published, so this information should be obtained from CAAM.

NOTE: Confirmation of compliance with the Airworthiness related CADs, as specified in the additional requirement, can be provided in section B paragraph 5 of the report.

2 Modifications relative to the Certified Build Standard approved by CAAM

2.1 This section should provide details on each modification, including minor modifications, which should include the following, as applicable.

1 The modification title.

2 The modification design organisation.

3 The modification installation organisation *.

4 The modification reference number or Service Bulletin number.

5 A brief description of the modification *.

6 The approval reference, e.g. CAAM SOC number or Service Bulletin number, under which the modification was approved.

7 The Foreign National Airworthiness Authority that approved the modification, and their approval reference, e.g. FAA Supplemental Type Certificate number, or Field Approval e.g. FAA DER Form 8110-3, etc *.

8 The modification classification minor/major (as agreed with CAAM).

9 The Flight Manual Supplement reference.

10 Any additional limitations introduced which compensate for a partial none compliance with a requirement.

11 Any additional maintenance actions required for the modification.

* Only for modifications which require CAAM approval.

NOTE: Modifications can only be classified as being either major or minor by an appropriately approved design organisation.

2.2 The modification information should include the approval reference issued by CAAM and identify those modifications that require CAAM approval. Details of modifications approved by CAAM may be provided in an appendix to the report if necessary.

3 Repairs relative to the Certified Build Standard approved by CAAM

3.1 This should include details on each major repair to the aircraft, which should include the following, as applicable. Repairs requiring CAAM approval should be clearly identified. Details of approved repairs may be provided in an appendix to the report if necessary:

a) The repair title.

b) The repair design organisation.

c) The repair installation organisation *.

d) The repair reference.

e) The basis of approval.

f) Effect on any life limitations.

g) Effect on inspections or their frequencies.

* Only for repairs which require approval from CAAM.

NOTE: Repairs can only be classified as being either major or minor by an appropriately approved design organisation.

4 Equipment Fit

4.1 This section should include a list of any equipment that is not approved by CAAM along with their associated foreign approval references, e.g. TSO. Refer also to section B paragraph 3 b). If the installation of the equipment has not been approved by CAAM, this should be addressed in section A, paragraph 2.

5 Flight Manual

5.1 This section should specify the reference and revision status of the Aircraft Flight Manual (AFM). The Temporary Revisions, applicable Supplement(s) and Change Sheet(s) must also be referenced.

Note. – The AFM must reflect the build standard of the aircraft

6 Summary List of Deviations and Variations

6.1 This section should contain a summary list of deviations from the design certification requirements, if any. The list should specify the method of acceptance, for example, acceptance based upon equivalent safety findings approved by CAAM. Where a temporary variation has been granted against a certification requirement, the period for which the variation remains valid should be stated.

Section B: Continued Airworthiness

This section should incorporate details on how the following subjects have been addressed:

1 Maintenance Program

1.1 As an aircraft in respect of which a C of A is in force, shall not fly unless the aircraft is maintained in accordance with an approved Maintenance Program, the applicant may elect to provide the following information in the report:

a) A Maintenance Program alignment/bridging check undertaken as agreed with CAAM.

b) All components with life limitations must be identified and cross referenced to the source document. The overhaul/service life remaining for each component or Out of Phase Inspection, including Certified Maintenance Requirements must also be established.

2 Airworthiness Limitations

2.1 Compliance must be established with the airworthiness limitations that are specified or referenced by the Aircraft, Engine, or Propeller Type Certificate Data Sheets. Airworthiness Limitations may include specific inspections and maximum retirement lives.

3 Civil Aviation Regulation (MCAR)

3.1 All the certification requirements applicable to the issue of the Certificate of Airworthiness must be complied with, and in particular the following;

a) The aircraft must be weighed and a weight schedule raised.

b) A list of applicable equipment must be provided including radio equipment as required, along with the respective type approval reference.

c) Separate log books, acceptable to CAAM, must be provided for the aircraft, engines and VP propellers.

d) Placards and markings required by the Civil Aviation Regulation must be affixed and displayed in the appropriate locations.

4 Airworthiness Directives

4.1 This section should incorporate a list of all applicable Airworthiness Directives promulgated by CAAM and State of Design, with respect to the Aircraft, Engines and Equipment. Conformation and method of compliance shall be stated in

each case. If an Airworthiness Directive has not been complied with, a justification for acceptance should be provided (e.g. short-term compensating factors). Where an Airworthiness Directive has been complied with by using an alternative means of compliance, the approval of such methods must be referenced. Where appropriate, the periodicity for initial and repetitive inspections, with respect to the applicable Calendar/Flt Hours/Cycle limits should also be stated.

5 Airworthiness Related CADs

5.1 This section should incorporate a statement against each applicable aircraft technical requirement CADs describing how compliance with the CAD has been achieved. If a modification previously approved by CAAM is embodied as the means of compliance with a CAD, the modification title, number and approval reference should be included in the statement. If compliance is achieved by embodying a modification that is not approved by CAAM, the modification should be referenced in the statement and addressed in Section A paragraph 2.

6 Aircraft Inspection

6.1 This section should include a reference to the inspection report(s) conducted to certify that a particular aircraft conforms to a standard approved by CAAM, for the issue of a Certificate of Airworthiness, for that aircraft type, or, differs in a defined manner from that approved standard.

7 Airworthiness Flight Test

7.1 This section should incorporate the approved Airworthiness Flight Test Schedule and Report references, if applicable.

8 Continued Airworthiness

8.1 This section should incorporate details of the design organisations that are responsible for the continued airworthiness of any major modifications or repairs installed in the aircraft that are not the responsibility of the TC holder.

Section C: Conclusions

This section should provide the conclusions of the assessment.

Aircraft Report: Attachment 1

Proposed Series/Series Modified Classification:

I have assessed the above aircraft and have established that it is Series /Series Modified (Delete as applicable) to the following aircraft, as detailed in Section A of the report:

Registration:..... Serial No: .....

Name:.....

Signature: .....

Date:.....

CAAM Response to Proposed Classification:

CAAM agrees/disagrees to the proposed series/series modified classification (Delete as applicable):

Name:.....

Signature :.....

Date:.....

Aircraft Report: Attachment 2

Certificate of Design Conformity to the airworthiness standards:

I hereby certify that, apart from the exceptions detailed below, the airworthiness standard of the above aircraft conforms to the applicable airworthiness standards approved by CAAM, as detailed in this report:

Name:.....

Signature :.....….....

Date:.....….....

Exceptions:……

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