



AIRWORTHINESS NOTICE

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This Airworthiness Notice is issued in pursuant to Section 24o of the Civil Aviation Act 1969. Any person who fails to comply with this Airworthiness Notice, shall be guilty of an offence.

APPROVAL OF DESIGN ORGANISATION WITH ALTERNATIVE PROCEDURE TO DEMONSTRATE DESIGN CAPABILITY

1.0 INTRODUCTION

- 1.1 Regulation 38 of Civil Aviation Regulation (CAR) 1996 makes provision for the approval of design organisation and provides the regulatory basis for the Certificate of Approval. **Refer to CAR 1996, Regulation 38(1).**
- 1.2 Airworthiness Notice (AN) No. 96 provides details to supplement the CAR in respect of Design Organisation Approval (DOA). Any organisation responsible for the design of products, parts and appliances or for changes or repairs thereto shall demonstrate its capability by holding a design organisation approval, issued by the DGCA in accordance with AN No. 96.
- 1.3 By way of derogation from AN No. 96, as an alternative procedure to demonstrate its capability, an applicant may seek DGCA approval, for the use of procedures setting out the specific design practices, resources and sequence of activities necessary to comply with the relevant requirements for approval of aircraft part or appliance.

2.0 SCOPE

- 2.1 This Notice provides alternative means to demonstrate design capability, in the context of specific projects, for approval of aircraft part or appliance. This concept is the implementation of procedures to ensure that the applicant will perform relevant activities as expected by the DGCA. The establishment of these alternative procedures may be seen as a starting phase for a DOA, allowing at a later stage, at the discretion of the applicant, to move towards a full compliance with AN No. 96 by the addition of the missing elements.
- 2.2 As alternative to DOA, a manual of procedures (refer to paragraph 10.0) shall set out specific design practices, resources and sequence of activities relevant for the specific projects, taking account of AN No. 96 requirements.
- 2.3 These procedures shall be concise and limited to the information needed for quality and proper control of activities by the applicant/holder, and by the DGCA.

3.0 ELIGIBILITY

- 3.1 Subject to paragraph 3.3, any organisation engaged or intending to engage in any stage of design, of simple and non-complex aircraft part or appliance shall be eligible as an applicant for an approval in accordance with this Notice

NOTE : For the purposes of this Notice, "aircraft part or appliance" means any part, instrument, mechanism, equipment, apparatus, appurtenance or accessory fitted to, or installed or provided in, an aircraft including communications equipment that is used or intended to be used in operating or controlling the aircraft in flight. **Refer to CAR 1996, Regulation 38(5).**

3.2 Approval will not be granted if applicant is located outside of Malaysia, unless the DGCA determines that the location places no undue burden on the DGCA in fulfilling the certificate management responsibilities.

3.3 The approval of alternative procedures, as defined in this Notice however, shall be limited to where the DGCA finds it more appropriate for the conduct of approval of simple and non-complex aircraft part or appliance.

4.0 APPLICATION

4.1 Each application for the approval of design organisation with alternative procedure to demonstrate design capability, as defined in this Notice, shall be made in a form and manner established by the DGCA, together with appropriate fee, and shall include a draft Manual of Procedures (refer to paragraph 10.0) containing the information required by this Notice.

5.0 ISSUE OF APPROVAL

5.1 An organisation shall be entitled to have an approval based on alternative procedures to demonstrate design capability for approval of aircraft part or appliance, as defined in this Notice, issued by the DGCA when it has demonstrated compliance with the applicable requirements under this Notice.

6.0 MANAGEMENT OF THE CERTIFICATION PROCESS

6.1 At the beginning of the process, for a particular project, the applicant shall submit a certification program to the DGCA, for approval. Subsequently, all revisions to the approved certification program shall be submitted to the DGCA, for approval.

6.2 A **certification program** includes the following :

a) Part 1

i) Procedures for the management of the certification program: creation and update all processes along the certification process to integrate the progress of the activities and distribution.

ii) This part shall also include the milestones of the project development up to the approval of aircraft part or appliance, with the minimum administrative delays imposed by the DGCA when necessary.

b) Part 2

The attribution of responsibilities, as follows:

i) names of the persons having specific responsibilities in the frame of the certification program

ii) the description of their tasks, responsibilities and associated competencies

iii) scope of authority of signatories.

c) Part 3

The airworthiness requirements applicable to the project, corresponding interpretations, and the equivalence of safety or other specific cases related to the applicable requirements.

d) Part 4

Working methods for showing of compliance and providing to the DGCA the means by which such compliance has been shown. This includes all or part of the following, depending on the complexity of the product:

- i) the means by which compliance will be shown (means of compliance), in relation with the requirements and/or their detailed interpretation
- ii) the technical criteria associated with the means of compliance
- iii) milestones specific to particular technical areas in relation with the general planning of the project
- iv) the decision process, especially the key points where the DGCA's decision is needed before further action
- v) the flow of information to the DGCA
- vi) the configuration control, especially of the test specimen used to show compliance
- vii) the organisation of the work for the interfaces or multidisciplinary subjects
- viii) those compliance documents that will be subject to verification by the DGCA
- ix) the establishment of the compliance documentation, including the time schedule and availability to the DGCA
- x) the control of the time schedule, for the accomplishment of the tasks in due time.

6.3 Compliance Document

- (a) The applicant shall establish procedures for creating compliance documents in such a way that:
 - i) the kind of document and the technical objectives for each document are determined at the beginning of the process
 - ii) the production of the documents is carefully managed all along the process, in accordance with the milestones defined in the certification programme
 - iii) the various issues of a document are controlled.
- b) Each document shall contain:
 - i) the reference of the requirements covered by the document
 - ii) data showing compliance and a statement by the applicant declaring compliance with these requirements
- c) A numbering system to identify the compliance documents shall be defined in order to have an adequate link with the certification program.
- d) Except as otherwise agreed with the DGCA, all compliance documents shall be produced before issuance of the final statement of compliance.

- 6.4 There are no privileges associated with this approval except as specified in paragraph 19.0. However, the DGCA will decide on the extent of its involvement in the verification of compliance documents. This involvement may vary according to the DGCA's knowledge of the applicant from previous and on-going activities and the resulting assessment of competence, and shall be addressed in the certification program.

7.0 MANAGEMENT OF DESIGN CHANGES

7.1 Classification

The applicant shall provide procedures acceptable to the DGCA to address the following points:

a) Identification of changes to type design

The procedure shall indicate how the following are identified:

- i) major changes to type design
- ii) those minor changes to type design where additional work is necessary to show compliance with the airworthiness requirements
- iii) other minor changes to type design requiring no further showing of compliance.

Note : Criteria used for classification shall be in compliance with Airworthiness Notice No 78 and corresponding interpretations.

b) Airworthiness classification

- i) The procedure shall show how the effects on airworthiness are analysed, from the very beginning, by reference to the applicable requirements.
- ii) If no specific requirements are applicable to the change, the above review shall be carried out at the level of the part or system where the change is integrated and where specific requirements are applicable.

c) Control of changes to type design initiated by subcontractors

The procedure shall indicate, directly or by cross-reference to written procedures, how changes to type design initiated by subcontractors are controlled.

d) Documents to justify the classification

All decisions of classification of changes to type design shall be documented and approved by the DGCA. It may be in the format of meeting notes or register.

e) Authorised signatories

The procedure should identify the persons authorised to verify and sign the proposed classification before submitting to the DGCA for approval.

7.2 Approval of changes to type design

The applicant shall provide procedures acceptable to the DGCA to address the following points:

a) Compliance documentation

For those minor modifications where additional work to show compliance with the applicable airworthiness requirements is necessary, compliance documentation shall be established following guidelines of paragraph 6.3.

b) *Approval process*

- i) For the approval of equipment, a certification programme as defined in paragraph 6.1 shall be established.
- ii) For those minor modifications where additional work to show compliance with the applicable airworthiness requirements is necessary, the procedure shall define a document to support the approval process.

This document shall include at least:

- 1. identification and brief description of the change and its classification
 - 2. applicable requirements
 - 3. reference to the compliance documents
 - 4. effects, if any, on limitations and on the approved documentation
 - 5. authorised signatory
- iii) For the other minor changes, the procedure shall define a means:
 - 1. to identify the change
 - 2. to present the change to the DGCA for approval.

c) *Authorised signatories*

The procedure shall identify the persons authorised to verify and sign the change before submitting to the DGCA for approval.

8.0 ISSUE OF INFORMATION AND INSTRUCTIONS TO OWNERS

8.1 General

- a) The information or instructions issued by the holder of DGCA approval certificate for a product, part or appliance are intended to provide the owners of a product with all necessary data to implement a change on the product, or a repair, or to inspect it.
- b) The information or instructions may be issued in a format of a Service Bulletin as defined in ATA 100 system, or in Structural Repair Manuals, Maintenance Manuals, Component Manuals, etc.
- c) The preparation of this data involves design, production and inspection. The three aspects should be properly addressed and a procedure should exist.

8.2 Procedure

- a) The procedure should address the following points:
 - i) preparation
 - ii) verification of technical consistency with corresponding approved change(s), repair(s) or approved data, including effectivity, description, effects on airworthiness, especially when limitations are changed
 - iii) verification of the feasibility in practical applications.

- b) The persons authorised to sign before release of information and instructions to the DGCA for approval should be identified in the procedure.
- c) The procedure should include the information or instructions prepared by subcontractors or vendors, and declared applicable to its products by the holder of DGCA approval certificate.

8.3 **Statement**

The information and instructions should contain a statement showing DGCA's approval.

9.0 **CONTROL OF DESIGN SUBCONTRACTORS**

The applicant should establish the necessary procedures to show to the DGCA how it will control design subcontractors.

10.0 **DATA**

- 10.1 The design organisation shall furnish, for approval, a Manual of Procedures to the DGCA describing, directly or by cross-reference, the organisation, the facilities, the relevant procedures and the products or changes to products to be designed. **Refer to CAR 1996, Regulation 38(2)(a)(ii) and (iii).**
- 10.2 Where any parts or appliances or any changes to the products are designed by partner organisation or subcontractors, the Manual of Procedures shall include a statement of how the design organisation is able to give, for all parts and appliances, the assurance of compliance required by paragraph 6.2, and shall contain, directly or by cross-reference, descriptions and information on the design activities and organisation of those partners or subcontractors, as necessary to establish this statements.
- 10.3 The Manual of Procedures shall be amended as necessary to remain an up-to-date description of the organisation, and copies of amendment shall be submitted to the DGCA for approval.
- 10.4 The design organisation shall furnish a statement of the qualification and experience of the management staff and other persons responsible for making decisions affecting airworthiness and environmental protection in the organisation. **Refer to CAR 1996, Regulation 38(2)(a)(i).**

11.0 **APPROVAL REQUIREMENTS**

The design organisation shall demonstrate, on the basis of the information submitted in accordance with paragraph 10.0, and in addition to complying with paragraph 6.0 to 9.0, compliance with the following requirements:

- a) The staffs in all technical departments are of sufficient numbers and experience and have been given appropriate authority to be able to discharge their allocated responsibilities and that these, together with the accommodation, facilities and equipment are adequate to enable the staff to achieve the airworthiness, noise, fuel venting and exhaust emissions objectives for the product. **Refer to CAR 1996, Regulation 38(2)(b).**
- b) There is full and efficient coordination between departments and within departments in respect of airworthiness and environmental protection matters.

12.0 **CHANGES IN THE SYSTEMS REQUIRED BY PARAGRAPHS 6.0 TO 9.0**

After the issue of this approval, each change to the Manual of Procedures that is significant to the showing of compliance or to the airworthiness and environmental protection of the products, shall be approved by the DGCA. An application for approval shall be submitted in writing to the DGCA and the design organisation shall demonstrate to the DGCA, on the basis of submission of proposed changes to the Manual of Procedures,

and before implementation of the change, that it will continue to comply with this Notice after implementation.

13.0 TRANSFERABILITY

This approval is not transferable.

14.0 TERMS OF APPROVAL

The terms of approval shall identify the types of design work, the products, parts and appliances for which the design organisation holds a design organisation approval, and the function and duties that the organisation is approved to perform in regard to the airworthiness and characteristics of noise, fuel venting and exhaust emission of products.

15.0 CHANGES TO THE TERMS OF APPROVAL

Each change to the terms of approval shall be approved by the DGCA. An application for a change to the terms of approval shall be made in a form and manner established by the DGCA. The design organisation shall comply with the applicable requirements of this Notice.

16.0 INVESTIGATION

16.1 The design organisation shall make arrangement that allow any persons authorised by the DGCA to make any investigations, including investigations of partners and subcontractors, necessary to determine compliance and continued compliance with the applicable requirements of this Notices. **Refer to CAR 1996, Regulation 38(3)(a), (b) and (d).**

16.2 The design organisation shall allow any persons authorised by the DGCA to review any report and make any inspection and perform or witness any flight and ground test necessary to check the validity of the compliance statements submitted by the applicant. **Refer to CAR 1996, Regulation 38(3)(c).**

17.0 FINDINGS

17.1 When objective evidence is found showing non-compliance of the holder of this approval with the applicable requirements of this Notice, the finding shall be classified as follows;

- a) A level one findings is any non-compliance with this Notice which could lead to uncontrolled non-compliance with applicable requirements and which could affect the safety of the aircraft.
- b) A level two finding is any non-compliance with this Notice which is not classified as level one.

17.2 A level three finding is any item where it has been identified, by objective evidence, to contain potential problem that could lead to any non-compliance under paragraph 17.1.

17.3 After receipt of notification of finding under the applicable administrative procedure established by the DGCA,

- a) In case of a level one finding, the holder of design organisation approval shall demonstrate immediate corrective action to the satisfaction of the DGCA.
- b) In case of level two findings, the corrective action period granted by the DGCA shall be appropriate to the nature of the finding but in any case initially shall not be more than three months. In certain circumstances and subject to the nature of the finding the DGCA may extend the three month period subject to a satisfactory corrective action plan agreed by the DGCA.
- c) A level three finding shall not require immediate action by the holder of the design organisation approval.

17.4 In case of level one or level two findings, the design organisation approval may be subject to a partial or full suspension or revocation under the applicable administrative procedure established by the DGCA. The holder of the design organisation approval shall provide confirmation of receipt of the notice of suspension or revocation of the design organisation approval in a timely manner.

18.0 DURATION AND CONTINUED VALIDITY

18.1 The approval certificate shall be issued for a period of one year. It will be renewed upon satisfactory DGCA annual audit and acceptance of annual renewal fee. It shall remain valid as stated in the certificate unless;

- a) the design organisation fails to demonstrate compliance with the applicable requirements of this Notice; or
- b) any persons authorised by the DGCA is prevented by the holder or any of its partners or subcontractors to perform the investigation in accordance with paragraph 16.0; or
- c) the certificate has been surrendered or revoked under the applicable administrative procedures established by the DGCA.

18.2 Upon surrender or revocation, the certificate shall be returned to the DGCA.

19.0 PRIVILEGES

19.1 The holder of this approval shall be entitled to perform design activities under this Notice and within its scope of approval.

19.2 Subject to paragraph 16.2, the holder of this approval is allowed to submit compliance documents for the purpose of obtaining approval of aircraft part or appliance (e.g. TSO authorisation)

20.0 OBLIGATIONS OF THE HOLDER

The holder of this approval shall;

- a) Maintain the Manual of Procedures in conformity with this Notice.
- b) Ensure that this Manual of Procedures is used as a basic working document within the organisation.
- c) Determine that the design of products, or changes thereof, as applicable, comply with applicable requirements and have no unsafe feature.
- d) The holder of this approval shall address obligations laid down in paragraphs 17.2 to 17.5 of AN No. 96.

21.0 MISCELLANEOUS

21.1 Any expense incurred by reason of anything done during, in or incidental to the investigation mentioned in paragraph 16.0 shall be paid by and be recoverable from the holder of the certificate of approval. **Refer to CAR 1996, Regulation 38(4).**

21.2 CAR 1996, Regulation 186 prescribes the regulation for fees and charges. The details of the fees and charges are specified in the Twelfth Schedule, Part B (other charges) paragraph 8.