

DEPARTMENT OF CIVIL AVIATION  
MALAYSIA  
**AIRWORTHINESS NOTICE**

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## DESIGN ORGANISATION APPROVAL

### 1.0 INTRODUCTION

- 1.1 Civil Aviation Regulation (CAR) 1996, Regulation 38, makes provision for the approval of design organisation and provides the regulatory basis for the Certificate of Approval.
- 1.2 This Notice provides details to supplement the CAR in respect of Design Organisation Approval (DOA). At the same time, the provisions in Appendix 2 of Airworthiness Notice No. 1 which are related to the DOA are hereby superseded by this Notice.

**NOTE :** “**Design Organisation Approval Handbook**” provides guidance material related to the DOA.

- 1.3 An 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 Director General of Civil Aviation (DGCA) in accordance with this Notice.

### 2.0 SCOPE

- 2.1 This Notice establishes the procedures for the approval of design organisations and rules governing the rights and obligations of applicants for, and holders of, such approvals.

### 3.0 ELIGIBILITY

- 3.1 Any organisation engaged or intending to engage in, any stage of design, of aircraft, engine, propeller or aircraft part or appliance shall be eligible as an applicant for a DOA. **Refer to CAR 1996, Regulation 38(1).**

**NOTE 1:** ICAO Doc 9760 defines MODIFICATION and REPAIR as design activities.

**NOTE 2:** 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.

- 3.2 DGCA does not issue a DOA if the facility is located outside of Malaysia, unless the DGCA finds that the facility places no undue burden on the DGCA in administering applicable airworthiness requirements.

### 4.0 APPLICATION

- 4.1 Each application for DOA shall be made in a form and manner established by the DGCA and shall include a draft of the **Design Organisation Manual (DOM)** as required in paragraph 7.0, and the terms of approval requested to be issued under paragraph 11.0.

### 5.0 ISSUE OF DESIGN ORGANISATION APPROVAL

- 5.1 An organisation shall be entitled to have DOA issued by the DGCA when it has demonstrated compliance with the applicable requirements under this Notice.

## 6.0 DESIGN ASSURANCE SYSTEM

- 6.1 The design organisation shall demonstrate that it has established and is able to maintain a design assurance system for the control and supervision of the design, and of design changes, of products, parts and appliances covered by the application. This design assurance system shall be such as to enable the organisation :
- a). to ensure that the design of products, parts and appliances or the design thereof, comply the applicable type-certification basis and environmental protection requirements;
  - b). to ensure that its responsibilities are properly discharged in accordance with:
    - i). the appropriate provisions of this Notice;
    - ii). the terms of approval issued under paragraph 11.0.
  - c). to independently monitor the compliance with, and adequacy of the documented procedure of the system. This monitoring shall include a feed-back to a person or a group of person having the responsibility to ensure corrective action.
- 6.2 The design assurance system shall include an independent checking function of the showing of compliance on the basis of which the organisation submits compliance statements and associated documentation to the DGCA.
- 6.3 The design organisation shall specify the manner in which the design assurance system accounts for the acceptability of the parts or appliances designed or the tasks performed by partners or subcontractor according to methods which are subject of written procedures.

## 7.0 DATA

- 7.1 The design organisation shall furnish a DOM 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).**
- 7.2 Where any parts or appliances or any changes to the products are designed by partner organisation or subcontractors, the DOM 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.
- 7.3 The DOM shall be amended as necessary to remain an up-to-date description of the organisation, and copies of amendment shall be supplied to the DGCA.
- 7.4 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).**

## 8.0 APPROVAL REQUIREMENTS

- 8.1 The design organisation shall demonstrate, on the basis of the information submitted in accordance with paragraph 7.0 that, in addition to complying with paragraph 6.0;
- i). The staff 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).**
  - ii). There is full and efficient coordination between departments and within departments in respect of airworthiness and environmental protection matters.

## **9.0 CHANGES IN DESIGN ASSURANCE SYSTEM**

9.1 After the issue of a DOA, each change to the design assurance system 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 DOM, and before implementation of the change, that it will continue to comply with this Notice after implementation.

## **10.0 TRANSFERABILITY**

10.1 Except as a result of a change in ownership, which is deemed significant for the purpose of paragraph 9.0, a design organisation approval is not transferable.

## **11.0 TERMS OF APPROVAL**

11.1 The terms of approval shall identify the types of design work, the categories of 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.

## **12.0 CHANGES TO THE TERMS OF APPROVAL**

12.1 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.

## **13.0 INVESTIGATION**

13.1 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).**

13.2 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 under paragraph 6.2. **Refer to CAR 1996, Regulation 38(3)(c).**

## **14.0 FINDINGS**

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

- i). 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.
- ii). A level two finding is any non-compliance with this Notice which is not classified as level one.

14.2 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 14.1.

- 14.3 After receipt of notification of finding under the applicable administrative procedure established by the DGCA,
- i). In case of a level one finding, the holder of design organisation approval shall demonstrate immediate corrective action to the satisfaction of the DGCA.
  - ii). 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.
  - iii). A level three finding shall not require immediate action by the holder of the design organisation approval.
- 14.4 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.

## **15.0 DURATION AND CONTINUED VALIDITY**

- 15.1 A DOA 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;
- i). the design organisation fails to demonstrate compliance with the applicable requirements of this Notice; or
  - ii). 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 13.0; or
  - iii). There is evidence that the design assurance system cannot maintain satisfactory control and supervision of the design of products or changes thereof under the approval; or
  - iv). the certificate has been surrendered or revoked under the applicable administrative procedures established by the DGCA.
- 15.2 Upon surrender or revocation, the certificate shall be returned to the DGCA.

## **16.0 PRIVILEGES**

- 16.1 The holder of a design organisation approval shall be entitled to perform design activities under this Notice and within its scope of approval.
- 16.2 Subject to paragraph 13.2, the design organisation is allowed to submit compliance documents for the purpose of obtaining;
- i). A type certificate or approval of a major modification to the type design; or
  - ii). Approval of major modifications
  - iii). TSO authorisation
  - iv). A major repair design approval.

- 16.3 The holder of a design organisation approval shall be entitled, within its term of approval and under the relevant procedures of the design assurance system;
- i). To classify modifications and repairs as 'Major' or 'Minor'.
  - ii). To approve minor modifications and minor repairs.
  - iii). To issue information or instruction containing the following statement:  
"The technical content of this document is approved under the authority of the DOA Approval No. xxxxxx".
  - iv). To approve documentary changes to the aircraft flight manual, and issue such changes containing the following statement:  
"Revision no. xxxxxx to the AFM is approved under the authority of the DOA Approval No. xxxxxx".
  - v). To prepare and submit data packages for major modifications and major repair.
  - vi). To enter into arrangements acceptable to the DGCA for the production of approved designs by organisations acceptable to DGCA

## 17.0 OBLIGATION OF THE HOLDER

- 17.1 The holder of a design organisation approval shall;
- i). Maintain the DOM in conformity with the design assurance system.
  - ii). Ensure that this DOM is used as a basic working document within the organisation.
  - iii). Determine that the design of products, or changes or repairs thereof, as applicable, comply with applicable requirements and have no unsafe feature.
  - iv). Except for minor changes or repairs approved under the privilege of paragraph 16.0, provide to the DGCA statements and associated documentation confirming compliance with paragraph 17.1(iii).
  - v). Provide to the DGCA information or instructions related to required actions under paragraph 17.3
- 17.2 The holder of a DGCA approval certificate for a product, part or appliance, (such as a type-certificate, Technical Standard Order (TSO) authorisation, major modification design approval or any other relevant approval) shall;
- i) have a system for collecting, investigating and analysing reports of and information related to failures, malfunctions, defects or other occurrences which cause or might cause adverse effects on the continuing airworthiness of the product, part or appliance covered by the DGCA approval certificate. Information about this system shall be made available to all known operators of the product, part or appliance and, on request, to any person authorised by DGCA.
  - ii)
    - a) report to the DGCA any failure, malfunction, defect or other occurrence of which it is aware related to a product, part, or appliance covered by the DGCA approval certificate, and which has resulted in or may result in an unsafe condition.
    - b) these reports shall be made in a form and manner established by the DGCA, as soon as practicable and in any case dispatched not later than 72 hours after the identification of the possible unsafe condition, unless exceptional circumstances prevent this.
  - iii)
    - a) investigate the reason for the deficiency and report to the DGCA the results of its investigation and any action it is taking or proposes to take to correct that deficiency, when an occurrence reported under paragraph (ii) results from a deficiency in the design.

- b) submit the relevant data to the DGCA, if the DGCA finds that an action is required to correct the deficiency,

### 17.3 Airworthiness Directives

17.3.1 An airworthiness directive means a document issued or adopted by the DGCA which mandates actions to be performed on an aircraft to restore an acceptable level of safety, when evidence shows that the safety level of this aircraft may otherwise be compromised.

17.3.2 The DGCA may issue an airworthiness directive when:

- i) an unsafe condition has been determined by the DGCA to exist in an aircraft, as a result of a deficiency in the aircraft, or an engine, propeller, part or appliance installed on this aircraft; and
- ii) that condition is likely to exist or develop in other aircraft.

17.3.3 When an airworthiness directive has to be issued by the DGCA to correct the unsafe condition referred to in paragraph 17.3.2, or to require the performance of an inspection, the holder of a DGCA approval certificate for a product, part or appliance, shall;

- i) Propose the appropriate corrective action or required inspections, or both, and submit details of these proposals to the DGCA for approval.
- ii) Following the approval by the DGCA of the proposals referred to under subparagraph (i), make available to all known operators or owners of the product, part or appliance and, on request, to any person required to comply with the airworthiness directive, appropriate descriptive data and accomplishment instructions.

### 17.4 Coordination between design and production

Each holder of a DGCA approval certificate for a product, part or appliance, shall collaborate with the production organisation as necessary to ensure:

- i) The satisfactory coordination of design and production; and
- ii) The proper support of the continued airworthiness of the product, part or appliance.

17.5 The actions and obligations required to be undertaken by the holder of a DGCA approval certificate for a product, part or appliance, may be undertaken on its behalf by any other natural or legal person, provided the holder of that certificate can show that it has made an agreement with the other person such as to ensure that the holder's obligations are and will be properly discharged.

## 18.0 MISCELLANEOUS

18.1 Any expense incurred by reason of anything done during, in or incidental to the investigation mentioned in paragraph 13.0 shall be paid by and be recoverable from the holder of the certificate of approval. **Refer to CAR 1996, Regulation 38(4).**

18.2 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.

18.3 Current holders of DOA, which were issued in accordance with Airworthiness Notice No. 1, Appendix 2, is required to comply with this Notice within six (6) months from the date of this Notice.