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1.0 INTRODUCTION

This Advisory Circular (AC) is provided for information and guidance purposes. It may describe an example of an acceptable means, but not the only means, of demonstrating compliance with regulations and standards. This AC on its own does not change, create, amend or permit deviations from regulatory requirements, nor does it establish minimum standards.

1.1 Purpose

The purpose of this AC is to provide guidance with respect to:

- (a) structure and objectives of the Airworthiness Control System (ACS) within an Airworthiness Engineering Organization (AEO) or Design Approval Organization (DAO); and
- (b) structure, responsibilities, privileges and decision process of the Airworthiness Control Committee (ACC).

1.2 Applicability

This document applies to all Transport Canada Civil Aviation (TCCA) employees, to individuals and organizations when they are exercising privileges granted to them under an External Ministerial Delegation of Authority. This information is also available to the aviation industry for information purposes.

1.3 Description of Changes

This document, formerly **Aircraft Certification Staff Instruction (ACSI) 45, Issue 01 and ACSI 46, Issue 01**, has been combined and reissued as **Advisory Circular (AC) 505-002**. With the exception of editorial changes and updated references, the content is unaltered.

2.0 REFERENCES AND REQUIREMENTS

2.1 Reference Documents

It is intended that the following reference materials be used in conjunction with this document:

- (a) Part V of the *Canadian Aviation Regulations (CARs)— Airworthiness*; and
- (b) Chapter 505 of the *Airworthiness Manual (AWM)— Delegation Of Authority*.

2.2 Cancelled Documents

As of the effective date of this document, the following documents are cancelled:

- (a) **ACSI 45**, Issue 01, 1999-03-31— *Airworthiness Control Committee Functions and Responsibilities*; and
- (b) **ACSI 46**, Issue 01, 1998-11-10— *Elements of an Airworthiness Control System*.

2.3 Definitions and Abbreviations

The following definitions and abbreviations are used in this document:

- (a) **Authorised Person (AP)**: an individual who performs delegated functions for an AEO or DAO, on behalf of the Minister.

3.0 BACKGROUND

- (1) Under Chapter 505 of the AWM, subsections 505.107 (f) and 505.407 (f), an AEO or DAO is required to have an ACS and to provide a description of their ACS in the AEO's Engineering Procedures Manual (EPM) or the DAO's Design Approval Procedures Manual (DAPM) .
- (2) An ACC, although not referenced in AWM 505, is envisaged to be an integral part of the ACS as required by paragraphs 505.407 (f) and 505.107 (f) of the AWM.

4.0 AIRWORTHINESS CONTROL SYSTEM (ACS)

The purpose of the ACS is to ensure that all data that is approved or recommended for approval by the AEO or DAO fully complies with the applicable standards of Airworthiness. To meet this objective, an AEO or DAO is required to have procedures or processes in place to address new designs, design changes, approval of data, continuing airworthiness, and if applicable, work and design sharing. These procedures or processes are to be described in the EPM or DAPM.

4.1 Management

The detailed management of the ACS may be under the direct authority of the ACC as described in section 5.0 or may be undertaken by other means. In either case, management of the ACS (by ACC or otherwise) must be clearly defined in the EPM or DAPM.

4.2 Design Process (New Design)

The design process and project definition should be compatible with the applicable procedural requirements outlined in Part V of the CARs and the associated advisory and guidance material as appropriate.

4.3 Design Changes

The process of developing data to support changes to an existing type certified product should consider the aspects identified in subsection 4.2 above, and, in addition:

- (a) classify the nature of the change as to whether it is major or minor, in accordance with criteria specified in the EPM or DAPM, to establish the required approval authority for the data;
- (b) ensure that all inter-disciplinary aspects have been considered and addressed by the appropriate specialists;
- (c) establish whether or not airworthiness directives, approved manuals or airworthiness limitations are affected;
- (d) evaluate the need for retroactivity, mandatory action, and service bulletins; and
- (e) ensure that the pertinent delegates advise or consult with their TCCA counterparts.

4.4 Approval Process

The approval process consists of establishing the certification basis, controlling the test article definition, demonstrating and recording findings of compliance with the defined certification basis, and providing data which satisfies the requirements for the issuance of an approval. The process should follow the requirements outlined in the appropriate procedural regulations in Part V of the CARs.

4.5 Continuing Airworthiness

The initial compliance with the requirement for continuing airworthiness is shown by the approval or acceptance of maintenance and overhaul manuals and appropriate service bulletins. Subsequent to entry into service, customer support representatives will monitor, report, coordinate and publish data on service difficulties. As required by the Service Difficulty Reporting System requirements in Part V of the CARs, this data will be supplied both to TCCA and the cognizant delegate(s).

4.6 Work and Design Sharing

- (1) A work sharing partner may also have “design responsibility” for given parts, equipment or sub-assemblies and may conduct tests or produce data in support of the approval of the subject item.
- (2) The design of parts, equipment and sub-assemblies contracted to outside suppliers or partners will be controlled in the manner described in this section and remain under the direct responsibility of the applicant and the applicant’s DAO or AEO.

5.0 AIRWORTHINESS CONTROL COMMITTEE (ACC)

The management function of an AEO or a DAO is normally provided by a committee which is usually referred to as the ACC. In the case of a large AEO or DAO, the management function may be carried out by a subset of the ACC, usually referred to as the Core ACC, as described below in section 5.2.

5.1 Membership

The membership of the committee is as follows:

- (a) The chairman of the committee is the person responsible for the AEO or DAO. This position is normally assumed by the vice president of engineering or the highest authority for engineering within the corporation.
- (b) For regular ACC meetings an alternate may chair on behalf of the Chairman. For Core ACC, alternates may only chair in the case of absence. Alternates for the Chairman shall be selected from the Membership of the Core ACC.
- (c) The membership of the ACC includes all persons who are authorized as APs. Other personnel may attend ACC meetings as observers, however, they cannot become members of the ACC unless they are identified in the EPM or DAPM.

5.2 Structure

- (1) In a large AEO or DAO the membership may be divided into two categories, Core and Regular, to ensure that the ACC operates in the most effective and efficient manner. It is not envisaged that a small AEO or DAO would need to divide the membership of the ACC into two categories.
- (2) The Regular Membership is comprised of all the APs within the AEO or DAO. Regular members are encouraged but not required to attend ACC meetings. Regular members shall attend meetings as required to resolve any airworthiness issues or concerns that may arise.
- (3) Core Members should be selected from the regular membership. There should be a core member representing each specialty within the AEO or DAO. The qualifications for the Core Members are the same as that for Regular Members, refer to paragraphs 505.109 (b) and 505.409 (b) of the AWM, except that a greater level of experience is required. Participation of appropriate Core Members is required at Core ACC meetings. Regular members may substitute for core members provided the level of experience and qualifications as defined in the EPM or DAPM for core members is met. The Regular ACC, as distinct from the Core ACC, is responsible for issues, which are not associated with management of delegated functions.
- (4) The terms of reference for the ACC, contained in the EPM or DAPM, should enable TCCA participation in the ACC. In any event, TCCA reserves the right to attend any ACC meeting. A TCCA representative shall participate as required by the EPM or DAPM.

5.3 Privileges

- (1) The core ACC may nominate APs and, subject to the provisions of their EPM or DAPM, may authorize APs who are to become regular members of the ACC. Membership in the core ACC is determined solely by TCCA. Nominations for membership in the core ACC will be reviewed by TCCA and eligible APs will be authorized as core members
- (2) The ACC may also approve certain revisions to the EPM or DAPM in accordance with TCCA approved procedures in the EPM or DAPM

5.4 Responsibilities

- (1) The person responsible for the AEO or DAO assumes overall responsibility for all authorized functions including those of the ACC.

- (2) The ACC is responsible for the following AEO or DAO functions:
- (a) ensuring that self audits are conducted to monitor performance of APs and ensure the procedures in the EPM or DAPM are followed;
 - (b) developing a corrective action plan to resolve applicable audit findings resulting from either a self audit or a TCCA audit;
 - (c) ensuring that nominated APs meet the requirements of Chapter 505 of the AWM;
 - (d) ensuring that APs receive sufficient and necessary training;
 - (e) ensuring that approval programs involving multiple specialties are coordinated and appropriately represented;
 - (f) reviewing and approving revisions to the EPM or DAPM within the defined scope of the EPM or DAPM;
 - (g) notifying TCCA if an aeronautical product, for which a design approval was issued, does not comply with the certification basis;
 - (h) ensuring that mandatory changes to correct unsafe conditions are submitted to TCCA for approval;
 - (i) ensuring APs are cognizant of relevant proposed changes to Canadian and foreign airworthiness standards;
 - (j) establishing that the relevant APs have reviewed and are in agreement with proposed compliance program for design approvals, including the means of compliance, responsibility and level of involvement;
 - (k) ensuring that minutes are kept for all ACC meetings, which shall be distributed to all members and retained until TCCA authorizes disposal;
 - (l) maintaining an effective ACS; and
 - (m) informing TCCA on the status of current and future projects necessitating TCCA input or action.
- (3) The Core ACC, if established, may assume responsibility for the first three functions listed as items (a), (b) and (c) above, however, the remaining functions are the responsibility of the entire ACC.

5.5 Decision Process

Decisions at the ACC meetings are made by consensus. The AP(s) responsible for the item or functional area(s) under discussion shall be present for the meeting. If a consensus cannot be reached at the ACC meeting then the item under discussion shall be referred to TCCA for a decision.

5.6 EPM or DAPM

The EPM or DAPM shall detail the membership, responsibilities, privileges, decision process and procedures for the ACC.

6.0 CONTACT OFFICE

For more information, please contact the:

Manager, Policies and Procedures (**AARTC**)

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Suggestions for amendment to this document are invited, and should be submitted via the Transport Canada Civil Aviation Issues Reporting System (CAIRS) at the following Internet address:

www.tc.gc.ca/CAIRS

or by e-mail at: CAIRS_NCR@tc.gc.ca

***Original signed by
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