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1.0 Introduction

(1) This Advisory Circular (AC) is provided for information and guidance purposes. It describes 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, and does not establish minimum standards.

1.1 Purpose

(1) This handbook describes policy, procedures, and guidance to be used by Transport Canada Civil Aviation (TCCA) Aircraft Certification delegates, as defined in Airworthiness Manual (AWM) 505, when fulfilling functions authorized by, and performed on behalf of, the Minister of Transport (herein referred to as the Minister). The term "delegate" may mean a corporation, an individual Authorized Person (AP) within an Airworthiness Engineering Organization (AEO)/Design Approval Organization (DAO), or a Design Approval Representative (DAR).

(2) This handbook:

- (a) Provides direction with respect to the AEO, DAO, AP and DAR approval process and associated responsibilities;
- (b) Informs delegates of the procedures that should be followed when accomplishing certification activities in accordance with subpart 521 of the *Canadian Aviation Regulations* (CARs) and AWM 505;
- (c) Promotes consistent application of the certification procedures by delegates in all TCCA Regions; and
- (d) Provides general guidance on the content of a delegate's procedures manual (i.e. Engineering Procedures Manual (EPM) or Design Approval Procedure Manual (DAPM)).
- (3) Questions pertaining to procedures contained in this AC should be discussed and coordinated with the applicable TCCA Regional Managers Aircraft Certification (RMAC) or the Delegations and Surveillance Division of the National Aircraft Certification Branch. Contact information is contained in Section 13.

1.2 Applicability

(1) This AC is applicable to all delegates, (APs, AEOs, DAOs and DARs), and staff that support the operation of these entities. Alternate procedures to those specified in this AC may be used, but only if approved by TCCA in writing and documented in the delegate's TCCA approved procedures manual.

1.3 Description of changes

- (1) This AC replaces the "Delegations Handbook for Designated Engineers and Design Approval Representatives", TP12995E, to provide:
 - (a) References to TCCA's current policy with respect to the implementation of the Changed Product Rule (CPR);
 - (b) Incorporation and references to TCCA's updated policy with respect to Level of Involvement (LOI);
 - (c) Pointers to information contained in the latest TCCA Staff Instructions (SI), Aircraft Certification Policy Letters (ACPL), ACs and other guidance materials;

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- (d) Updated Delegation Principles and Expectations;
- (e) Removal of instructions for TCCA staff, which are now transferred to SI 505-001; and
- (f) Updated references to subpart 521 of the CARs.

2.0 References and requirements

2.1 Reference documents

- (1) It is intended that the following reference materials be used in conjunction with this document:
 - (a) Aeronautics Act (R.S.C, 1985, c. A-2);
 - (b) Canada Evidence Act (R.S.C., 1985, c. C-5);
 - (c) Personal Information Protection and Electronic Documents Act (S.C. 2000, c.5);
 - (d) Part V, Subpart 21 of the *Canadian Aviation Regulations* (CARs) —Approval of the Type Design or a Change to the Type Design of an Aeronautical Product;
 - (e) Chapter 505 of the Airworthiness Manual (AWM) —Delegation of Authority;
 - (f) Airworthiness Notice (AN) B043 Conformity Inspection Associated with Appliance Type Certification or Modification/Repair Approval Projects;
 - (g) Civil Aviation Directive (CAD) FIN-003 Recovering the Incremental Costs of Providing Services Inside/Outside Canada:
 - (h) AC 500-016 Establishing the Certification Basis of Changed Aeronautical Products;
 - (i) AC 505-001 Design Approval Representative (DAR)
 - (j) AC 505-002 Airworthiness Control System for a Delegated Organisation (Aircraft Certification);
 - (k) AC 521-002 Type Certification Requirements of Aircraft, Engines and Propellers;
 - (I) AC 521-004 Changes to the Type Design of an Aeronautical Product;
 - (m) AC 521-005 Supplemental Type Certificates:
 - (n) AC 521-006 Repair Design Approvals;
 - (o) AC 521-007 Part Design Approvals;
 - (p) AC 521-009 Division IX Service Difficulty Reporting;
 - (q) AC SUR-002 Root Cause Analysis and Corrective Action for TCCA Findings;
 - (r) AC SUR-004 Civil Aviation Surveillance Program:
 - (s) ACPL 19 Canadian Aviation Regulations, Part 1, Subpart 104 Implementation;
 - (t) Maintenance Staff Instruction (MSI) 14—Flight Authority;
 - (u) Maintenance Staff Instructions (MSI) 53—Review of Supplemental Instructions for Continued Airworthiness;
 - (v) PL 500-002 Establishing the Certification Basis of Changed Aeronautical Products— Interpretation and Policy;
 - (w) PL 500-003 Delegation of Flight Manual Supplement Approval for Simple Avionics Installations;

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- (x) SI 500-002 Approval of Airworthiness Limitations—Regional Aircraft Certification Projects;
- (y) SI 500-003 Aircraft Certification Level of Involvement;
- (z) SI 500-019 Issue Papers, Concern Papers and Certification Memoranda;
- (aa) SI 505-001 Delegation of Authority Process—Aircraft Certification;
- (bb) SI 521-002 Type Certification of Aeronautical Products;
- (cc) SI 521-004 Changes to the Type Design of an Aeronautical product;
- (dd) SI 521-005 Supplemental Type Certificates;
- (ee) SI 521-006 Repair Design Approvals;
- (ff) SI 521-007 Part Design Approvals;
- (gg) SI 521-009 Division IX Service Difficulty Reporting;
- (hh) SI GEN-003 Technical Reference Centre Holdings and Operations;
- (ii) TCCA Guide to Electronic Signatures for Delegates;
- (jj) Transport Canada form number 26-0757 Ministerial Delegate Statement of Compliance with the Certification Basis; and
- (kk) TCCA/FAA Implementation Procedures for Airworthiness;

2.2 Cancelled documents

- (1) As of the effective date of this document, the following document is cancelled:
 - (a) TP12995E, Issue 2, dated 2003-06-10—Delegations Handbook for Designated Engineers and Design Approval Representatives.
- (2) By default, it is understood that the publication of a new issue of a document automatically renders any earlier issues of the same document null and void.

2.3 Definitions and abbreviations

- (1) The following definitions are applicable to this AC. For formal definition of these terms, and others that may be applicable, the definitions and interpretations presented in the CARs and the AWM will take precedence if there is a conflict.
 - (a) **Acceptable**: Used to describe equipment or a procedure that in itself constitutes an adequate standard, or if used or complied with will result in compliance with the airworthiness standards.
 - (b) **Airworthiness Engineering Organization**: Means the group of individuals in the employ of and nominated by the applicant pursuant to subsections 505.103(c) and 505.103(d) and 505.105(e) of the AWM.
 - (c) **Applicant:** In the context of CAR 521, means an individual or organization responsible for the design of an aeronautical product, or a representative of such an individual or organization, that makes an application for the issuance of or a change to a design approval document in respect of an aeronautical product (Ref. Section 521.01 of the CARs).
 - (d) **Applicant:** In the context of AWM 505, means an individual or organization that submits an application to TCCA to obtain a delegation from the Minister.

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- (e) **Approved**: The word "approved", when used without any indication of a method of approval, is to be interpreted as referring to an approval granted by the Minister under the *Aeronautics Act*.
- (f) **Authorized Person:** Means an individual nominated by an AEO or DAO, in accordance with subsections 505.105(e) and 505.405(e) of the AWM and authorized by TCCA to carry out certain specified authorized functions on behalf of the DAO or AEO for the Minister. An AP will have a Letter of Authorization (LOA) issued by the Minister and is governed by the AEO or DAO's DAPM/EPM.
- (g) **Changed Product Rule:** The term for the process used to meet the criteria described in section 521.158 of the CARs, for design change applicants to obtain approval of a proposed design change to an approved type design for an aircraft, aircraft engine or propeller, to incorporate the latest standards as required by the regulation.
- (h) Delegate: (Noun) APs, DARs, AEOs and DAOs. Means a corporation or an individual authorized pursuant to subsection 4.3(1) of the *Aeronautics Act* to perform authorized functions on behalf of the Minister subject to the conditions specified in their Design Approval Procedures Manual (DAPM) or Engineering Procedures Manual (EPM) and their Letter of Authorization (LOA) and AWM 505.
- (i) **Design Approval Organization:** Means the group of individuals in the employ of and nominated by the applicant pursuant to subsections 505.403(c) and 505.403(d) and 505.405(e) of the AWM.
- (j) **Design Approval Representative:** Means any person authorized pursuant to subsection 4.3(1) of the *Aeronautics Act* to perform functions on behalf of the Minister subject to the conditions specified in AWM 505 Subchapter C (Reference, section 505.201 of the AWM).
- (k) **Finding of Compliance:** Ministerial determination that the applicant's compliance demonstration satisfies a requirement specified in the certification basis.
- (I) Letter of Authorization: The Letter of Authorization is one of the documents used by the Minister to grant privileges to an individual or enterprise outside of TCCA to act on the Minister's behalf. The LOA is viewed as a contract between the delegated individual, or the responsible person on behalf of an enterprise, and the Minister. The LOA is considered to be a Canadian Aviation Document.
- (m) Level of Involvement: The activities undertaken by TCCA specialists during a product certification activity in performing surveillance of the delegate when the delegate is exercising their delegated authority.
- (n) **Minister:** Means the Minister of Transport.
- (2) The following **abbreviations** are used in this document:
 - (a) **AC**: Advisory circular;
 - (b) **ACCT:** Aircraft Certification Consultation Team;
 - (c) **ACO:** Aircraft Certification Office;
 - (d) **ACPL:** Aircraft Certification Policy Letter;
 - (e) **ACS:** Airworthiness Control System;
 - (f) **AD:** Airworthiness Directive;
 - (g) AEO: Airworthiness Engineering Organization;

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- (h) **AFM:** Aircraft Flight Manual;
- (i) **AN:** Airworthiness Notice;
- (j) **AP:** Authorized Person;
- (k) **AWM:** Airworthiness Manual;
- (I) BASA: Bilateral Aviation Safety Agreement;
- (m) **CAN-TSO:** Canadian Technical Standard Order;
- (n) CARs: Canadian Aviation Regulations;
- (o) **CAD:** Civil Aviation Directive;
- (p) **CDP:** Candidate Development Plan;
- (q) **CMR:** Certification Maintenance Requirement;
- (r) CPR: Changed Product Rule;
- (s) **DAO:** Design Approval Organization;
- (t) **DAPM:** Design Approval Procedures Manual;
- (u) **DAR:** Design Approval Representative;
- (v) **DER:** Designated Engineering Representative;
- (w) **DIS:** Delegations Information System;
- (x) **EME:** Electromagnetic Effects;
- (y) **EPM:** Engineering Procedures Manual;
- (z) **FAA:** Federal Aviation Administration;
- (aa) FMS: Flight Manual Supplement;
- (bb) **FoC:** Finding of Compliance;
- (cc) FTOM: Flight Test Operations Manual;
- (dd) **ICA:** Instruction for Continued Airworthiness;
- (ee) **IPA:** Implementation Process for Airworthiness;
- (ff) **LOA:** Letter of Authorization;
- (gg) LOI: Level of Involvement;
- (hh) **MMEL:** Master Minimum Equipment List;
- (ii) **MSI:** Maintenance & Manufacturing Staff Instruction;
- (jj) **NAPA:** National Aeronautical Product Approval Information System;
- (kk) **ODA:** Organization Designation Authorization;
- (II) **OEM:** Original Equipment Manufacturer;
- (mm) **OPI:** Office of Primary Interest;
- (nn) PDA: Part Design Approval;
- (oo) PIPEDA: Personal Information Protection and Electronic Document Act,
- (pp) **PL:** Policy Letter;
- (qq) PVI: Program Validation Inspection;

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- (rr) RDA: Repair Design Approval;
- (ss) RMAC: Regional Managers Aircraft Certification;
- (tt) **SCA:** Special Condition—Airworthiness;
- (uu) SI: Staff Instruction;
- (vv) **SoC:** Statement of Compliance;
- (ww) **STC:** Supplemental Type Certificate;
- (xx) TC: Type Certificate;
- (yy) TCCA: Transport Canada Civil Aviation;
- (zz) TCDS: Type Certificate Data Sheet; and
- (aaa) TP: Technical Publication.

3.0 Overview of the delegation program

3.1 Why does the delegation program exist?

(1) In the context of Civil Aviation, delegation is an essential tool used by the TCCA National Aircraft Certification Branch in Ottawa and the operational branches in the TCCA Regional offices to fulfil their responsibilities towards the design approval of aeronautical products, in compliance with airworthiness standards (e.g. new design approvals, changes to existing design approvals and repairs). Through the *Aeronautics Act*, the Minister authorizes certain persons, by delegation, to act on the Minister's behalf, to assist TCCA in fulfilling the Minister's mandate. This provides a greater pool of technical experts to perform design approval work, which in turn leads to improved efficiency and response times for applicants and holders that are engaged in the design approval process. These delegates exercise their design approval authority in the many different specialties of the airworthiness standards, for example: avionics, structures, powerplants. While exercising these authorities, these delegates use the same regulations, standards, and guidance material as approved or accepted by the Minister.

3.1.1 History of the delegation program

(1) The development of TCCA's delegation framework originated in 1968 with N-AME-AO 45/68, which introduced provisions for the appointment of DARs. The Report of the Commission of Inquiry into Aviation Safety, May 1981, included in its recommendation the following: "The role and responsibilities of the Design Approval Representatives and the Airworthiness Inspection Representatives should be codified in the Airworthiness Code". The inquiry, conducted by Justice Dubin, recognized the value of these functions and thus recommended that they be formally recognized in the legislation governing aeronautics in Canada. Transport Canada accepted this recommendation, and in its response committed to "amending the Aeronautics Act to provide for the inclusion of Authorization, by the Minister, of persons engaged in the field of Airworthiness". Also, the commitment was made for the AWM to include the standards for, and the roles and responsibilities of, those persons so authorized to act on behalf of the Minister. On 28 June 1985, the Aeronautics Act was amended to include specific provisions authorizing the Minister to delegate any of the powers, duties or functions, except the power to make Regulations and Orders. During the development of the airworthiness standards for delegation, the DAR concept was expanded and two new categories were added for corporate delegates: the AEO and the DAO. These concepts were incorporated as a revision to AWM 505. The AEO and DAO replaced the "company DAR" category from N-AME-AO 45/68 and introduced the concept that the corporation is the delegate and is responsible for having adequate resources to support and

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maintain the delegation. Although the corporation is the delegate, individuals are still required to carry out the authorized functions. The authorized individuals within a corporate delegate are now referred to as APs, who also have a delegation from the Minister.

3.2 Evolution of the Delegate's Handbook

- (1) Until 1998, the Aircraft Certification Branch, now National Aircraft Certification Branch, headquartered in Ottawa, was solely responsible for the delegation program, at which point the responsibility was shared with the TCCA Regional offices. The "Delegations Handbook for Delegated Engineers and Design Approval Representatives", TP 12995, was developed with the goal of ensuring the delegation program was implemented in a consistent manner.
- (2) The first revision to the Handbook (Issue 1) incorporated a change in policy that resulted in the removal of most of the procedures from the sample EPM and their insertion into the body of the Handbook in an effort to streamline the EPM approval process.
- (3) The second revision (Issue 2) was promulgated to incorporate the changes necessary for implementation of the Changed Product Rule (CPR).
- (4) Since then, TCCA has issued a number of new and revised documents (e.g. Civil Aviation Directives, Staff Instructions, Supplementary Staff Instructions, Aircraft Certification Staff Instructions, Advisory Circulars, Policy Letters...etc.), cancelled a number of documents, evolved the workings of the delegation system, and published subpart 521 of the CARs.
- (5) This issue of the Handbook has been updated to reflect the current regulatory environment.

3.3 Delegation concepts and principles

3.3.1 Introduction

- (1) The principles of delegation describe the concepts, rationale, roles, responsibilities and expectations for the authorization of persons to perform functions on behalf of the Minister. The principles of delegation are meant to guide the conduct of delegates and TCCA staff, based on the following considerations:
 - (a) Delegation is a partnership balancing the needs and responsibilities of both Industry and TCCA;
 - (b) Delegation maximizes Industry and TCCA's capabilities in certifying aeronautical products;
 - (c) Granting of delegation reflects TCCA's trust in the competence and integrity of the delegate; and
 - (d) Responsible and accountable use of delegation ensures the continued public and foreign civil airworthiness authorities' confidence in the safety of Canadian aeronautical products.

3.3.2 The principles of delegation

- (1) Delegation is a partnership:
 - (a) The certification process is cooperative.
- (2) TCCA and the delegate share a commitment to aviation safety:
 - (a) Through delegation, TCCA has access to a broader range of technical expertise and an increased number of qualified personnel to fulfil its responsibility for aviation safety;
 - (b) Through delegation, the delegate has access to the regulatory and technical expertise of TCCA to fulfil its responsibility for aviation safety; and

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- (c) Both TCCA and the delegate are accountable for, and committed to, addressing compliance and safety concerns proactively.
- (3) TCCA is responsible to the delegate:
 - (a) TCCA extends flexibility to the delegate to manage its own organization's compliance to the delegation standards or requirements;
 - (b) TCCA respects the procedures developed by the delegate and which are in turn accepted by TCCA on behalf of the Minister;
 - (c) TCCA makes available to the delegate all the information necessary to perform their authorized functions; and
 - (d) TCCA conveys its expectations regarding delegation and certification to the delegate on an ongoing basis.
- (4) The delegate is accountable to the Minister:
 - (a) During the performance of authorized functions;
 - (b) APs are accountable to the DAO/AEO, and ultimately to the Minister;
 - (c) The delegate makes findings of compliance (FoCs) and approvals on behalf of the Minister using the regulations, standards and advisories approved or accepted by the Minister;
 - (d) The delegate will not knowingly make an FoC using an interpretation of the standards that is different from that of the Minister; and
 - (e) Procedures developed and used by the delegate are aligned with the procedures and policies of TCCA.
- (5) The delegate is responsible for the performance of authorized functions:
 - (a) Where the delegate is part of a corporation, the corporation provides the AEO or DAO the authority, freedom and resources to perform the investigation to the level required to ensure that compliance has been established;
 - (b) The AEO or DAO may authorize persons within the corporation in accordance with the procedures approved by the Minister to assist in managing functions necessary to exercise the delegation.

Note: This does not include authorizing persons to make an FoC to the airworthiness standards;

- (c) The delegate carries out only those functions for which they are authorized on behalf of the Minister in accordance with approved procedures;
- (d) The delegate determines the level of investigation required to determine compliance;
- (e) The delegate cannot devolve responsibility for authorized functions;
- (f) The delegate may use other persons to assist in the performance of those functions related to test witnessing, but the delegate remains responsible for the FoC (see section 8.4.3 for more details); and
- (g) The delegate must first make an FoC before a design can be approved.

3.3.3 Roles and expectations

- (1) The delegate:
 - (a) Accepts the responsibilities associated with delegation;
 - (b) Recognizes TCCA's role as the national authority for aircraft certification in Canada;

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- (c) Works in partnership with TCCA in determining that an aeronautical product design complies with applicable airworthiness and environmental standards;
- (d) Communicates effectively at all levels with corresponding TCCA personnel;
- (e) Promotes early identification of issues and takes a proactive approach in resolving them;
- (f) Submits complete and accurate data in support of certification;
- (g) Maintains an effective Airworthiness Control System (ACS) to ensure the quality and completeness of the substantiating data; and
- (h) Maintains proficiency in their areas of expertise and ensures that the AP is supported in terms of infrastructure and authority.

(2) TCCA:

- (a) Sets requirements for certification of aeronautical product design;
- (b) Provides assistance to the delegate in finding compliance with airworthiness standards;
- (c) Fulfils specific certification functions including functions which cannot be delegated;
- (d) Applies a consistent process to aircraft certification from application to issuance of approval;
- (e) Plays an advocacy role on behalf of Canadian designed aeronautical products at the international level:
- (f) Exercises due diligence on behalf of the Minister and foreign civil airworthiness authorities:
- (g) Develops and promotes delegation in consultation with Industry;
- (h) Communicates effectively at all levels within TCCA with corresponding delegate personnel;
- (i) Shares and coordinates information relating to international regulatory activities; and
- (j) Maintains proficiency in all aircraft certification areas of expertise, including interpretation of regulations, standards and guidance material.

3.3.4 Summary of delegation concepts and principles

(1) Delegation is based on the mutual understanding and respect between industry's and TCCA's technical and regulatory expertise. The integration of this expertise enables the collaborative framework which provides a more effective certification process, with decisions made using the best available knowledge and expertise.

3.4 Regulatory framework

- (1) The *Aeronautics Act* and Canadian Aviation Regulations are the legislative and the regulatory instruments governing Canadian aviation. Section 4.2 of the *Aeronautics Act* states that the Minister: "is responsible for the development and regulation of aeronautics and the supervision of all matters connected with aeronautics".
- (2) To fulfil these responsibilities, the Minister is provided with various resources and tools, which include the power to delegate to others. This power is specified in the *Aeronautics Act*, Section 4.3(1), namely:

"The Minister may authorize any person or class of persons to exercise or perform, subject to any restrictions or conditions that the Minister may specify, any of the

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- powers, duties or functions of the Minister under this Part, other than the power to make a regulation, an order, a security measure or an emergency direction."
- (3) AWM 505 contains the requirements for authorizing delegates. Advisory material supporting AWM 505 includes this AC, SI 505-001, and the other reference documents listed in Section 2.1.

3.5 Role of delegate vs applicant vs holder in respect of design approval documents

- (1) The delegate, when exercising their privileges on behalf of the Minister, plays an active role in aeronautical product design approval projects to fulfil the Minister's responsibilities under the *Aeronautics Act* and subpart 521 of the CARs.
- (2) The responsibilities of the delegate when representing the Minister are:
 - (a) Making FoC to the AWM requirements in accordance with the scope of their privilege(s), attesting that a characteristic of the type design or change to the type design satisfies the applicable design requirements as defined in their DAPM/EPM; and
 - (b) If so authorized, issue an approval for a type design change or repair in accordance with the provisions of subpart 521 of the CARs.
- (3) The responsibilities of an applicant for a type design document are to:
 - (a) In accordance with section 521.57 or 521.160(a) of the CARs, submit to the Minister a declaration attesting to the demonstration of compliance of the aeronautical product with its certification basis; and
 - (b) Submit a signed undertaking to carry out the responsibilities identified in Division VIII of subpart 521 of the CARs.
- (4) The responsibility of a design approval document holder is to:
 - (a) Fulfil the conditions specified in CAR 521 Division VIII.

3.5.1 Delegate signature (Minister) vs subject matter expert signature

(1) When a delegate is exercising their privilege to act on behalf of the Minister, their signature will also contain the DAO/AEO/DAR number, and if applicable, their AP number. Any signature without the applicable number(s) does not constitute an attestation on behalf of the Minister (the individual is not exercising their delegated authority). When the delegate is acting as a subject matter expert, they should not use their DAO/AEO/DAR number.

3.5.2 Documents a delegate (AP/DAR) signs as a Minister's representative

- (1) It is not unusual for an AP/DAR to take on multiple roles during the various phases of a certification program or product lifecycle. Typically these roles are:
 - (a) Acting on behalf of the Minister;
 - (b) Acting on behalf of the applicant for a design approval document; and
 - (c) Acting on behalf of a design approval document holder.
- (2) Care needs to be taken to ensure that the unique requirements and expectations of each role are not mixed to avoid creating undue burden on the delegate. The expectations of each role are further clarified in Section 10 and in SI 505-003.
- (3) A person who is a delegate may assist the applicant/holder for a design approval document in generating data and documents by following processes defined by the applicant/holder in support of applicant/holder responsibilities. These activities, although performed by an individual who is

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- also a delegate, are not considered acts on behalf of the Minister. In so supporting the applicant, the individual is applying their expertise but is not exercising their Ministerial delegated authority.
- (4) A common misconception is that a delegate (AP or DAR) is required to sign all documentation they generate for the applicant/holder of a design approval document with their Minister's delegate signature. This is not the case. A delegate (AP or DAR) is expected to perform their due diligence, as required to support an FoC as stated in their LOA, including the review of any pertinent data produced by the applicant for the purposes of demonstrating compliance to the applicable standards. In some cases, the data will be developed by persons other than the delegate and as such, the delegate would review the data in order to support their FoC. In other situations, a person who happens to also be a delegate may have developed this data him/herself. Any activity by the applicant, or on behalf of the applicant, to develop data in support of the demonstration of compliance is not a delegated function. It is the applicant's responsibility to demonstrate compliance. Subsequent to the applicant's demonstration of compliance, the delegate can make or withhold a FoC, as appropriate. It is the act of finding compliance itself, not the demonstration of compliance and/or creation of the supporting data that constitutes exercising Ministerial authority.

3.5.3 What does it mean to be a delegate?

- (1) It is not the right of every qualified candidate to receive a Ministerial delegation, but rather it is a privilege that is granted at the discretion of the Minister.
- (2) AWM 505 sets out criteria and conditions under which an applicant for delegation may obtain privileges in order to carry out functions on behalf of the Minister as a DAR, DAO, an AEO or an AP within a DAO/AEO.
- (3) When conducting activities on behalf of the Minister, the delegate uses the same standards, procedures, and interpretations applicable and acceptable to TCCA employees accomplishing similar tasks. The delegate is also required to observe all conditions and limitations imposed by the Minister on the authority delegated, as defined in the LOA and DAPM/EPM. The level of investigation conducted is the same irrespective of whether the delegate is making an FoC on behalf of the Minister or it is completed by TCCA.
- (4) A delegate offers technical expertise with state-of-the-art knowledge regarding aeronautical product design, thereby complementing the pool of specialists the Minister can rely on to complete the aircraft certification process. The relationship between TCCA specialists and delegates is based on trust and professionalism, building on the mutual interest of achieving the highest levels of aeronautical product safety. This cooperative working relationship also extends to the management of the TCCA aircraft certification delegation program and the leadership of the delegated entities or individuals.
- (5) A delegate is expected to respect the spirit of the Public Service of Canada Values and Ethics policy. Additional details are found in Section 3.7 of this document, "TCCA Values and Ethics and Independence of the Delegate".
- (6) When the delegate is performing their duties on behalf of the Minister, the Government of Canada will indemnify the delegate as discussed in Section 3.9, "Liability".
- (7) The tools that are used by TCCA to administer and oversee the Delegation Program are discussed in:
 - (a) Section 5 "Letter of Authorization Structure";
 - (b) Section 6 "Delegate Procedures Manuals"; and
 - (c) Section 7 "TCCA Oversight of Delegates".

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3.6 Types of delegates

- (1) Prior to an application for delegation being processed, the applicant for delegation needs to discuss with TCCA the need for the delegation. TCCA needs to determine that there is value to the Minister in granting a delegation, prior to committing the resources to setup and manage a delegate.
- (2) Currently the Aircraft Certification Delegation Program has three categories of delegates:
 - (a) DAO: The DAO is found in a corporation whose activities include being involved in type certification activities, design changes and repairs of aeronautical products;
 - (b) AEO: The AEO is found in organizations that have an air operating certificate and who complete design changes and repairs to aircraft in their fleet; and
 - (c) DAR: A DAR is an individual specialist, authorized to make FoC to specific airworthiness manual paragraphs in one or more specialty areas.
- (3) The AP is an individual specialist in a DAO or AEO, who meets the requirements of section 505.409 (DAO) or 505.109 (AEO) of the AWM. The AP will have an LOA from the Minister. The scope of delegation to the AP is defined by their LOA and their DAO/AEO DAPM or EPM.
- (4) DARs will also receive an LOA, similar to an AP.
- (5) Typical areas of delegation include but are not limited to:
 - (a) Structures;
 - (b) Powerplants;
 - (c) Fuel and Hydro Mechanical Control;
 - (d) Avionics;
 - (e) Electrical;
 - (f) Software and Airborne Electronic Hardware;
 - (g) Occupant Safety and Environmental Systems;
 - (h) Electromagnetic Effects (EME);
 - (i) Flight Test Pilot; and
 - (j) Flight Test Analyst.
- (6) Some of these specialties are further broken down into subgroups. The specific type of delegation would be determined in discussions with TCCA.
- (7) It is important to note that due to the increasingly high level of integration in aeronautical products, past practices where an avionics delegate solely addressed software aspects in isolation have changed. With the industry move to highly integrated products and with the increasing prevalence of software in avionics, electrical and control systems, delegates are reminded that projects that require the development/certification of software will also require the involvement of a delegate in the software speciality to contribute to an FoC in specific areas such as sections 523.1309, 525.1309, 527.1309 and 529.1309 of the AWM. Due to the evolution of the software specialty, existing avionics delegates that have a software delegation should discuss with their RMAC the need to have their software scope of delegation reviewed by the Manager Electronic Equipment Design Assurance, National Aircraft Certification. This review may result in a revised EPM/DAPM and LOA to reflect two distinct engineering specialties: Avionics and Software.

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3.6.1 Basic organization structure of a DAO/AEO

- (1) The requirements for a DAO and AEO are defined in AWM 505 and SI-505-001. The manner in which these requirements are addressed will vary based on the size and complexity of the delegated organization within the corporation and are documented in the delegate's Procedures Manual. The Manual addresses topics such as:
 - (a) How APs will be managed within the DAO/AEO;
 - (b) AP succession planning;
 - (c) The processes for APs to follow when performing their Ministerial duties; and
 - (d) TCCA meetings with APs and delegate management.
- (2) Each corporation is somewhat unique in its structure and, as a result, there should be extensive consultation with TCCA on how requirements are addressed.
- (3) Both AEOs and DAOs will have APs that have a delegation from the Minister to make FoC to specific requirements of the AWM and perform other authorized functions. This delegation is defined in the AP's LOA, and is further discussed in Section 5 "Letter of Authorization Structure". The aggregate total scope of the APs defines the total scope of the DAO/AEO. APs are typically grouped by specialty functions that loosely mirror the Engineering and Flight Test organizations in TCCA.

3.6.2 Differences between a DAR, DAO and AEO

- (1) The requirements for a DAR are defined in AWM 505 and SI-505-001. A DAR as an individual specialist, is authorized to make FoC to specific AWM requirements and perform specific functions. A DAR will have an EPM that describes the processes that they will follow when exercising their privileges. Additional details about a DAR EPM can be found in Section 6 "Delegate Procedures Manuals". The DAR's EPM and LOA specify the boundaries of the DAR's scope of delegation. It is possible for some individuals to be granted a scope of delegation in more than one specialty area, for example Avionics and Electrical. The DAR specialties have evolved over time and tend to mirror the Engineering and Flight Test specialties in TCCA.
- (2) The "DAR—General" category has been phased out; however, it has been grandfathered for existing delegation holders. New DAR applicants are required to pick an Engineering/Flight Test specialty. The "DAR—Systems and Equipment" delegation is also being phased out, with new DAR applicants being asked to choose an area of expertise.
- (3) Table 1 provides a summary of the differences between DAR, DAO and AEO.

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Table 1 Difference between a DAR, DAO and AEO

	I	e between a DAN, DAO a	I
	DAR	DAO	AEO
	Design Approval Representative	Design Approval Organization	Airworthiness Engineering Organization
Scope of Delegation	Authorized to make FoC and perform authorized functions.	Authorized to make FoC and perform authorized functions.	Authorized to make FoC and perform authorized functions.
Delegation granted to:	A Person	 A Corporation AP within the DAO 	 A Corporation that has an air operating certificate. AP within the AEO.
Area of activity	Design changes and Repairs.	Type certification, design changes and repairs.	Design changes and repairs to aircraft in its fleet.
Citizenship and Residency	Canadian citizen or permanent resident having an ordinary place of business in Canada.	Ordinary place of business in Canada.	Ordinary place of business in Canada.
Airworthiness Control Committee	Applicable for projects requiring the interaction of multiple specialties.	Yes	Yes
Self-Audit/Quality Control	Recommended	Mandatory per AWM 505.	Mandatory per AWM 505.
Multiple Authorized persons	No	Yes	Yes
Procedures Manual	EPM	DAPM	EPM
Letter of Authorization issued to:	The individual	The Corporation Each AP	The Corporation Each AP

3.7 TCCA values and ethics and independence of the delegate

(1) The "Values and Ethics Code for the Public Sector" is applicable to all TCCA employees. This code can be found at the Treasury Board of Canada website or by searching criteria "Policy on Legal Assistance and Indemnification". While delegates are not public servants, it is expected

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- that every delegate respects the spirit of the "Values and Ethics Code for the Public Sector" when they are carrying out any activity that may include actions on behalf of the Minister, or when they may be reasonably perceived as undertaking activities on behalf of the Minister.
- (2) With the objective of respecting the spirit of the Values and Ethics Code, a delegate is requested to:
 - (a) Review the "Values and Ethics Code for the Public Sector" documented in the referenced website and understand how the spirit of the principles and practices apply to their work as a delegate;
 - (b) Demonstrate and uphold the spirit of the Values and Ethics Code through their personal and professional behaviours when operating as a delegate;
 - (c) Adhere to the spirit of this Code as a condition of both receiving and retaining their authorization as a delegate; and,
 - (d) Seek guidance by contacting TCCA when they have questions or uncertainty with respect to this Code.
- (3) Section 6.6 addresses the need for a delegate to be independent of applicant or holder pressures, despite the inherent conflict of interest in the delegation program. While all parties want to ensure a safe, reliable, compliant aeronautical product, sometimes business pressures, such as applicant timelines and commitments, conflict with Ministerial interests.
- (4) Delegates are expected to maintain a level of independence from the applicant or holder for a design approval document, when performing due diligence on behalf of the Minister. This is referenced in a delegate's LOA with the following statement:
 - "...review the applicant's data, make any engineering inspection or assessment and conduct or witness any test necessary to verify that the data is correct and is sufficient to enable you to determine compliance with the applicable standards of airworthiness;..."
- (5) If an AP or DAR feels that they are being subjected to undue pressure from the applicant or holder while performing their Ministerial duties:
 - (a) For an AP: They are encouraged to address their concerns within their DAO/AEO for resolution. If a satisfactory solution cannot be found, then raise the matter to their TCCA counterpart; and
 - (b) For a DAR: They are encouraged to contact their TCCA counterpart.

3.8 Delegate limitations

- (1) The boundaries of a delegate's scope of authorization are defined by their procedures manual and LOA. In rare unique situations, a DAO/AEO, with TCCA agreement, may include in the procedures manual, additional restrictions applicable only to specific specialities. In the case of a DAO/AEO, the procedures manual will contain limitations that are applicable to all APs within the organization. Specific limitations to each AP will be contained in the AP's LOA.
- (2) TCCA has defined limitations that are applicable uniformly to all delegates.
 - (a) If it is within their scope of privileges, TCCA expects delegates to make an FoC to AWM requirements related to the following documents, however, TCCA will retain the responsibility and authority for their approval:
 - (i) An aircraft flight manual (AFM) or flight manual supplement. There are some exceptions as stated in PL 500-003;
 - (ii) A master minimum equipment list (MMEL), MMEL supplement or MMEL addendum;

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- (iii) An Airworthiness Limitation (AWL) or Certification Maintenance Requirement (CMR) contained in the Instructions for Continued Airworthiness (ICA);
- (iv) A noise approval applicable to an aircraft and/or engine in accordance with AWM 516; and
- (v) A limitation contained in a Maintenance Manual or a Maintenance Manual Supplement, including damage tolerance, where applicable, or a service life applicable to any life-limited part of an aeronautical product.
- (b) TCCA will retain the responsibility for the following FoC, approvals and Ministerial responsibilities:
 - (i) FoC relating to findings of equivalent safety and exemptions;
 - (ii) Special Conditions Airworthiness (SCA), unless TCCA has specifically granted this privilege to the delegate;
 - (iii) Issuance of a Type Certificate (TC), Part Design Approvals (PDA), Canadian Technical Standard Order (CAN-TSO) design approvals, and Supplemental Type Certificates (STC) (excluding serialized STC's);
 - (iv) Establishing the certification basis, if different from that identified on the Type Certification Data Sheet for a previously certified aeronautical product; and
 - (v) FoC for new, novel, or unique technologies.
- (c) Only those delegated functions in the authorized areas specified in the EPM / DAPM and the TCCA letter of authorization may be exercised.
- (d) The delegated privileges are not transferable and cannot be further delegated.
- (e) New Airworthiness requirements and standards introduced subsequent to an appointment shall be reviewed with TCCA with respect to their applicability to the delegate's scope of delegation. A new LOA may be required.

3.9 Liability

- (1) A delegate, when acting under a Ministerial authorization, represents the Minister. A delegate is not an employee of the Government of Canada. As a private individual, a delegate is subject to general tort law.
- (2) A delegate is considered to be a Crown Servant (for policy purposes) since they are a representative authorized in writing to act on behalf of a serving Minister. For more information, see the Treasury Board Secretariat website using search criteria: "Policy on Legal Assistance and Indemnification".

3.10 TCCA delegate oversight and management responsibilities and systems

3.10.1 TCCA responsibilities for delegate management

(1) TCCA Standards Branch's Aircraft Certification Standards division is responsible for the policy and guidance pertaining to the governance of the delegates. The day-to-day oversight of delegates is done by the National Aircraft Certification Branch. This oversight is split between divisions focusing on operations in Ottawa and in the Regions. The responsibilities of the National Aircraft Certification Branch in Ottawa and in the Regions is defined in the subsections below.

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3.10.1.1 National Aircraft Certification regional responsibility

- (1) The RMACs have functional responsibility for delegates who are primarily involved in design changes and repairs. Specifically, the Regions are typically responsible for oversight and support to:
 - (a) DARs, excluding those in the specialties of Flight Test and Software specialties;
 - (b) AEOs; and
 - (c) DAOs involved in design change activities, repair activities, and/or in CAN-TSO Design Approvals.

3.10.1.2 National Aircraft Certification in Ottawa responsibility

- (1) The Delegations and Surveillance Division of the National Aircraft Certification Branch is responsible for OEM Enterprise DAOs involved in type certification activities, and for all Flight Test and Software delegates. For corporations that have a combination of type certification, design change and repair activities, the delegation oversight responsibilities will be decided on a case-by-case basis in consultation with the applicable TCCA Region.
- (2) It should be noted that there may be exceptions and the TCCA Regions may handle some DAO activity associated with initial type certification.

3.10.2 Delegations Information System (DIS)

(1) Delegates are publicly listed in the Delegations Information System (DIS). The DIS may be found by searching the Transport Canada website with the following criteria "Transport Canada delegation information system". Delegates have the responsibility to inform TCCA if any information shown in DIS is incorrect or needs to be updated. DIS is managed by the Delegations and Surveillance Division of the National Aircraft Certification Branch.

3.10.3 Delegate oversight—post appointment monitoring

(1) Monitoring of the newly appointed AP/DAR should be carried out in accordance with the procedures described in the delegate's procedures manual and TCCA's own procedures.

3.10.4 Delegate oversight—TCCA Level of Involvement (LOI)

(1) TCCA uses the LOI policy to conduct oversight on delegates when they are exercising their delegated privileges during a certification project. Additional details can be found in Section 7.0.

3.10.5 Delegate oversight—TCCA formal surveillance

(1) Surveillance encompasses all activities directly related to TCCA evaluating a delegate's (DAO, AEO, DAR) compliance with applicable regulatory requirements using TCCA defined formal inspection methodology. The surveillance methodology is documented in AC SUR-004. Details of management of corrective actions resulting from TCCA's surveillance program can be found in AC SUR-002.

3.11 Tools to manage delegation scope of privileges

(1) The delegate's LOA and procedures manual together define the scope of privileges delegated to an AP or DAR, and document the procedures the delegate will use to exercise these privileges. These two documents are closely linked and form the basis from which TCCA and the delegate

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will work together on certification programs. Additional details about these can be found in Section 5 "Letter of Authorization Structure" and Section 6 "Delegate Procedures Manuals."

4.0 Application process

4.1 Office of Primary Interest (OPI)

- (1) Individuals or corporations interested in obtaining a delegation should direct their applications to the RMAC or the National Aircraft Certification Branch in Ottawa Office of Primary Interest (OPI) that will be interfacing with the applicant the most. Depending on circumstances, TCCA may subsequently assign a different OPI from the one that is applied to, but generally the following will apply:
 - (a) Prospective applicants for delegation who are holders of a TC or who have operations on a national scale will interact principally with the National Aircraft Certification Branch in Ottawa. These applicants should direct their applications to the Chief, Delegations and Surveillance Division of the National Aircraft Certification Branch;
 - (b) Individuals who are prospective applicants for delegation as a DAR in the specialty of Flight Test or Software will interact principally with the National Aircraft Certification Branch in Ottawa. These applicants should direct their applications to the Chief, Delegations and Surveillance Division of the National Aircraft Certification Branch; and
 - (c) Prospective applicants for all other types of delegation will interact with Aircraft Certification personnel at the Regional office with jurisdiction over the prospective applicant's operations. These applicants should direct their applications to the RMAC of the TCCA Regional office having jurisdiction over their operations.
- (2) See Section 13 "Contact Information".

4.2 Types of application

4.2.1 New DAO, AEO, or DAR applicant

- (1) AWM 505 specifies the requirements that are to be met by an applicant when applying for delegation, as follows:
 - (a) Subchapter B—Airworthiness Engineering Organization;
 - (b) Subchapter C—Design Approval Representative; and
 - (c) Subchapter E—Design Approval Organization.
- (2) For AWM 505 Subchapter C Design Approval Representative, TCCA has also published an AC that provides information as follows: AC 505-001.
- (3) For all AEOs and DAOs, also refer to AC 505-002.

4.3 Application requirements common to DAO, AEO, and DAR

(1) Prior to making a formal application for delegation, the individual or corporation should speak with TCCA to discuss their capability to obtain this privilege. For each applicant or prospective applicant, TCCA needs to determine if there is value to the Minister in pursuing the delegation application. By having early discussions with TCCA, the applicant for delegation can make an informed decision to proceed, or not, prior to investing the time required to generate the documentation required for an application.

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- (2) Applications for delegation shall be in a written form; the format of the resulting written document is not specified and may be either electronic or hardcopy. Contact the RMAC or the Delegations and Surveillance Division for assistance and guidance with the application process and required supporting documentation information.
- (3) The applicant for delegation shall submit a checklist to demonstrate compliance with the criteria specified in the applicable subchapters of AWM 505, along with the supporting information.
- (4) Applications to become a delegate must include the name of the applicant for delegation and the address of the ordinary place of business. The ordinary place of business will serve as a mailing address, and is not to be confused with the address of a certification applicant (subpart 521 of the CARs) which a delegate is supporting.
- (5) The application review process may include an interview and briefing with a TCCA National Aircraft Certification Branch Manager/Specialist, and/or an RMAC.
- (6) Appointment of an individual as a DAR or as an AP in a DAO/AEO does not relieve the individual from meeting those requirements enacted by Provincial/Territorial Professional Engineering licensing laws. Provincial or Territorial law may require an individual to be a licensed Professional Engineer (ie. P.Eng.) in order to engage in the practice of providing engineering services within that province or territory. Each delegation applicant should determine whether each province or territory in which the individual intends to offer engineering services, requires licensing as a Professional Engineer in order to provide that service.
- (7) SI 505-001 provides further information about the delegation process including an outline of the qualification guidelines for delegation applications in the specialty of Software and Flight Test. This SI also discusses changes to authorization such as expansion, temporary expansion or reduction of authorized scope.

4.3.1 AEO application

- Section 505.103 of the AWM specifies minimum eligibility requirements for becoming an AEO.
- (2) The application should include:
 - (a) The air service Operating Certificate number and the list of products the applicant for delegation may maintain under the Operating Certificate;
 - (b) A draft copy of the EPM; and
 - (c) The AP applications discussed in Section 4.3.4.

4.3.2 DAO application

- (1) Section 505.403 of the AWM specifies minimum eligibility requirements for becoming a DAO.
- (2) The application should include:
 - (a) A listing and brief description of the aeronautical products that the applicant for delegation intends to design, modify or repair;
 - (b) A draft copy of the DAPM; and
 - (c) The AP applications discussed in Section 4.3.4.

4.3.3 DAR application

- (1) Section 505.203 of the AWM specifies minimum eligibility requirements to become a DAR.
- (2) The application for delegation should include:

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- (a) A listing and brief description of the aeronautical products that the applicant for delegation intends to design, modify or repair;
- (b) A draft copy of the EPM. TCCA has developed EPM templates, based on each technical discipline which are available on request from the RMAC or Delegations and Surveillance Division:
- (c) The scope of the delegation requested based on the applicant's specialty;
- (d) An up-to-date resume, along with all information necessary to confirm the qualifications and eligibility required by AWM 505 Subchapter C; (such as experience records and knowledge, activity logs);
- (e) A Candidate Development Plan (CDP) or equivalent, which indicates the training that has been and will be undertaken by the applicant for delegation in order to achieve the necessary qualifications. The CDP will, for example, indicate the timeframe when the applicant will complete the following:
 - (i) TCCA Aircraft Certification Speciality course;
 - (ii) TCCA Changed Product Rule course; and
 - (iii) Anticipated projects the candidate will be working on to develop a working relationship with TCCA.
- (f) Proof of successful completion of the training outlined in the CDP. The CDP is reviewed by TCCA, on an as-required basis, to determine if the applicant is on-track to achieve the necessary qualifications.
- (3) Individuals may make an application to become a DAR for private purposes while in the employ of a corporation provided that:
 - (a) There is no conflict with the employer; and
 - (b) If the employer has a DAO or AEO, the services are not being offered to the employer. If the employer has a DAO, see section 4.3.6 for information about multiple authorizations.

4.3.4 AP application

- (1) The minimum eligibility requirements for an AP in an AEO are specified in AWM 505.109 and, for an AP in a DAO in AWM 505.409.
- (2) The same requirements as in Section 4.3.3 paragraphs (2) through (3) apply.
- (3) An application for a new AP within a delegated organization does not necessitate a new application for the AEO/DAO, only for the individual.
- (4) An application for a new AP will be coordinated through the office of the head of the DAO/AEO, and will follow the procedures set out in the approved procedures manual (DAPM or EPM).
- (5) The table of concordance in the delegate procedures manual, which lists the specific AWM paragraphs delegated, may require updating, depending on the scope of delegation required for the AP.

4.3.5 Changes to existing delegation

- (1) Changes to approved procedures may necessitate a re-approval of the procedures in question. This will be coordinated through the TCCA OPI.
- (2) Changes in the authorized activities (i.e. scope) of APs may be treated as a new application and a reassessment against the requirements of AWM 505 may be performed.

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(3) A revised scope of delegation, such as addition / removal of limitations in an LOA, will result in a new LOA signed by the Director of the National Aircraft Certification Branch. A delegate's (DAO/AEO, DAR, AP) scope may change as a result of revisions in their DAPMs / EPMs. Approvals to revisions of existing DAPMs/ EPMs may be completed by RMACs.

4.3.5.1 One-time expansion of scope

- (1) TCCA has developed criteria for granting one-time expansion of scope on a per project basis, where development initiatives are in place, or for administrative purposes such as preceding a permanent scope of expansion through a DAPM/EPM revision.
- (2) One-time scope expansions are not intended to compensate for limited availability of TCCA resources or project scheduling difficulties.
- (3) Where the business case of the delegate has evolved to the degree where additional scope of authority is warranted, the delegate and OPI will agree on a development plan to allow the delegate a means of demonstrating competency for the additional scope and eventually having the scope updated by DAPM/EPM revision.

4.3.5.1.1 One-time expansion of scope principles:

- (1) One--time expansions of scope are granted on a per-project basis and do not diminish the service or surveillance obligations on TCCA nor the responsibilities on the delegate.
- One-time expansions of scope are granted only for acknowledging additional airworthiness standards not contained within the delegate's scope.
- (3) Coordination between the delegate and OPI has taken place (in the certification planning phase) to ensure TCCA is fully aware of the implicated airworthiness standard and is confident in the delegate's ability to make the FoC.
- (4) One-time expansions of scopes are an additional tool, used on a per-project basis, for the effective management of delegations and are not intended to circumvent the necessity for a DAPM/EPM revision where the delegate has been found competent in executing the extended scope of authority.
- (5) Oversight of a one-time expansion of scope is done by applying adequate LOI, where risk indicators justify TCCA involvement.

4.3.5.1.2 Criteria when considering one-time expansion of delegation:

- (1) The delegate will have prepared a rationale, including a record of their research as applicable, supporting the area for which they are requesting the one-time expansion.
- (2) The delegate has several years of experience following initial delegation.
- (3) The working relationship between TCCA and the delegate is functional.
- (4) The delegate demonstrates that they can effectively and vigorously represent the Minister's interests.
- (5) There are no open surveillance findings against the delegate.
- (6) The delegate's manual is current in all aspects.
- (7) The delegate has demonstrated an ability to appropriately interpret and implement regulatory guidance material.

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4.3.5.1.3 One-time scope expansion practices:

- (1) One-time expansions of authority are requested in writing by the delegate in accordance with the appropriate provision of AWM 505 and submitted to the TCCA Regional office, or the National Aircraft Certification Branch in Ottawa, for consideration.
- (2) One-time expansions of authority are granted by the appropriate TCCA Regional office, or National Aircraft Certification Branch in Ottawa, by replying in writing to the delegate. The letter will include appropriate limitations to the authority at the discretion of the TCCA Regional office or National Aircraft Certification Branch in Ottawa.
- One-time expansions of authority, granted by the appropriate TCCA OPI are to be signed by the RMAC or the Director of the National Aircraft Certification Branch upon recommendation by the delegate OPI.
- (4) If the requested expansion of delegation is denied, the denial must be provided in writing with supporting rationale as to why the request is not granted.
- One-time expansion letters, either granting or denying, are retained on the delegate's file within RDIMS or in accordance with the departmental information retention policies.

4.3.6 Individuals with multiple authorizations

- (1) An individual may be authorized to act as a DAR or as an AP within one or more DAO/AEOs at the same time. In such cases, TCCA will issue separate authorizations consisting of a separate delegate number and LOA for each.
- (2) A DAR may not regularly perform authorized functions for an employer who has a DAO/AEO. In this case, an authorization as an AP within that DAO/AEO should be obtained.
- (3) A DAR performing isolated (i.e. a single project) authorized functions in conjunction with a DAO does not necessarily need a second authorization (as an AP within that DAO). TCCA will advise on such situations.
- (4) TCCA expects that all APs within a DAO / AEO self-declare if they hold other delegations.
- (5) The LOAs issued to an individual are mutually exclusive and cannot be combined to expand a delegated scope of authority. For example, when working within a particular DAO, only the applicable LOA as an AP may be used; the LOA as a DAR cannot be used in this case.
- (6) The scope of authority of an individual who is a DAR may be different from the scope of authority they have as an AP within a DAO/AEO.
- (7) Each authorization is managed by the TCCA Region or National Aircraft Certification Branch in Ottawa, which has oversight responsibilities for the delegated individual. If the authorizations span more than one geographical area of responsibility, then TCCA will determine which area will be responsible for oversight of the delegate.

4.3.7 Interpretation of individual eligibility requirements of sections 505.109, 505.203 or 505.409 of the AWM

- (1) All DAR and AP applications are required to meet all applicable requirements of eligibility as stated in sections 505.109, 505.203, or 505.409 of the AWM.
- (2) Subsection 505.109(b)(1), 505.203(a) and 505.409(b)(1) provide the Minister the flexibility to recognize persons who are not formally trained as engineers, but have a technical education and work experience specific to a unique specialty related to the functions of aircraft certification.
 - (a) In these cases the Minister shall establish the required knowledge and technical experience suitable in the Minister's opinion for the delegation of authority requested, as

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per the applicable eligibility requirements. The one year working relationship with TCCA is typically extended in these cases.

- (b) TCCA will consider the following criteria while reviewing these types of applications:
 - A DAR/AP applicant or nominee who did not graduate from an engineering discipline should have successfully graduated from a degree or diploma program with courses directly related to the requested field of specialty from either a recognized university or a technical college;
 - (ii) An individual holding either an engineering degree/diploma, or a degree/diploma with courses directly related to the requested field of specialty from either a foreign or non-recognized university or technical college, should obtain a determination of academic equivalency through the assistance of the Canadian Information Centre for International Credentials, or a similar recognized service; and
 - (iii) In the case of broad delegation of authority, it may be necessary to extend the requirement of the six years of related aeronautical experience stated in subsection 505.109(b), 505.203(e), or 505.409(b) of the AWM, including the oneyear working relationship with TCCA Aircraft Certification personnel on relevant projects.
- (3) Even though the DAR/AP applicant is considered to be a knowledgeable and respected specialist in the field, equivalency determination will be made by the review committee comprised of Aircraft Certification Consultation Team (ACCT) members. A quorum of the review committee shall be 3 of the 5 RMACs, the Chief of Engineering of the National Aircraft Certification Branch, and the Chief of Delegations and Surveillance Division of the National Aircraft Certification Branch. The review committee will determine if the equivalency criteria are satisfied and the scope of delegation that can be granted. If the delegation is granted, and a subsequent request for scope expansion is received, the process will be repeated to determine if the expanded scope should be granted.
- (4) The TCCA OPI will ensure that a written copy of concerns noted during the review is discussed with the DAR/AP applicant until each concern is resolved. Disposition of comments shall be documented and permanently retained on the applicant's file.

4.4 Delegation approval process

(1) In processing the applications, the TCCA OPI will follow the procedures specified in SI 505-001. The review process of an application for delegation of authority consists of establishing the applicant's eligibility and approving the associated procedures manual (EPM or DAPM). For AEOs and DAOs, the review of the manual and personnel is processed separately.

5.0 Letter of Authorization structure

5.1 General

- (1) The LOA is one of the documents used by the Minister to grant privileges to an individual outside of TCCA to act on their behalf. The LOA is viewed as a contract between the delegate and the Minister. The LOA is considered to be a Canadian Aviation Document, and the recipient of this delegation is subject to oversight by TCCA.
- (2) The form and content of the LOA has evolved over time due to regulatory and policy changes. Templates have been developed to provide more national consistency in the LOA. The LOA currently consists of three main sections:

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- (a) Conditions of Authorization;
- (b) Additional Information; and
- (c) Appendix(ices)
- (3) Sections (a) & (b) of the LOA consist of standard text common to all Aircraft Certification LOAs.
- (4) Section (c) is specially tailored to the individual's technical abilities and, in the case of an AP, also takes into account the capabilities of the DAO/AEO within which they are working. Additional details regarding the Appendices to LOA are found in Section 5.1.3.

5.1.1 Conditions of authorization

- (1) This section contains the conditions which the AP/DAR is required to maintain to keep their delegated privileges. Additional details are provided to supplement the requirements in sections 505.125, 505.225 and 505.425 of the AWM.
- (2) In summary, this section requires an AP/DAR to:
 - (a) Conduct themselves as if they were a TCCA employee when acting on behalf of the Minister.
 - (b) Comply with the procedures manual approved by the Minister. The procedures manual forms part of the contractual agreement between the DAO/AEO/DAR and the Minister.
 - (c) Review all of the AP/DAR applicant's data to the extent they deem appropriate to ensure compliance can be found to the applicable airworthiness standard. This wording is very similar to section 521.44 of the CARs. The intent of this point is to indicate the AP/DAR is responsible for performing their own determination of the required due diligence to enable them to make the FoC. This due diligence must be carried out and not influenced by process from the Design Approval Document applicant (often their employer) to make an FoC prematurely.

5.1.2 Additional information

(1) This section contains TCCA Specialist contact information for the AP/DAR, when technical consultations are needed, and a requirement to sign the LOA indicating that they understand the terms and conditions of the privileges granted to them.

5.1.3 Appendix

- (1) The appendix is tailored to the specific capabilities of the AP/DAR and thus refines the scope of delegation. If the AP/DAR is authorized to work in more than one specialty, there will typically be a separate appendix for each authorized specialty attached to the LOA. The sub-headings in the appendix provide further details and help describe the refined scope of the delegated privileges.
- (2) TCCA will ensure that the following have been addressed when completing the LOA appendix:
 - (a) Discussions have taken place between TCCA, the candidate AP, and their DAO mentoring counterparts if applicable, to ensure all parties are in agreement on the scope of privileges to be delegated to the candidate AP. For a DAR, similar discussions are required between TCCA, the DAR applicant, and the DAR mentor if applicable;
 - (b) Scope, functions and limitations that are common to and applicable to all APs of a DAO/AEO are to be contained in the DAO/AEO's delegate procedures manual (DAPM/EPM). Specific limitation(s) unique to an AP in a DAO/AEO are to be contained in the AP's LOA Appendix.

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- (c) Scope, functions and limitations applicable to a DAR are to be contained in their EPM and LOA:
- (d) The LOA appendix indicates the AP's/DAR's area of expertise (discipline/specialty) as defined in their DAPM/EPM table of concordance;
- (e) The LOA appendix indicates which Airworthiness Manual paragraphs the AP/DAR are authorized to make FoC against, by referencing the concordance matrix in the procedures manual;
- (f) LOI criteria is contained in the DAPM/EPM and is not duplicated in the LOA. Additional details regarding LOI criteria is found in Section 7.0;
- (g) Wording alluding to making recommendations for FoC does not to appear in the LOA or procedure manual as it is no longer an accepted practice; and
- (h) Acknowledgement (when the AP/DAR has returned a copy of their signed LOA to TCCA) that the AP/DAR is aware of their responsibility as a Minister's representative, and of their obligations to fulfil this role including contacting TCCA if pressure is being applied to achieve commercial interests at the expense of performing their Ministerial duties properly.
- (3) TCCA will ensure the following are included when completing the "Additional Limitations Section":
 - (a) Specific limitation(s) are tailored to the AP's/DAR's technical capabilities;
 - (b) Limitation(s) should be written in a form such that if the AP/DAR requested, the limitation(s) could be removed after successful completion of a development plan to address the limitations;
 - (c) AWM standards that are not authorized will, as much as possible, be noted at the paragraph level, and not subparagraph level;
 - (d) AWM amendment levels are not indicated in the LOA or the DAPM/EPM; and
 - (e) The Additional Limitations Section does not duplicate limitations, restrictions, or procedures that are already in the DAPM/EPM.

6.0 Delegate procedures manuals

6.1 General

- (1) Each applicant for delegation is required to submit a procedures manual that describes the procedures used to manage and carry out the privileges delegated by the Minister. The procedures manual, working in conjunction with the LOA, form the primary tools used by TCCA to manage delegates. The development of the procedures manual requires extensive discussion with TCCA. For a DAO, the procedures manual is referred to as a DAPM, for an AEO and DAR, the procedures manual is referred to as an EPM. The contents of each manual is tailored to the type of delegation being requested, and the abilities of the organization requesting the delegation.
- (2) The purpose of the procedures manual is to describe the procedures that will be used by the delegate to manage and carry out their delegated functions. These procedures will be inspected by TCCA during the formal inspection process. The procedures manual may reference other documents to support the delegate's procedures.

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6.2 Comparison of DAO/AEO/DAR procedures manual contents

- (1) Sections 505.107, 505.207 and 505.407 of the AWM list specific standards for procedure manuals for AEOs, DARs and DAOs respectively. Additional items that are common to all manuals are:
 - (a) The description of how the TCCA LOI will be addressed and tracked in the organization;
 - (b) Interaction with other delegated (aircraft certification) entities;
 - (c) Resolution mechanism when there is a technical disagreement between the delegate and a TCCA specialist; and
 - (d) The delegate table of concordance.
- (2) Table 2 outlines, in general terms, the similarities and differences between a DAO/AEO procedures manual and a DAR procedures manual.

Table 2 Procedures Manual Content (EPM versus DAPM)

DAR EPM	DAO DAPM or AEO EPM	
Cover page	Cover page	
Approvals page	Approvals page	
Table of contents	Table of contents	
Record of revisions and approvals	Record of revisions and approvals	
Delegate information and commitment, made by the DAR	Delegate information and commitment, by the individual with the authority to commit the necessary resources. This individual is also typically the head of the DAO/AEO.	
Airworthiness control procedures	Description of the airworthiness control system.	
Scope of authority	Scope of authority	
N/A	Description of the delegated organization and reporting lines of responsibilities.	
N/A	Self-audit process	
N/A	Nominations and appointments and succession planning of Authorized Persons.	
Record keeping System	Record keeping System	
Table of concordance	Table of concordance	
Other aspects deemed to be required	Other aspects deemed to be required	
Appendices as required	Appendices as required	

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6.3 DAR EPM template

(1) TCCA has developed templates for Engineering and Flight Test DAR EPMs. These templates are available from the TCCA Regional office or the National Aircraft Certification Branch in Ottawa. These templates form the basis for developing an EPM unique to the delegation being requested. The principal items that are addressed in a DAR's EPM are listed in the Table 3.

Table 3 DAR EPM Template Content

EPM INITIAL APPROVAL PAGE

RECORD OF REVISIONS AND APPROVAL

- 1 DAR Information and Commitment
- 1.1 Purpose Of Engineering Procedures Manual
- 1.2 Appointment
- 1.3 Business Address
- 1.4 Authorization
 - 1.4.1 Commitment
 - 1.4.2 Control of Delegated Privileges
 - 1.4.3 Resources
- 1.5 EPM Revision Control
 - 1.5.1 Transport Canada Civil Aviation Approval
 - 1.5.2 Revisions Proposed by the DAR
 - 1.5.3 Revisions Initiated by Transport Canada
- 1.6 Acronyms
- 1.7 References
- 1.8 EPM Distribution

2 AIRWORTHINESS CONTROL PROCEDURES

- 2.1 Applications
- 2.2 Documentation and Technical Data
 - 2.2.1 Changed Product Rule (CPR)
 - 2.2.2 Certification Plan
 - 2.2.3 Master Data List
 - 2.2.4 Engineering Order
 - 2.2.5 Certification Test Program
- 2.3 Compliance Verification Activities
 - 2.3.1 General
 - 2.3.2 Certification Tests
 - 2.3.3 Conformity
 - 2.3.4 Statement of Compliance
 - 2.3.5 CAR 521 Letters

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2.4 **Configuration Control** 2.5 Certificates 2.5.1 DAR Prepared Certificates (Serialized STC and RDA) 2.5.2 TCCA Prepared Certificates (STC, PDA and CAN-TSO) 2.6 **Document Distribution** 2.6.1 **DAR and TCCA Distribution** 2.6.2 Design Approval Document Holder Distribution 2.7 Technical Data and Records 2.7.1 Control of Technical Data 2.7.2 **Definition of Records** 2.7.3 **Record Keeping** 2.8 Revisions to Design Changes 2.8.1 Design Change requiring a Revision to an SOC 2.8.2 Minor Design Changes 2.8.3 Major Design Changes 2.9 **Special Procedures** 2.9.1 Instructions for Continued Airworthiness 2.9.2 Reserved for Electronic Equipment Design Assurance (EEDA Software) 2.10 **Coordination Procedures** 2.10.1 Contact with TCCA 2.10.2 Multiple DAR Approval Projects 2.10.3 Joint Programs with a DAO or an AEO 2.10.4 **Operating In Other Regions** 2.10.5 **Subcontracted Engineering Support** 2.11 Inspections and Audits 2.11.1 **Internal Quality Control** 2.11.2 TCCA Surveillance **SCOPE OF AUTHORITY** 3.1 **DAR Authorization Specialty Delegation Matrices** 3.1.1 3.1.2 **Foreign Standards** 3.2 Limitations Of Privileges 3.2.1 General 3.2.2 Limitations 3.3 Overlapping Responsibilities

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3.4 Changes To Authorization

3.5 Duration Of Authorization

3.6 Non-Authorized Functions

3.7 TCCA Level Of Involvement Procedures

4 Continuing Airworthiness

APPENDIX A: DELEGATION OF AUTHORITY CERTIFICATE

APPENDIX B: LETTER OF AUTHORIZATION

APPENDIX C: AIRWORTHINESS MANUAL 505 COMPLIANCE MATRIX

APPENDIX D: SPECIALTY DELEGATION MATRICES

APPENDIX E: MINISTERIAL DELEGATE STATEMENT OF COMPLIANCE FORM

APPENDIX F: CHANGE PRODUCT RULE DECISION RECORD

6.4 DAO/AEO procedures manual

(1) TCCA does not have templates for DAO DAPMs and AEO EPMs. Due to the complexity of these delegated organizations, a collaborative approach between the delegate applicant and TCCA is used to develop the manuals.

6.5 Delegates engaged in flight testing.

(1) This paragraph is intended to provide awareness to delegates who engage in flight test activities. Sections 521.44, 521.45 and 521.46 of the CARs have requirements unique to flight test that are applicable to the applicants and holders of design approval documents who intend, and have the means, to conduct flight tests. The regulation requires applicants who are involved in flight test activities to have a Flight Test Operations Manual (FTOM). Flight test delegates are expected to adhere to the design approval document applicant's FTOM. The development and approval of a FTOM is done outside of the delegation system and does not form part of the DAO/AEO, unless this document is referenced by the delegate procedures manual. Additional details can be found in AC 521-002 and AC 521-004.

6.6 Expectations applicable to all delegates

(1) There are various expectations placed on the conduct of a delegate which are derived from the concepts and principles of delegation, discussed in Section 3.3. Some of these expectations are:

(a) **Independence**

A delegate must have the ability to maintain the highest degree of objectivity, have adequate time to perform all assigned duties, and be able to adequately represent the Minister. The applicant for a design approval document and the Minister both seek to ensure that aeronautical products are designed and built to high standards to ensure safety for the public. The Delegation Program, by its very nature, contains a conflict of interest for the delegate in that while the delegate is representing the Minister, they are receiving compensation from the applicant for a design approval document whose commercial interests may conflict with the Minister's interests. Commercial/Project Management issues should not impact a delegate's ability to represent the Minister. Additional information can be found in Section 3.7 "TCCA Values and Ethics and Independence of the Delegate".

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(b) Interpretations

When delegates have questions about the interpretation of a CAR or AWM requirements or guidance material, they must consult with TCCA staff. A delegate's interpretation of regulations, standards and guidance material should not differ from TCCA interpretations. There are times when the delegate will have a different interpretation of the regulation, standard or guidance material. In these situations, discussions are required to understand the various points of view. However, TCCA as the regulator will make the final decision on interpretation. The delegate and TCCA specialists are guided by existing TCCA policies, procedures, specifications, processes, standards and regulations. A delegate must consult with TCCA before departing from existing procedures/interpretations when making an FoC.

(c) Remain current

The delegate must actively take measures to remain current and knowledgeable in the delegate's technical disciplines and with all of the applicable current TCCA regulatory documents (e.g. airworthiness standards, policies, guidance material, procedures, Sls, CADs, ACs...etc.). Delegates are expected to contact their TCCA counterparts on a frequent basis in order to maintain active lines of communication.

(d) Good practices

Delegates need to be competent and knowledgeable in the TCCA aircraft certification process and the delegation system, so that they and TCCA can work together as a team. TCCA expects a delegate, while acting as a representative of the Minister, to be guided by "good practice" principles. There are expectations that the delegate will respect the spirit of the Government of Canada's values and ethics, as discussed in Section 3.7 "TCCA Values and Ethics and Independence of the Delegate".

(e) Use of delegate number

When a DAR or AP makes an FoC, the AP/DAR is to sign the applicable document with their DAR number and, in the case of an AP, with their AP number and DAO/AEO number. When an AP is performing duties for an applicant that are not Ministerial in nature, the AP must not sign with the DAO/AEO number and AP number. Further clarification on the distinction between an individual representing the Minister vs conducting themselves as a subject matter expert can be found in Section 3.5 and Section 10.

(f) Cooperate with TCCA

The nature of the work related to certification of aeronautical products requires TCCA specialists and delegates to work cooperatively and collaboratively. There are times when TCCA, as the regulator, may ask a delegate to attend specific meetings. TCCA may also ask the delegate to make available all information that was used in the making of the FoC.

(g) Remain within the scope of delegation

When exercising their Ministerial privileges, delegates are required to remain within the scope of the delegation as defined by their procedures manual and LOA.

(h) Service documents related to ADs

A delegate who has the privilege can approve design change aspects of service bulletins and revisions. However, if TCCA has issued, or intends to issue, an Airworthiness Directive (AD) that addresses an unsafe condition that is the subject of a service bulletin, then the delegate must coordinate with TCCA and obtain concurrence prior to approving the associated design change.

(i) Delegate responsibility when relying on other technical experts

Delegates may rely on technical experts as needed to completely evaluate and substantiate engineering technical data. However, the delegate retains the responsibility to complete their due diligence in reviewing all data to support their FoC.

(i) Using Transport Canada and TCCA logos

No delegate is authorized to use the Transport Canada or TCCA logo on business cards, letterheads, facsimile covers, document covers, or any other business forms.

6.6.1 Record keeping and technical capability

- (1) The technical records to be maintained by an AEO, DAO and DAR are defined in sections 505.121, 505.421 and 505.221 of the AWM respectively. Non-technical data items that must be retained may be defined during the review of the delegate procedures manual. For example, the procedures related to the retention of development records of candidate APs within a DAO/AEO are to be included within the DAPM/EPM.
- (2) The data retained by a delegate is part of the overall data package that the design approval document holder is required to maintain as part of their CAR 521 obligations (Ref. section 521.365 of the CARs). It is the responsibility of the design approval document holder to retain all documentation required to support their aeronautical product.
- (3) The design approval document holder is required to have, or have access to, the technical capability to maintain their design approval document for the aeronautical product.
- (4) In a situation where the design approval document holder is an organization that contains a DAO/AEO, history has shown that record retention for the purpose of auditing AWM 505 and CAR 521 requirements use the same record retention systems.
- (5) In situations where the design approval document holder has contracted a delegate to satisfy the CAR 521 technical capability requirements, the individual data retention requirements in CAR 521 and AWM 505 are to be respected. This may necessitate detailed discussion and agreement on data retention such that the design approval document holder has ongoing access to the data to support their CAR 521 obligations, and the delegate has access to the data to support their AWM 505 obligations.
- (6) Delegate records must allow for traceability to a given project and to the activities associated with generating those technical records, where applicable.

6.6.2 Record keeping media

(1) Delegates can store their data in electronic and paper formats. Regardless of the media used, the delegate is required to be able to provide the data to the Minister upon request.

6.6.3 Electronic signature

- (1) Any Minister, public official or person acting in the capacity of the Minister (Minister's delegate) making a statement of truth (*Canada Evidence Act*) is required to do so using wet ink or a "Secure Electronic Signature". The authorized functions that this applies to include:
 - (a) Making an FoC; and
 - (b) Issuing a design approval document.
- (2) Traditionally, when a delegate is exercising their Ministerial privileges, they have signed the required documents in wet ink, with their delegate Identification Number (DAO/AEO/DAR), and if applicable, their AP number. Unless otherwise authorized, delegates are expected to sign documents in wet ink when exercising their Ministerial privileges.
- (3) Technology has advanced to the state where wet ink signatures can be replaced by secure electronic signatures. The use of secure electronic signatures is a privilege that can be granted if, in the opinion of TCCA, the delegate has satisfied the requirements in the *Canada Evidence Act*

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and the *Personal Information Protection and Electronic Documents Act* (PIPEDA). A delegate may apply for approval to use secure electronic signatures by following the "Guide to Using Electronic Signatures for Delegates". This document, and applicable templates tailored for Aircraft Certification delegates can be obtained by a delegate from the TCCA office providing oversight of the delegate.

6.6.4 Support to foreign validation

(1) When a design approval document holder (TC, STC etc.) wishes to export their aeronautical product to a foreign country, the certification authority of the foreign country may conduct a validation of the Canadian design approval document. A delegate, as a knowledgeable expert, may help the design approval document holder with this activity. However, in these situations, the delegate is not acting on behalf of the Minister. Additional details can be found in Section 8.4.2 "Findings of Compliance".

6.6.5 Department of National Defence modification approvals

(1) Paragraph 102.01(a) of the CARs, which came into effect in 1996, stipulates in part that Canadian Aviation Regulations "... do not apply to military aircraft of Her Majesty in right of Canada where operated under the authority of the Minister of National Defense". As a result, TCCA will not support applications for the approval of modification or repairs to military aircraft that are not on the civil register. TCCA may support an applicant for civil certification of an aeronautical product that will be on the civil register but is also destined for a military role.

6.6.6 Design change or repair to a foreign registered aircraft

- (1) A delegate may undertake to certify a design change to a foreign registered aircraft when there is a Canadian TC or accepted TC for that aircraft type and model. A serialized STC may be issued, if permitted by their scope of authorization. Technical agreements between certification authorities indicate what type of data may be used. Communications with the foreign civil airworthiness authority will be in accordance with any agreements that may exist. The foreign civil airworthiness authority may require the validation of the approval prior to the issue or reinstatement of the flight authority. If here is no technical agreement, delegates should contact their TCCA OPI.
- (2) A delegate may undertake to certify a repair of a foreign registered aircraft in accordance with provisions of applicable implementation procedures to a bilateral agreement, if one exists, and within their scope of authorization. An RDA may be issued, if permitted by the LOA.

6.6.7 Multiple delegates working on the same project

- (1) Situations may arise when a certification project requires the efforts of multiple delegates (DARs or DAR/DAO/AEO) external to the applicant, working collaboratively to certify an aeronautical product. It is the responsibility of the applicant for the design approval document to put in place any required management structure to coordinate/manage all the activities of all the delegates involved in the program. Additional details can be found in AC 505-001.
- (2) In these collaborative working arrangements, the applicant for the design approval document remains the focal point with TCCA for the program; however, the delegates are still required to abide by their respective procedures manuals and LOAs.

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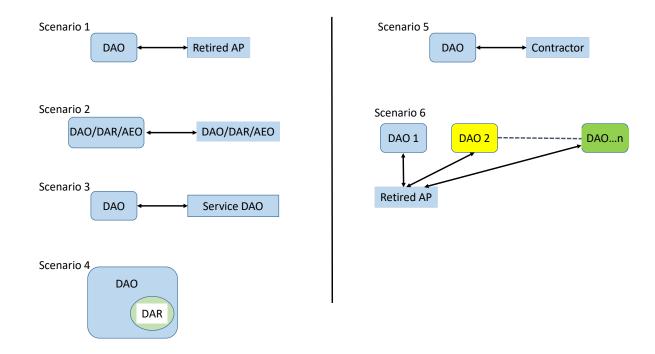


Figure 1 Various interactions between delegates

- (3) Figure 1 depicts various scenarios in which delegates interact with each other.
 - (a) Scenario 1 An AP had retired from the organization but wishes to continue to support the DAO/AEO.
 - A contractual relationship exists between the DAO and AP, now retired.
 - (ii) The AP is only supporting the DAO from which they retired; and
 - (iii) The existing AP LOA (pre-retirement) will remain in effect post retirement.
 - (b) Scenario 2 Traditional working relationship between delegated Entities.
 - (i) This scenario represents the traditional relationship between DAO/AEO and DARs or DAR supporting DARs, or DAR/AEO supporting each other; and
 - (ii) This is represented as a business relationship between the two or more entities.
 - (c) Scenario 3 Service DAO supporting other delegated entities.
 - (i) This is similar to scenario 2; however, the Service DAO is comprised of APs that provide a specialized service such as Software and Flight testing.
 - (d) Scenario 4 The DAR becomes part of the DAO/AEO.
 - This scenario is similar to scenario 2 but takes place over a longer period of time.
 - (ii) The DAR would become an AP in the DAO / AEO by going through the DAO/AEO approval process. Interactions with TCCA in developing an AP would also apply, but timelines could be shortened taking into account the individual is already a delegate.
 - (iii) A second LOA would be issued to the DAR, specific to the DAO/AEO that they are being absorbed into.

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- (iv) The DAR would have to agree to go through the AP development process; and
- (v) Record keeping would be simplified.
- (e) Scenario 5 The DAO/AEO/DAR hires a contractor for support.
 - (i) If the contractor does not have a delegation, then the contractor can only act as an SME. The individual cannot make an FoC; and
 - (ii) If the contractor has a delegation, then one of the other scenarios would apply.
- (f) Scenario 6 Variation of Scenario 1.
 - (i) This is a rare case, resulting from a corporation selling several products lines, and members of the DAO helping to support the new DAOs; and
 - (ii) It is preferred that the retired delegate become a DAR.

6.6.8 Conflict resolution

- (1) This section addresses the dispute resolution mechanism when an issue or disagreement arises between an AP/DAR and TCCA specialists. This section does not address disagreements between an applicant for, or holder of, a design approval document and TCCA.
- (2) During the progression of a certification program, there are times when a professional difference of opinion on technical matters between an AP/DAR and TCCA specialists will arise. In the event that the disagreement cannot be resolved at the specialist level, a formal methodology is used to help arrive at a resolution.
- (3) Disagreements should be documented using an issue paper that clearly states the technical facts of the problem, and the various positions relating to how to address the problem. See SI 500-019 for more information. The purpose of the issue paper is to help focus the discussion. The dispute resolution mechanism follows a path of gradual escalation through the management structure at TCCA; hopefully an agreement can be reached at any point along the escalation path. The final decision rests with the Director of the National Aircraft Certification Branch.
- (4) The dispute resolution path is:
 - (a) TCCA Project Manager applicant Project Manager;
 - (b) TCCA Specialist AP/DAR:
 - (c) TCCA Manager *Delegate (AP/DAO/DAR);
 - (d) TCCA Chiefs *Delegate (AP/DAO/DAR); and
 - (e) TCCA Director NAC *Delegate (AP/DAO/DAR).

7.0 TCCA oversight of delegates (details)

- (1) The oversight of the Aircraft Certification delegate community consists of three distinct parts:
 - (a) LOI;
 - (b) Formal inspections; and
 - (c) Day-to-day interaction with TCCA.

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^{*} At this stage, more senior individuals may be involved in the discussions (i.e., an AP may involve their senior AP from their specialty to aid in the discussions).

7.1 Level of Involvement (LOI)

- (1) Details on how TCCA implements LOI for aircraft certification can be found in SI 500-003. This SI describes TCCA's risk-based approach to oversight of Aircraft Certification delegates on a project-by-project basis. Delegates are strongly encouraged to review this document on a periodic basis.
- (2) TCCA may choose to participate in approval projects, notwithstanding the authorized functions of the delegate, according to the TCCA LOI practices for aircraft certification described in SI 500-003.
- (3) Where a delegate is exercising their delegated authority, TCCA uses the LOI process to identify and manage the participation of TCCA specialists in the surveillance of delegates during activities leading up to the FoC. Where a delegate is not exercising their delegated authority, (activities are outside of their scope) the TCCA activities constitute services to the applicant.
- (4) Findings of non-compliance to the DAPM / EPM, similar to a formal TCCA inspection, may be issued during completion of LOI if it is found that the delegate exercised their privileges inappropriately in the certification process. TCCA will look for the following condition to be met before a finding is issued:
 - (a) TCCA must obtain confirmation from the delegate that any data being submitted for an LOI activity has been reviewed by the delegate and found to be adequate, and that the same data will eventually be used towards an FoC against the relevant requirement. This confirmation can be obtained through informal means, such as an e-mail, on a project-by-project basis.

7.1.1 LOI thresholds

- (1) In some situations, typically with larger delegated organizations, TCCA will establish LOI thresholds. LOI thresholds define conditions in which TCCA will not have any involvement in the project. TCCA will typically not have any involvement in routine repetitive activities, or where the nature of a certification project is considered low risk due to other procedures in place which have been accepted by TCCA. The LOI thresholds are unique to each delegate (DAO/AEO/DAR) and are defined in their delegate procedures manual.
- (2) If a project falls below a threshold, TCCA's LOI will automatically be "NIL" and the delegate can proceed without TCCA involvement for the entire project. In this situation, the delegate can accept, on behalf of the Minister, the applicant's certification plan. For these types of projects, TCCA's oversight will be in the form of formal inspections.

7.2 Formal inspections

(1) All delegates and design approval document holders within Civil Aviation are subject to the TCCA formal surveillance program. Details of the formal surveillance program can be found in AC SUR-004 and AC SUR-002.

7.3 Day-to-Day interaction with TCCA

- (1) Delegates are encouraged to maintain regular contact with their TCCA counterparts, as this helps maintain a good working relationship and helps ensure that the delegates remain well informed about any regulatory or policy relating to their delegated activities.
- (2) In addition to certification work, some APs will take on the role of mentoring new APs as part of a DAO/AEO succession planning. Some DARs will take on a mentoring role to help develop new DARs. Delegates acting in a mentoring role will have regular contact with TCCA to discuss the progress of candidate delegates (AP, DAR).

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(3) DAOs and AEOs generally have dedicated staff to maintain/evolve their procedures manual to ensure that it remains current and to develop internal guidance material for their organization. These staff members in a DAO/AEO are encouraged to maintain regular contact with TCCA specialists.

8.0 Delegate activities by certification phase

8.1 General

(1) Sections 8.2, 8.3, 8.4 and 8.5 provide additional details of the role and expectations of the delegate during each phase of a certification program. All certification programs will follow the same four phases, although they are scalable to match the complexity of a particular certification program. AC 521-002 provides additional details on the certification process.

8.2 Certification Phase 1—Application and establishment of the proposed certification basis

(1) This phase of a certification program is an applicant activity, working with TCCA to obtain agreement on the proposed certification basis and the draft certification plans which will contain the proposed means and methods of compliance against the proposed certification basis.

8.2.1 Support to the applicant

- (1) The delegate may assist an applicant in developing the required documents, but in these cases, the delegate is not acting on behalf of the Minister. For example:
 - (a) A delegate may assist an applicant in classifying a change to a type design as either MAJOR or MINOR in accordance with section 521.152 of the CARs, in order to determine the approval route to be followed.
- (2) A delegate may assist an applicant in completing the CPR process, particularly in determining if a proposed change to the type design is CPR significant or not significant in accordance with section 521.158 of the CARs; additional guidance on establishing whether a change is CPR significant or not may be found in AC 500-016. One advantage of a delegate being involved in the early stage of a certification project is that it provides the delegate increased opportunity to become more knowledgeable about the project.

8.3 Certification Phase 2—Establish means and methods of compliance, and definition of TCCA LOI

(1) This phase of the certification program is an applicant led activity working with TCCA to agree on the means and methods of compliance. The delegate may propose an LOI to TCCA; however, TCCA will establish the LOI that will be applied to the delegate.

8.3.1 Support to the applicant

(1) The participation of the delegate in phase 2 is not a Ministerial activity. The delegate, as a technical expert, may assist the applicant in determining the means and methods with TCCA. It is common for the delegate to lead the applicant's discussions with TCCA. There are advantages of having the delegate involved in these discussions, as this reduces the potential for misunderstandings in Phase 3 of the certification process and helps TCCA focus its LOI.

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8.4 Certification Phase 3—Demonstrate and record compliance

8.4.1 Minister and applicant responsibilities

- (1) During this phase of the certification process, the delegate is responsible for making FoC against all requirements of the standards within certification basis that are within their scope of delegation, using the means and methods that were agreed to in the previous certification phase. The delegate makes the FoC by signing the appropriate statement of compliance document. The signatures shall be in wet ink, unless the delegate has obtained the privilege to use secure electronic signatures.
- (2) The applicant is responsible to track all FoC and to demonstrate to the Minister that the aeronautical product does not have characteristics or features that make the product unsafe, and demonstrate that the type design or change to the type design complies with its certification basis.
- (3) TCCA will conduct its LOI as initially established in Phase 2. TCCA LOI may change during the course of the program.

8.4.2 Findings of compliance

- (1) When a delegate is acting on behalf of the Minister and making an FoC, the delegate is expected to review the applicant's data, make any engineering inspections or assessments, and conduct or witness any test necessary to verify that the data is correct and is sufficient to determine compliance with the applicable standards of airworthiness. The review of an applicant's data for FoC may include:
 - (a) Engineering reports and drawings;
 - (b) Drawing lists;
 - (c) Instructions for continued airworthiness;
 - (d) Change product rule decision records; and
 - (e) Other technical data as required.
- (2) A flight test pilot delegate is required to perform all tests on which the delegate intends to make an FoC or issue a statement of compliance (SoC), or a recommendation for the data. The extent and conduct of the overall flight test plan must be coordinated with the TCCA Flight Test Division of the National Aircraft Certification Branch which has overall responsibility for all flight test pilot delegates. When a flight test pilot delegate makes an SoC or a recommendation, the delegate is indicating that they performed the tests, the tests were conducted in accordance with the approved test plan, and the data are official test results.

8.4.2.1 Findings of compliance form

- (1) The documentation required to record an FoC has changed with the introduction of subpart 521 of the CARs. The use of the former AE-100 form is no longer permitted; instead, FoC are to be recorded on the "Ministerial Delegate Statement of Compliance with the Certification Basis" form number 26-0757 or a similar document acceptable to TCCA, see (4) below.
- (2) The 26-0757 form is to be used only for making an FoC.
- (3) When a DAR is exercising Ministerial privileges, the DAR will sign the documentation with their delegate Identification Number and their signature. In the case of a DAO/AEO, an AP will sign with their AP number, DAO/AEO Number and signature.

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- (4) Delegates may develop their own Statement of Compliance form for use in their organization provided that:
 - (a) The customized form and the related procedures for its use are included in their approved DAPM or EPM;
 - (b) The customized form must contain all the information specified on TCCA form 26-0757;
 - (c) The Transport Canada identity marks, flags, logos and the "Canada" word mark, must be removed from the delegate's customized form.
- (5) For airworthiness requirements needing multiple delegates to make an FoC, each delegate will make an FoC for the paragraphs of the Airworthiness Manual within their scope of authorization. The individual responsible for coordinating the activities of the delegates is responsible for ensuring that all the required signatures are obtained for a complete FoC.

8.4.2.2 Finding of compliance to foreign requirements

- (1) FoC to foreign design standards are required in two common scenarios:
 - (a) When those foreign standards are included in the certification basis as quoted in the Canadian Type Certificate Date Sheet (TCDS); or
 - (b) When a foreign civil airworthiness authority requests TCCA to make an FoC to their certification basis for a Canadian product being validated by that foreign civil airworthiness authority.

8.4.2.2.1 Canadian type certificate data sheet contains foreign requirements

- (1) There are situations where TCCA has adopted foreign certification basis requirements as part of the Canadian certification basis for certain aeronautical products, for example:
 - (a) Legacy aircraft; and
 - (b) Products that were issued a Canadian TCDS prior to the publication of the Canadian Airworthiness Manual.
- (2) In the case where the Canadian TCDS references foreign requirements, or where such foreign requirements become part of the certification basis following a CPR assessment, the delegate may make an FoC to the foreign requirements, provided the technical nature of the foreign requirement is consistent with the specialty of the AP/DAR and is not in conflict with any limitations on the AP's/DAR's LOA or DAPM/EPM. If there is any doubt, the delegate should contact TCCA for clarification.

8.4.2.2.2 Foreign civil airworthiness authority requesting TCCA to make an FoC on their behalf

- (1) Agreements exist between the United States and Canada, and The European Union and Canada, for example, that recognize the delegation systems in each country. These agreements allow TCCA to use delegates to make FoC to foreign regulations, when the foreign civil airworthiness authority has formally requested TCCA assistance.
- (2) When TCCA receives a request from a foreign civil airworthiness authority with which Canada has a bilateral aviation safety agreement to make an FoC to the foreign certification basis on behalf of the foreign civil airworthiness authority:
 - (a) TCCA may authorize a delegate to make an FoC to a foreign certification requirement, provided the technical nature of the foreign requirement is consistent with the specialty of the AP in the DAO/AEO, or DAR, and is not in conflict with any limitations on the

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- AP's/DAR's LOA or DAPM/EPM. TCCA's request is to be documented by formal letter and retained on file by the delegate.
- (b) The delegate will submit all FoC to TCCA via an agreed document (i.e. form 26-0757); and
- (c) TCCA will collect the FoC made by the delegate and provide the FoC to the foreign civil airworthiness authority.

8.4.2.3 FAA delegates making FoC on Canadian projects

- (1) There has been some confusion in the manner in which to engage FAA Designated Engineering Representative (DERs) or Organization Designation Authorization (ODAs) on Canadian certification programs. The Canada-US Bilateral Aviation Safety Agreement (BASA) Implementation Procedures for Airworthiness (IPA) (Ref. 2.1(1)(kk)) recognizes the strengths of both delegation programs and defines the process to follow to engage delegates from each country under the "Technical Assistance between Authorities" section.
- (2) In accordance with the IPA, communications involving a foreign delegate are to take place between certification authorities: if a Canadian delegate is involved in a certification project that requires the assistance of a FAA DER/ODA, the Canadian delegate is required to notify TCCA, who in turn will communicate with the FAA. The FAA will communicate with the FAA DER/ODA, and oversight of the FAA DER/ODA will be provided by the responsible FAA Aircraft Certification Office (ACO). The FAA ACO will issue the approval for the work completed by the FAA DER/ODA to TCCA. FoCs made directly by FAA delegates in support of Canadian design approval documents are not accepted unless prior arrangements have been agreed to between TCCA and the FAA.
- (3) There is an exception to this procedure in the area of flammability testing. Section 8.4.1 of the BASA IPA recognizes that Canadian design approval document applicants are utilizing US flammability test facilities in support of their Canadian domestic design approval activities. TCCA or its appropriately authorized delegates using approved procedures, will interact directly with FAA designees at such facilities to coordinate activities and facilitate information exchange. Section 8.4.1 of the BASA IPA defines the process to be followed in this case.

8.4.3 FoC involving testing as a means of compliance

- (1) Prior to conducting any testing, the delegate is to ensure that the test article configuration conforms to the configuration required. In the case of flight testing, there are additional requirements to ensure that the prototype aircraft does not have any unsafe features, and flight activities are conducted in accordance with the applicant's FTOM.
- (2) During the discussion of means and methods of compliance for a certification program (see section 8.3), the Minister will identify tests that it is electing to witness and is requiring access to, in accordance with subsection 521.44(e) of the CARs. Circumstances may arise when a delegate is unable to witness a test and wishes to substitute an alternate person. In these cases, TCCA is required to approve any substitutions for test witnessing unless there exists an approved process with the DAO/AEO/DAR to address these substitutions. The delegate remains responsible to ensure that the alternate person is qualified to perform the test witnessing duties and the use of an alternate person does not absolve the delegate of their responsibilities to conduct due diligence prior to making an FoC.
- (3) TCCA reviews and indicates its acceptance of test plans prior to the applicant conducting certification test activities. (SI 521-004 and AC 521-004). TCCA LOI related to test witnessing may be adjusted during the evolution of a certification program. Upon completion of reviewing the certification plan, TCCA may declare their LOI as "NIL" for a test. At this point, TCCA involvement

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- has stopped and the delegate is expected to complete their activities. TCCA may revisit this area of activity as part of a formal inspection.
- (4) Following review of the certification plan, TCCA may indicate that their LOI is "REVIEW and ACCEPT" for a test plan. Based on the results of this activity, TCCA may adjust their LOI to "NIL", or "TEST WITNESS". In the case where LOI is "TEST WITNESS", both the delegate and TCCA will witness the test.

8.4.3.1 Repetitive test witnessing

(1) For certain repetitive tests, TCCA may indicate in the delegate's DAPM/EPM that the LOI will always be "NIL". This is a privilege based on the abilities and working relationship between TCCA and the delegate and is to be documented in the delegate's procedures manual.

8.4.4 Use of FAA Form 8110-3, statement of compliance

- (1) Approved or accepted alterations per FAA's 14 CFR Part 43 Maintenance, Preventive Maintenance, Rebuilding and Alteration, installed on a product exported from the U.S, regardless of the State of Design of the product, are considered approved by TCCA at the time of import into Canada. TCCA will accept such FAA alteration data when substantiated via an appropriately executed FAA Form 8110-3, 8100-9 FAA, and Form 337 (block 3) or logbook entry.
- (2) With the exception of flammability tests, acceptance of an FAA form 8110-3 shall be done by TCCA.
- (3) Where flammability testing is involved, FAA form 8110-3 issued by a flammability DER may be accepted by a TCCA delegate provided that appropriate procedures are incorporated into the delegate's EPM/DAPM. Alternatively, where the TCCA delegate is in receipt of the full data package and the work is within the delegate's scope of authority, the TCCA delegate may review the data and make an FoC using TCCA SoC form #26-0757. Delegates cannot base an FoC upon a FAA form 8110-3.

8.5 Certification Phase 4 — Type design approval

8.5.1 Approvals—Minister and applicant responsibilities

- (1) During phase 4, the applicant is required to submit a declaration attesting to having demonstrated the aeronautical product's compliance to the applicable standards, and a signed undertaking to carry out the responsibilities of a design approval document holder required under CAR 521 Division VIII. The delegate may assist the design approval document holder, formerly the applicant, in fulfilling their CAR 521 Division VIII obligations, but the delegate is not acting on behalf of the Minister and the applicant, and subsequently the holder, are responsible for meeting the CAR 521 requirements.
- During this phase of a certification program, the role of the Minister is to issue the approval for the type design or change to the type design. This design approval may take the form of a TC, A/TC, STC, Serialized STC, RDA, PDA or CAN-TSO design approval document.

8.5.2 Design approvals outside of a delegate's scope of privileges

(1) If the delegate is not authorized to issue design approval documents, TCCA will complete the activity.

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8.5.3 Design approvals within a delegate's scope of privileges

- (1) Some delegates have the privilege of issuing Serialized STCs and RDAs. Where the delegate has been granted the privilege to issue design approval documents for a design change or repair, they may issue the approval when:
 - (a) All FoC have been completed to requirements in the applicable standards of the certification basis:
 - (b) The applicant has submitted a declaration of demonstration of conformity;
 - (c) The intended holder has submitted a signed undertaking to carry out the responsibilities of a design approval document holder under CAR 521 Division VIII; and,
 - (d) The delegate has received written notification that TCCA's LOI is complete.

8.5.3.1 Serialized STC

(1) Serialized STCs are used to record a design change to the type design. These documents signify that the approved technical design data becomes part of the aeronautical product type design, when the subject design change is incorporated. Where the design change is intended for incorporation in a limited number of products of a type, as opposed to all products of a type, the serialized STC will be used. Additional details can be found in SI 521-005.

8.5.3.2 Repair Design Approvals (RDA)

- (1) With the introduction of CARs 521, the "Repair Design Certificate" was replaced with "Repair Design Approval". A delegate may issue repair design approvals and process repair design approvals in accordance with their DAPM/EPM and LOA.
- (2) The criteria to obtain a repair design approval can be found in SI 521-006, but this information pertains to the applicant, not the delegate.

8.6 Post certification

- (1) This stage of the aeronautical product life cycle is referred to as Continuing Airworthiness. It is the responsibility of the design approval document holder to meet their requirements in accordance with CAR 521 Division VIII.
- (2) The delegate is not responsible for the type design; however, the delegate may assist the design approval document holder in a technical capacity as a technical subject matter expert. The delegate's activities in this role are not Ministerial activities.

9.0 TCCA data sharing with delegates

9.1 Regional delegates and TCCA's NAPA system

- (1) TCCA has developed a database, called "National Aeronautical Product Approval Information System" (NAPA), which is used by TCCA Regional Offices and their delegates to help manage aircraft certification projects. Delegates that are working on behalf of an applicant can submit an application for an STC, RDA or PDA, view past design change certificates, and gain access to the most up to date approval information.
- During the course of a project, delegates can upload various documents into NAPA. However, at the completion of a project, NAPA is to contain only the FoC and approvals such as ICAs, Flight Manual Supplements (FMS) and other approved documents which are required for issuance of

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the design approval document. NAPA is not an electronic filing system for engineering data; additional data that may have been loaded during the course of the program will be removed. In this way, TCCA ensures it does not retain the technical and proprietary data that supported the FoC and approval. In accordance with subpart 521 of the CARs, the design approval document holder is responsible for maintaining and having access to the technical data to support their aeronautical product. Additional details on record keeping can be found in Section 6.6.1 and 6.6.2.

10.0 TCCA reference material

- (1) There is an expectation that a delegate will actively take measures to remain current and knowledgeable in their technical discipline and with TCCA regulations, standards and guidance materials. It is the delegate's responsibility to have access to this documentation, which is available on the TCCA website.
- (2) Regulations, Standards and Advisory documents can be found at:

 https://tc.canada.ca/en/aviation/aircraft-airworthiness/aircraft-certification
- (3) Guidance material can be found at:
 - https://tc.canada.ca/en/aviation/reference-centre/civil-aviation-integrated-management-system-ims-documents
- (4) International agreements and working arrangements can be found at:
 - https://tc.canada.ca/en/aviation/aircraft-airworthiness/international-agreements-arrangements
- (5) The delegate's database can be found at:
 - http://wwwapps.tc.gc.ca/saf-sec-sur/2/CAS-SAC/h.aspx
- (6) Service Difficulty Reporting and Airworthiness Directives can be found at:
 - https://wwwapps.tc.gc.ca/saf-sec-sur/2/cawis-swimn/

11.0 Information management

(1) Not applicable.

12.0 Document history

(1) TP12995E, Issue 2, dated 2003-06-10—Delegations Handbook for Designated Engineers and Design Approval Representatives – Cancelled.

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13.0 Contact information

(1) Contact information for Headquarters and Regional offices can be found at: https://tc.canada.ca/en/aviation/civil-aviation-contacts-offices

We invite suggestions for amendment to this document. Submit your comments to: AART Documentation Services

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Signed by Ryan Johnson for

Félix Meunier Director, Standards Branch Civil Aviation

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