Advisory Circular

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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, nor does it establish minimum standards.

1.1 Purpose

- (1) The purpose of this document is to provide information and guidance on Airworthiness Directives (ADs) in respect of an aeronautical product for which a design approval document has been issued or accepted by the Minister of Transport (the Minister), or in respect of an aeronautical product without design approval document.
- (2) The information and guidance in this AC are intended to describe Transport Canada Civil Aviation (TCCA)'s responsibilities towards:
 - (a) Issuance and distribution of TCCA ADs;
 - (b) Review and processing of ADs issued by foreign Civil Aviation Authorities (CAAs) for Canadian-registered aircraft; and
 - (c) Distribution of foreign-issued Mandatory Continuing Airworthiness Information (MCAI) or ADs.
- (3) This AC also informs owners/operators/maintainers how they can become aware of all the applicable ADs for their aeronautical product.

1.2 Applicability

- (1) This document applies to TCCA personnel, delegates, and the aviation industry, including but not limited to:
 - (a) Aircraft owners;
 - (b) Aircraft operators;
 - (c) Aircraft maintainers;
 - (d) Person having legal custody and control of an aircraft; and
 - (e) Design organizations.
- (2) This document does not apply to persons operating a foreign-registered aircraft in Canada under subsection 605.01(2) of the CARs.
- (3) This document is effective upon publication; however, it is not retroactive. For that reason, ADs that were issued before the publication of this document may not comply with all the requirements of this document; however, they remain valid unless they are cancelled.

1.3 Description of changes

(1) Not applicable.

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) <u>Aeronautics Act</u> (R.S.C., 1985, c. A-2);
- (b) Part I Subpart 1 of the <u>Canadian Aviation Regulations</u> (CARs) Interpretation;
- (c) Part V Subpart 21 of the CARs Approval of the Type Design or Change to the Type Design of an Aeronautical Product;
- (d) Part VI Subpart 5 of the CARs Aircraft Requirements;
- (e) Standard 625 of the CARs Aircraft Equipment and Maintenance;
- (f) Airworthiness Notice (AN) B055 Service Bulletin Compliance;
- (g) AN B061 Privileges of Performing Maintenance or Elementary Work When Instructed by Sources other than the *Canadian Aviation Regulations*;
- (h) AC (RESERVED) Responsibilities of a Design Approval Document Holder;
- (i) AC 521-009 Division IX Service Difficulty Reporting;
- (j) AC 605-005 Alternative Means of Compliance (AMOC);
- (k) SI 605-002 Alternative Means of Compliance (AMOC);
- (I) Aircraft Certification Policy Letter (ACPL) Number 5, Issue 1 Canadian Airworthiness Directives Inspection Interval Tolerances;
- (m) Treasury Board of Canada Secretariat Standard on Web Accessibility;
- (n) International Civil Aviation Organization (ICAO) Annex 8 to the Convention on International Civil Aviation Airworthiness of Aircraft;
- (o) Implementation Procedures For Airworthiness Covering Design Approval, Production
 Activities, Export Airworthiness Approval, Post Design Approval Activities, And Technical
 Assistance Under The Agreement Between The Government Of The United States Of
 America and The Government Of Canada For Promotion Of Aviation Safety; and
- (p) <u>Technical Implementation Procedures for Airworthiness and Environmental Certification</u>
 <u>Under The Agreement On Civil Aviation Safety Between The Government of Canada and</u>
 The European Union.

2.2 Cancelled documents

- (1) As of the effective date of this document, the following document is cancelled:
 - (a) AN B056, Issue 01, 2000-07-14 Applicability of Foreign Airworthiness Directives in Canada.
- (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 used in this document:
 - (a) **Aeronautical Product**: Any aircraft, aircraft engine, aircraft propeller, or aircraft appliance, or part, or the component parts of any of those things, including any computer system and software. (Ref: *Aeronautics Act* section 3(1));
 - (b) **Airworthiness Directive (AD)**: An instruction issued by the Minister or by a civil aviation authority responsible for an aeronautical product type design that mandates a maintenance or operation action to ensure that an aeronautical product conforms to its type design and is in a condition for safe operation. (Ref. section 101.01 of the CARs);

- (c) **Airworthy**: In respect of an aeronautical product, means in a fit and safe state for flight and in conformity with its type design (Ref. section 101.01 of the CARs);
- (d) Airworthiness Limitation Section (ALS): This is the section of the Instructions for Continued Airworthiness (ICA) which specifies the maintenance (ex. modification, inspection, replacement) required by any applicable airworthiness standard or operating rule. The ALS may contain:
 - (i) Certification Maintenance Requirements (CMR): Required maintenance task established during the certification of the aircraft systems as an operating limitation of the Type Certificate (TC);
 - (ii) Candidate CMR Limits: This section identifies task interval limits placed on Maintenance Review Board Report (MRBR) tasks that were deemed equivalent to the candidate CMR tasks derived during the aircraft system safety analysis;
 - (iii) **Structural Limitations**: Items that the certification process has defined as being critical from a fatigue or damage tolerance assessment. The inspection interval for such items is mandatory and is treated in a similar manner to a CMR;
 - (iv) Safe Life Components / Life Limits: Mandatory replacement times for components necessary to maintain compliance with the type design;
 - (v) Fuel System Limitations (FSLs): These periodic maintenance tasks result from the fuel tank assessment analysis conducted in accordance with 14 CFR 21 SFAR 88 or section 525.981 of Standard 525 of the CARs for more recently certified transport category aeroplanes;
 - (vi) Critical Design Configuration Control Limitations (CDCCL): These airworthiness limitations preserve a critical ignition source prevention feature of the fuel system design that is necessary to prevent the occurrence of an unsafe condition identified during the fuel tank assessment analysis performed in accordance with 14 CFR 21 SFAR 88 or paragraph 525.981(d) of Standard 525 of the CARs for more recently certified transport category aeroplanes; and
 - (vii) **Engine Airworthiness Limitations:** Service life limits and/or mandatory inspections of engine static structure or rotating parts.
- (e) Alternative Means of Compliance (AMOC): An approval issued by the Minister, or a foreign approval accepted by the Minister, under subsection 605.84(2) of the CARs that provides alternative means to comply with an AD, where the proposed alternative maintains the level of safety that is provided for by the compliance time, the modification, the restriction, the replacement, the special inspection, or the procedure set out in the AD;
- (f) **Continuing Airworthiness**: The set of processes by which an aeronautical product complies with the applicable airworthiness requirements and remains in a condition for safe operation throughout its operating life;
- (g) Continuing Airworthiness Web Information System (CAWIS): A TCCA web-based information system that can be used by the public as a source, but not the only source, for collecting or identifying MCAI, ADs, or AMOC of general applicability issued by TCCA or other States of Design (SoD) that may be applicable to a Canadian-registered aircraft or an aeronautical product installed, or intended to be installed on a Canadian-registered aircraft;
- (h) Instructions for Continued Airworthiness (ICA): Contain the recommended scheduling, methods, inspections, processes, and procedures necessary to maintain an aeronautical product airworthy throughout its operational service life. The ICA contain information on each item or part installed on the aeronautical product. The ICA are

- developed, maintained, and provided by the design approval document holder under subsection 521.367(1) and section 521.368 of the CARs;
- (i) International Civil Aviation Organization (ICAO) Contracting State: Any State that is a party to the Convention on International Civil Aviation signed at Chicago on the 7th day of December 1944;
- (j) Make: Is a name assigned to the aeronautical product by the manufacturer at the time it was produced to use in lieu of the aircraft manufacture's name. If the organization that holds rights to an aeronautical product's design permits another organization to build that product, in most cases, the product make is the name assigned by the organization that holds rights to the design. The make is normally printed on the product's data plate, if installed, at the time of manufacture;
- (k) Mandatory Continuing Airworthiness Information (MCAI): As described in ICAO Annex 8, refers to any generally applicable information, which the SoD has found necessary for the continuing airworthiness and safe operation of the aircraft, including its engines and propellers when applicable. Such information is commonly issued by ICAO Contracting States in the form of an AD. In Canada, this ICAO Annex 8 requirement is codified in section 521.426 of the CARs;
- (I) **Manufacturer**: The organization that has been recognized by its certifying authority as having manufactured the aeronautical product, at the time of its completion. The manufacturer's name is normally identified on the product's data plate, if installed. In most cases, the manufacturer is also the TC holder;
- (m) **Model**: An aeronautical product manufacturer's designation for a product grouping with same or similar design which is listed in the product's Type Certificate Data Sheet (TCDS);
- (n) **Operator**: Persons operating a Canadian-registered aircraft under paragraph 605.01(1)(a) of the CARs or Canadian persons operating a foreign-registered aircraft in Canada under paragraph 605.01(1)(b) of the CARs;
- (o) **State of Design (SoD)**: The State having jurisdiction over the organization responsible for the type design of an aeronautical product (Ref: ICAO Annex 8);
- (p) **State of Manufacture (SoM)**: The State having jurisdiction over the organization responsible for the final assembly of the aircraft, engine, or propeller (Ref. ICAO Annex 8); and
- (q) **State of Registry (SoR)**: The State on whose register the aircraft is entered (Ref: ICAO Annex 8).
- (2) The following **abbreviations** are used in this document:
 - (a) **AMOC**: Alternative Means of Compliance;
 - (b) **AD**: Airworthiness Directive;
 - (c) **ATA**: Air Transport Association of America;
 - (d) **CAA**: Civil Aviation Authority;
 - (e) **CAN-TSO**: Canadian Technical Standard Order;
 - (f) CARs: Canadian Aviation Regulation;
 - (g) CASA: Civil Aviation Safety Alert;
 - (h) **CAWIS**: Continuing Airworthiness Web Information System;
 - (i) **CDCCL**: Critical Design Configuration Control Limitations;

- (j) **DADH**: Design Approval Document Holder;
- (k) **EASA**: European Union Aviation Safety Agency;
- (I) **FAA**: Federal Aviation Administration;
- (m) ICAO: International Civil Aviation Organization;
- (n) MCAI: Mandatory Continuing Airworthiness Information;
- (o) **NAPA**: National Aeronautical Product Approval;
- (p) **NDT**: Non-Destructive Testing;
- (q) **PDA**: Part Design Approval;
- (r) **PMA**: Parts Manufacturer Approval;
- (s) RDA: Repair Design Approval;
- (t) **SB**: Service Bulletin;
- (u) SoD: State of Design;
- (v) **SoM**: State of Manufacture;
- (w) **SoR**: State of Registry;
- (x) **STC**: Supplemental Type Certificate;
- (y) **TC**: Type Certificate;
- (z) **TCCA**: Transport Canada Civil Aviation;
- (aa) TCDS: Type Certificate Data Sheet;
- (bb) **TSO**: Technical Standard Order;
- (cc) USA: United States of America; and
- (dd) WSDR: Web Service Difficulty Report.

3.0 Background

- (1) Canada, as a signatory to the Convention on International Civil Aviation, has an obligation to comply with the international standards contained in the Annexes published by the International Civil Aviation Organization (ICAO). Canada is a State of Design (SoD), a State of Registry (SoR), and a State of Manufacture (SoM) as defined by ICAO. As the Civil Aviation Authority (CAA) of the SoD, TCCA provides the original approval for any Canadian-designed aeronautical products, on which other ICAO Contracting States may base their own approval. In addition, TCCA provides continuing airworthiness support for Canadian-designed aeronautical products worldwide. As the CAA of the SoR, TCCA oversees the continuing airworthiness of aeronautical products registered under Canadian jurisdiction. As the CAA of the SoM (i.e. when jurisdiction of Design Approval Document Holder (DADH) is another State), TCCA oversees the conformity of manufactured products manufactured with the approved type design.
- (2) ICAO Annex 8, Airworthiness of Aircraft, requires a SoD, or SoR to issue and distribute MCAI whenever it finds it necessary for the continuing airworthiness and safe operation of the aircraft, engines, propellers, associated parts, or appliances, under its jurisdiction.
- (3) The continuing airworthiness of aeronautical products that are designed, registered, or operated in Canada is a shared responsibility among TCCA, aircraft owners, aircraft operators, aircraft maintainers, manufacturers, and design organizations. Furthermore, for foreign aeronautical products registered in Canada (i.e., where Canada is not the SoD), the CAA of the SoD also shares responsibility for continuing airworthiness. For foreign-registered aeronautical products

- operated in Canada, the CAAs of the SoD and/or SoR also share responsibility for continuing airworthiness.
- (4) The term MCAI in ICAO Annex 8 is intended to include mandatory requirements for a modification, a replacement of parts, an inspection and/or amendment of operating limitations and procedures of an aircraft, engine, propeller, associated parts, or appliances. Such information is commonly issued by ICAO Contracting States in the form of ADs. In Canada, this Annex requirement is codified in section 521.426 of the CARs.
- (5) When a corrective action is required to address an unsafe condition in an aeronautical product and the unsafe condition is likely to exist or develop in other aeronautical products, TCCA has an obligation to issue an AD under paragraph 521.427(1)(a) of the CARs, unless the unsafe condition has been rectified by a corrective action taken under section 521.356 of the CARs, pursuant to subsection 521.427(3) of the CARs.
- (6) Section 605.84 of the CARs is the basic regulation that identifies the ADs that apply in Canada, namely:
 - (a) ADs issued by the Minister under section 521.427 of the CARs;
 - (b) Notices that are equivalent to ADs issued by the CAA of the SoD for an aircraft, engine, propeller, associated parts, or appliances unless otherwise rendered not applicable by the Minister; and
 - (c) Notices that are equivalent to ADs issued by the CAA of the SoM for an aeronautical product in respect of which no Type Certificate (TC) has been issued unless otherwise rendered not applicable by the Minister.
- (7) MCAIs or ADs issued by a SoD other than Canada (i.e. a foreign-issued MCAI or AD) or an equivalent foreign notice which applies in Canada can be modified or cancelled by TCCA through the issuance of another AD under paragraph 521.427(1)(b) of the CARs.
- (8) Subsection 605.84(2) of the CARs and appendix H of Standard 625 of the CARs clarify that where a conflict exists between a foreign-issued MCAI or AD or an equivalent foreign notice and an AD issued by the Minister, the AD issued by the Minister prevails.
- (9) Owners, operators, or persons having legal custody and control of an aircraft except for aircraft with Special Certificates of Airworthiness in the Amateur Built or Owner Maintained classifications are responsible to ensure that their aircraft meets the requirements of any ADs applicable to their aircraft, engines, propellers, associated parts, or appliances, prior to conducting a take-off.

4.0 Purpose of an Airworthiness Directive

- (1) Section 521.426 of the CARs requires the Minister to issue ADs for the purpose of fulfilling their continuing airworthiness responsibility either as a SoR or as a SoD:
 - (a) When issued under the responsibility of a SoD, the TCCA AD applies to all aeronautical products registered or operated in Canada and generally other foreign countries. Under ICAO Annex 8, foreign countries either adopt the MCAI issued by the SoD or assess the MCAI and take appropriate airworthiness action, which often results in the foreign country implementing an airworthiness action equivalent to that mandated by a SoD; or
 - (b) When issued under the responsibility of a SoR, the TCCA AD applies only to aeronautical products registered in Canada that fall under the jurisdiction of the CARs.
- (2) Where Canada is designated a SoM, and another country is the SoD, the primary responsibility for continuing airworthiness of the aeronautical product and issuance of an AD is with the SoD. TCCA coordinates and cooperates with the SoD in assessing information or experience with the affected aeronautical product.

- (3) An AD issued by the Minister applies to aeronautical products that are approved or accepted for use in Canada:
 - (a) Through issuance of a design approval document under Subpart 521 of the CARs, predecessor regulations Subpart 511 and 513 of the CARs, or *Air Regulations* (e.g. TC, Canadian Technical Standard Order (CAN-TSO), Supplemental Type Certificate (STC), Repair Design Approval (RDA), Part Design Approval (PDA));
 - (b) Through acceptance of a foreign design approval document issued by a SoD that is equivalent to a design approval document referred to in paragraph (a) above, for the purpose of issuing a TCCA certificate of airworthiness; or
 - (c) Through a mutual recognition provision in a legally binding bilateral agreement with the Government of Canada that allows for automatic or direct acceptance of a foreign design approval document without the need to issue a corresponding TCCA design approval document (e.g. Technical Standard Order (TSO) approvals and replacement parts).
- (4) The issuance of an AD under Subpart 521 of the CARs is intended to support the continuing airworthiness for the following:
 - (a) Canadian operations: TCCA's safety oversight applies to all aircraft, engines, propellers, appliances, and parts operated in Canada, regardless of whether such products originated from Canada or were imported from foreign countries. TCCA's responsibility is to assess potential continuing airworthiness safety issues and specify the necessary mandatory corrective actions for products falling under the jurisdiction of the CARs. In this capacity, TCCA is performing both as the CAA of the SoR and/or SoD; and
 - (b) International operations: Foreign countries that operate Canadian-designed aircraft, engines, propellers, appliances, or parts place primary reliance on TCCA and the Canadian DADH responsible for that product to develop corrective actions when unsafe conditions are encountered. In this capacity, TCCA is primarily performing the role of the CAA of the SoD.

5.0 Conditions for issuing an Airworthiness Directive

- (1) Paragraph 521.427(1)(a) of the CARs requires the Minister to issue an AD to correct or address an identified unsafe condition unless it has already been rectified under subsection 521.427(3) of the CARs.
- (2) If the identified unsafe condition is with a Canadian-designed product, TCCA directs the Canadian DADH to develop a corrective action. Once a corrective action is approved by TCCA under paragraph 521.356(a) of the CARs, the Minister may issue an AD to specify the required mandatory corrective action. For corrective actions identified in an AD, the identification of those corrective actions in the AD is confirmation of approval by the Minister under paragraph 521.356(a) of the CARs. The TCCA AD that is issued for the Canadian aeronautical product is transmitted as a MCAI under ICAO Annex 8 to every foreign state which has advised Canada that the aeronautical product has been entered on its register and to any other ICAO Contracting State upon request. The SoR are required to either adopt the TCCA AD or take an equivalent corrective action of their own.
- (3) If, in the opinion of the Minister, a corrective action of urgent nature is warranted to eliminate or mitigate an unsafe condition, an emergency AD is issued and transmitted expeditiously.
- (4) If, in the opinion of the Minister, the identified unsafe condition consists of security vulnerabilities which can be exploited before corrective action is taken, a security sensitive information AD is issued and is not made publicly accessible.
- (5) Alternatively, the Minister may agree with the Canadian DADH for other means of responding to the unsafe condition in lieu of an AD issuance, under subsection 521.427(3) of the CARs. For

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example, this provision gives the Minister flexibility to accept DADH monitored fleet campaigns in place of ADs where there are safety benefits and certain provisions are met. Refer to AC (RESERVED) for additional information.

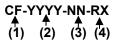
- (6) If the identified unsafe condition is with a foreign aeronautical product that is registered in Canada, TCCA communicates with either the CAA of the SoD or the foreign DADH, or both, to establish a corrective action. If the CAA of the SoD or foreign DADH, or both, does not respond by issuing corrective action or MCAI in response to TCCA's safety concern, it is incumbent upon the Minister to issue an AD under Subpart 521 of the CARs to address the unsafe condition. This is considered a unilateral action by Canada, acting as a SoR in issuing its own AD. In this instance, TCCA has an obligation under ICAO Annex 8 to transmit its unilateral AD to the SoD.
- (7) With respect to unilateral ADs, it is recognized that TCCA and the CAA of the SoD may disagree as to the finding of an unsafe condition and/or the required mandatory corrective action(s), resulting from investigations made by TCCA. In this case, TCCA communicates and consults with the CAA of the SoD for the purposes of addressing and resolving safety concerns raised by TCCA, prior to issuing its unilateral AD. The Federal Aviation Administration (FAA)/TCCA Implementation Procedures for Airworthiness and the European Union Aviation Safety Agency (EASA)/TCCA Technical Implementation Procedures provide requirements for the collaboration on continuing airworthiness information of aeronautical products under the respective jurisdictions of EASA, FAA, and TCCA.
- (8) There may be cases where the contents of an AD issued by a SoD do not directly apply to Canada (e.g. reliance on foreign regulations for which there are no equivalent CARs or where there is a conflict with the CARs) or where the Minister may disagree with its contents, instructions, or compliance timeframes. Paragraph 521.427(1)(b) of the CARs allows the Minister to either modify or cancel the requirements of these foreign-issued MCAIs or ADs. In this case, the Minister issues in a timely manner its own AD under Subpart 521 of the CARs to modify or cancel the foreign-issued MCAI or AD. Subsection 605.84(2) of the CARs and appendix H of Standard 625 of the CARs clarify that where a conflict exists between a foreign-issued MCAI or AD and an AD issued by the Minister, the AD issued by the Minister prevails.
- (9) An AD issued under Subpart 521 of the CARs may also be modified or cancelled as follows:
 - (a) An AD may be modified by being either revised or superseded when it is necessary to modify the contents, either the requirements or compliance timeframes, or because the conditions for its original issuance have changed. The revised or superseding mandatory corrective action is approved by TCCA under paragraph 521.356(a) of the CARs at which point the Minister issues the revised or superseding AD; or
 - (b) An AD may be cancelled when the condition for its issuance ceases to exist. For example, TCCA may have initially issued a unilateral AD and the CAA of the SoD for the aeronautical product has now issued their own MCAI to correct the unsafe condition; or TCCA may become aware of new safety information which renders the requirements of the AD no longer required. An AD cancellation refers to the complete revocation of an AD without replacement.

6.0 Contents of an Airworthiness Directive

- (1) Subsection 521.427(2) of the CARs prescribes the minimum set of information published in an AD.
- (2) The AD is published in a standard format that clearly identifies the Minister as the issuer. The format includes a citation of Subpart 521 of the CARs as the basis of authority for issuance.
- (3) The AD is published in accordance with the Treasury Board Standard on Web Accessibility which ensures the uniform application of a high level of web accessibility across Government of Canada websites and web applications.

- (4) An AD issued under section 521.426 of the CARs is published in the official languages of Canada, English and French, both being equally authoritative.
- (5) The following information is provided for all ADs issued under section 521.426 of the CARs:
 - (a) AD Number: Unique alpha-numeric code by which the document is identified and distinguished from other ADs. This number is the same for both English and French versions:

AD Numbers adhere to the following naming convention:



- (1) = Country code (CF for Canada)
- (2) = Year of AD issuance
- (3) = Distinguishing number (sequential)
- **(4)** = Revision number ('R' remains constant; 'X' is sequential). Omitted unless the AD is a revision
- (b) Issue Date: This is an administrative date denoting when the AD is issued following approval by the Minister;
- (c) Effective Date: This is the date on which the AD becomes effective;
- (d) Subject: Identifies the Air Transport Association of America (ATA) chapter title with the sub-chapter title, as required, followed by the unsafe condition addressed by the AD. Under certain circumstances, as determined by the Minister, the subject of the AD may identify the corrective action as opposed to the unsafe condition;
- (e) Applicability: Identifies the aeronautical product(s) affected by the AD. It lists the name of the DADH, with the make and model(s) of the aeronautical product as formally recorded in the design approval document (TC or equivalent), and specifies the serial numbers of the products affected, or excluded. The DADH of some aeronautical products may have changed from one holder to another, in which case, the name of the previous DADH is listed in parenthesis. A clear history of the ownership of the TC can be found on the Type Certificate Data Sheet (TCDS). Modification status or part numbers affected by the AD may also be identified with the serial numbers affected or excluded, as required;
- (f) Compliance: Specifies the time period within which the mandatory corrective actions described in the AD are completed. The standard wording "As indicated below, unless already accomplished" may be used to give credit to those aeronautical products that have previously accomplished the corrective action as mandated by the AD, before the effective date of the AD. In these instances, the AD is applicable to these aeronautical products, but they have already met the requirements of the AD;
- (g) Background: Provides a concise description of the unsafe condition, the cause, and the risk or consequence if action is not taken in accordance with the AD, and a brief statement describing the mandatory corrective action;
- (h) Approving Authority: An AD is signed by an authorized person in TCCA. The name and title of the person signing are clearly indicated in the signature block of the AD; and
- (i) Corrective Action Requirements:
 - (i) Schedule: Specifies the different time periods involved (e.g. initial/threshold, repeat intervals, phase-in) and the unit of measure (e.g. hours air time/Flight Hours (FH), Flight Cycle (FC), pressurization cycle, engine cycle, calendar time) for completion of the required corrective actions;
 - (ii) Required Corrective Action: Specifies the airworthiness action(s) required (such as, but not limited to, inspection, modification, replacement), and whether such action(s) constitute an initial action or a recurring action required to mitigate the risks; and

- (iii) Required Terminating Action: Specifies the airworthiness action(s) required to correct the unsafe condition.
- (6) In addition to the minimum set of information required in an AD under section 521.426 of the CARs, the following information is provided on TCCA ADs:
 - (a) ATA: Specifies the two-digit chapter code of the ATA 100 specification for the aircraft system which is relevant to the unsafe condition of the AD;
 - (b) Type Certificate: Specifies the TC number(s) issued by the SoD (or "N/A" if not applicable) for the aeronautical product(s) to which the AD applies. For unilateral AD, both the SoD TC and TCCA TC numbers are listed;
 - (c) Revision: Specifies the superseded AD number and its issue date when the original AD is revised. The revised AD uses revision bars to indicate the changes to the document and has a revision number in accordance with paragraph 6.0(5)(a) above. A change to a previously issued AD that is relieving in nature and/or where compliance with the corrective action requirements of the original AD has no detrimental effect on safety is issued as a revised AD (e.g. a change to the AD revision level);
 - (d) Replacement: Specifies the superseded AD number and its issue date when the original AD is superseded. A change to a previously issued AD that imposes new requirements and/or where compliance with the original AD has a detrimental effect on safety is issued as a superseded AD (e.g. a new unique AD number is provided); and
 - (e) Cancellation: Specifies the cancelled AD number and its issue date. The cancellation of an AD refers to the complete revocation of an AD without replacement.
- (7) The corrective action(s) may include, but are not limited to:
 - (a) Inspection, repair, modification, replacement, test, operational limitations, or functional/operational checks;
 - (b) Revisions to the ALS through the introduction of a new or revised (more restrictive) limitation;
 - (c) Revisions to flight manuals through the introduction of new limitations and/or procedures required to address unsafe conditions or revisions to existing limitations and/ or procedures where unsafe conditions have been identified; or
 - (d) Reference to external documents incorporates by reference external documents such as, but not limited to, service bulletins, repairs, new or revised airworthiness limitations, Non-Destructive Testing (NDT) procedures, that are integral parts of the corrective action. If there is a conflict between the requirements or instructions as described in the external document (e.g. Service Bulletin (SB)) and that of the AD, the AD's requirements or instructions take precedence. The AD specifies the version or revision of the document to incorporate, and the specific content being mandated as a corrective action to rectify the unsafe condition. Subsequent revisions of the corrective actions specified within the external documents require approval by TCCA to meet the requirements of the AD. If subsequent revisions to a document are acceptable to meet the requirements of the AD, the AD includes an explicit statement to that effect, and specifies if approval by TCCA of the corrective action in the referenced document is required. The Minister's approval of the revised corrective action referenced in the document in the AD is provided to the DADH for the applicable aeronautical product.
- (8) A security sensitive information AD does not directly contain the sensitive details of the identified security vulnerability.

7.0 Distribution of an Airworthiness Directive

- (1) An AD issued under section 521.426 of the CARs is distributed as follows:
 - (a) Canada: to all registered owners and/or operators of a Canadian-registered aircraft affected by the AD. If an owner has leased their aircraft to a foreign organization, it is the responsibility of the Canadian owner to forward the AD to the aircraft lessee. In cases where an AD applies to an appliance or part, it is not distributed and is only posted in Continuing Airworthiness Web Information System (CAWIS) because of the uncertainty of where the appliance or part is installed, or who may own it;
 - (b) DADH: this is the person or organization who is responsible for the type design, or change to the type design, of the aeronautical product that is the subject of the AD. This person or organization could be domestic (in Canada), or in a foreign state;
 - (c) SoD: this is the foreign CAA if the product affected is a foreign aeronautical product approved or accepted by the Minister;
 - (d) SoM: if different from the SoD; and
 - (e) SoR: these are all the foreign CAAs that are known to have the affected Canadiandesigned aeronautical product on their register. This is only applicable for aeronautical products whose SoD is Canada.

7.1 Continuing Airworthiness Web Information System (CAWIS)

- (1) CAWIS contains a database used by TCCA to record and store electronic copies of ADs that have been determined to apply to aeronautical products registered or designed in Canada. The database is publicly accessible through the Internet and contains ADs issued by TCCA as well as ADs issued by other SoD. CAWIS users can be, but are not limited to, aircraft owners, operators, maintainers, person having legal custody and control of an aircraft, manufacturers of Canadian aeronautical products, or Canadian holders of a design approval document. The CAWIS website is accessed at: www.tc.gc.ca/cawis-swimn
- (2) Users can use the CAWIS website to query the database to identify ADs (foreign and domestic) that may apply to their Canadian-operated, Canadian-registered, or Canadian type designed aeronautical product. In addition to CAWIS serving as a database for ADs, it can also be used for other purposes, such as to review the recorded data pertaining to an owner's aircraft, or to consult the Web Service Difficulty Reports (WSDRs) database.
- (3) TCCA offers CAWIS as one source, but not the only source, of information on ADs that may apply in Canada. Most SoD make available to the public an online database for accessing their ADs, and this can be used to complement the records available in CAWIS. Since TCCA relies on other SoD for the transmission of ADs that may apply in Canada, circumstances beyond TCCA's control may play a factor in CAWIS' ability to provide a complete or comprehensive listing of applicable ADs. In respect of foreign aeronautical products registered in Canada, appendix H of Standard 625 of the CARs states that "...the owners are expected to avail themselves of all TC holders' instructions for continuing airworthiness." Therefore, aircraft owners, operators, maintainers, or persons having legal custody and control of an aircraft are encouraged to supplement CAWIS with other means for receiving or identifying ADs that may apply to their aeronautical products.

7.2 Dissemination of an Airworthiness Directive

(1) When TCCA issues an AD or receives an AD from a CAA that is the SoD on an aeronautical product, the document is posted electronically in CAWIS. The availability of the AD in CAWIS serves as a means for disseminating the AD to all known owners or operators of Canadian-registered aircraft, TCCA regional offices, and other CAWIS users. Owners or operators of Canadian-registered aircraft receive, through the CAWIS distribution system, ADs, and Civil Aviation Safety Alerts (CASAs) that are applicable to their aircraft.

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(2) An AD issued by TCCA for an aeronautical product for which Canada is the SoD is formally distributed by e-mail to all ICAO Contracting States listed in ICAO's web-based version of Circular 95 – The Continuing Airworthiness of Aircraft in Service, in fulfillment of Canada's obligation under ICAO Annex 8.

- (3) Aircraft owners, operators, maintainers, and foreign CAAs who are part of ICAO Circular 95 can join the TCCA electronic mailing list to receive notification of new ADs as well as other civil aviation related documents and publications issued by TCCA by sending an e-mail to tc.cawwebfeedback-retroactionwebmdln.tc@tc.gc.ca. If you do not belong to one of these groups, and wish to receive notification of new ADs as well as other civil aviation related documents and publications issued by TCCA, you can subscribe to TCCA e-Bulletin at: tc.canada.ca/en/aviation/transport-canada-civil-aviation-e-bulletin.
- (4) CAWIS offers the most efficient means for individuals to become aware of a newly issued TCCA AD. Delays may occur in the e-mail notification of a TCCA AD that is already posted on the CAWIS website.
- (5) In the case of an emergency AD, TCCA notifies the SoR of the affected Canadian-designed aeronautical product immediately using the most expedient means of communication.

7.3 Dissemination of a miscellaneous equipment Airworthiness Directive

- (1) Equipment ADs are posted electronically in CAWIS in the form of a miscellaneous equipment AD list which identifies ADs applicable to other aeronautical products such as appliances, equipment, or system installations.
- (2) Miscellaneous equipment ADs are posted in CAWIS against the design approval document/manufacturer company name in the miscellaneous equipment AD list as well as against any aeronautical product models listed in the AD. The affected product may be installed in an aircraft not identified by the AD. Users review the CAWIS miscellaneous equipment AD list periodically to learn of the existence of such ADs.
- (3) STC holders may issue SBs for their products and, if dealing with an unsafe condition, the CAA of the SoD may mandate the SB through an AD. If the AD does not list affected aircraft, engine, or propeller models in the applicability section, the AD is posted in the CAWIS miscellaneous equipment AD list. It is important to review the CAWIS Miscellaneous Equipment List for these ADs when performing an AD review for the aircraft.
- (4) Other products certified by TCCA/FAA/EASA/CAAs include TSOs, TCCA PDAs or the FAA equivalent Parts Manufacturer Approvals (PMAs), or other recognized design approvals. If an AD is required, it is in most cases issued against the actual aeronautical product and not the aircraft, engine, or propeller type design where it is incorporated. These miscellaneous equipment ADs identify the product models and sometimes include the possible model of aircraft, engine, or propeller in which the equipment may be installed.

7.4 Dissemination of a security sensitive information Airworthiness Directive

- (1) A security sensitive information AD is distributed on a need-to-know basis:
 - (a) When the AD is issued by TCCA for an aeronautical product for which Canada is the SoD, the AD is transmitted only to ICAO Contracting States who are known to have aeronautical products on their registry which are affected by the AD. The recipient ICAO Contracting States are requested to not make the AD publicly available until further notice and to provide the AD upon request only to the registered owner of an aeronautical product which is affected by the AD; or
 - (b) When the AD is foreign-issued by the CAA of the SoD, TCCA reviews and processes the AD in accordance with the procedures in section 7.5 of this document. Furthermore,

TCCA does not make the AD publicly available and provides a copy of the AD only to the registered owner of an aeronautical product which is affected by the AD.

- (2) A security sensitive information AD may be made public by TCCA when:
 - (a) All known affected aeronautical products comply with the requirements of the AD;
 - (b) The compliance deadline has expired; and
 - (c) For a foreign-issued AD, after the CAA of the SoD makes the AD publicly available.

7.5 TCCA review of foreign-issued MCAI or Airworthiness Directive for applicability to products on the Canadian aircraft registry

- (1) ICAO Annex 8 requires the SoD to transmit MCAI to ICAO Contracting States who have aeronautical products on their registry that are affected by the MCAI.
- (2) Upon receipt of a MCAI, TCCA conducts a review of these documents to ensure that they are appropriate for the Canadian operating context and that the MCAI can reasonably be expected to reduce the safety risk associated with the unsafe condition to an acceptable level. TCCA reviews the MCAI for:
 - (a) Applicability to aeronautical products in Canada;
 - (b) Jurisdiction of issuing authority;
 - (c) Mandatory versus non-mandatory applicability in Canada;
 - (d) Existence of a comparable Canadian document;
 - (e) Effect on aviation safety;
 - (f) Effective date and the impact on the Canadian aviation community; and
 - (g) Compliance with the CARs.
- (3) If TCCA determines that the MCAI is applicable and appropriate in Canada, the information is uploaded to the CAWIS database. In the case of type certified aeronautical products (aircraft, engine, or propeller), TCCA associates ADs in CAWIS only by the applicability statement to the make and model and does not consider serial number range, or other information such as modification status, etc.
- (4) There may be occasions when an AD issued by the CAA of the SoD is not appropriate for application in Canada due, but not limited, to the:
 - (a) Canadian operating environment such as extreme cold weather or remote northern operations:
 - (b) Citation of foreign operating rules that do not apply or for which there is no equivalent operating rules in Canada;
 - (c) Reliance on foreign regulations to ensure compliance with the corrective action that are likely to lead to the inadvertent contravention of Canadian regulations by owners, operators and/or maintainers of Canadian-registered aircraft;
 - (d) Corrective actions conflicting with CARs. For example, allowing for the owner/pilot to conduct elementary work without meeting the Canadian elementary work requirements. Further guidance on elementary work may be found in AN B061 Privileges of Performing Maintenance or Elementary Work When Instructed by Sources other than the Canadian Aviation Regulations;
 - (e) Compliance timeframe not being adequate; or
 - (f) Other safety reasons as determined by the Minister.

- (5) In such a case, TCCA issues its own corresponding AD in lieu of the AD issued by the SoD, and the TCCA AD prevails over the AD of the SoD. Any ADs not adopted in Canada are posted in CAWIS and annotated as such, e.g. Not Adopted in Canada/Superseded in Canada by AD CF-YYYY-NN.
 - **Note**: The AD issued by the CAA of the SoD is applicable until the TCCA AD is issued or a TCCA Alternative Means of Compliance (AMOC) is issued to remove the need to comply with it.
- (6) When an AD issued by the CAA of the SoD is determined not appropriate for application in Canada for the reasons described in paragraph 7.5(4) above, TCCA notifies the CAA of the SoD of this determination and the reason thereof, prior to the issuance of the corresponding TCCA AD.

8.0 Determining Airworthiness Directive applicability

- (1) It is the responsibility of the owners, operators, or persons having legal custody and control of an aircraft to ensure that their aircraft meets the requirements of any ADs applicable to their aircraft, engines, propellers, associated parts, or appliances, prior to conducting a take-off under section 605.84 of the CARs. Therefore, it is important for owners, operators, or persons having legal custody and control of an aircraft to be able to determine which ADs are applicable to their aeronautical product.
- (2) A foreign-issued MCAI or AD applies to aeronautical products registered in Canada. If a foreign-issued MCAI or AD applies in Canada, it is accorded the same mandatory status under section 605.84 of the CARs and is complied with, just as ADs issued under Subpart 521 of the CARs are complied with. An AD issued by other than a SoD (such as by a SoM or SoR) does not have a legal status under the CARs, and is not mandatory, with the exception of MCAIs issued by the SoM for which no TC has been issued for the aeronautical product under subparagraph 605.84(1)(c)(ii) of the CARs.
 - Note: The European Union (EU) established the EASA to perform, on behalf of member States, the SoD responsibilities for safety of civil aviation in the EU. EASA has established two types of documents as their MCAI under ICAO Annex 8, namely an AD and Emergency Conformity Information (ECI). An AD is issued when addressing a design related unsafe condition. An ECI document is issued when addressing non-design related unsafe conditions. TCCA accepts an ECI to be equivalent in authority to an AD. Therefore, compliance with both ADs and ECIs are mandatory under section 605.84 of the CARs.
- (3) A foreign-issued MCAI or AD is considered to have been issued by the CAA of the SoD when the CAA that issues the AD is, on the date of issuance of that AD, responsible for the certification of the aircraft, engine, propeller, part, or appliance to which the AD applies. The SoD for a given aeronautical product can be determined by reviewing the TC and TCDS of the product and assessing which CAA was the SoD at the time the foreign MCAI or AD was issued. Canadian TCDSs can be accessed at National Aeronautical Product Approval (NAPA) Issued Certificates Online (NICO) website: https://www.apps.tc.gc.ca/saf-sec-sur/2/nico-celn/
- (4) The TCs of some aeronautical products may be transferred from one SoD to another under section 521.357 of the CARs. For example, a helicopter model was transferred to a Canadian DADH from the United States of America (USA); and an aircraft model was transferred to a Canadian DADH from Austria. Canada became the SoD for those products after the TC transfer. The ADs applicable to the helicopter are those ADs issued by the FAA before the type design transfer date to TCCA and those ADs issued by TCCA after the type design transfer date. The ADs applicable to the aircraft are those ADs issued by EASA before the type design transfer date to TCCA and those ADs issued by TCCA after the type design transfer date.
- (5) With respect to foreign-issued MCAI or AD issued by the CAA of the SoD, unless superseded or cancelled by a TCCA AD (Ref. section 7.5), the following applies:

- (a) These ADs apply to Canadian-registered aircraft of the affected type, regardless of any contained language to the contrary. For example, some FAA ADs have included statements indicating that the AD is applicable only to USA-registered aircraft and could be incorrectly interpreted as meaning that the AD is not applicable to Canadian-registered aircraft;
- (b) Any reference to foreign regulations in these ADs (e.g. the USA FARs) is interpreted as meaning the equivalent Canadian regulations (e.g. the CARs), which take precedence;
- (c) Regardless of any requirement (or not) for the use of foreign approved facilities (e.g. an FAA-approved repair station or other organization) the owner assesses whether the AD requires specialized work (as defined by the CARs) by a suitably qualified Transport Canada approved company (e.g. Approved Maintenance Organization);
- (d) These ADs may contain language that allow for a one-time ferry flight of the aircraft to a location where the corrective actions of the AD can be accomplished. In these cases, a Transport Canada AMOC is not required for the ferry flight, but a Transport Canada flight permit is still required (Ref. section 605.03 and 507.04 of the CARs). Conversely, if the language of these ADs does not explicitly allow for a ferry flight, a Transport Canada AMOC is required in addition to the Transport Canada flight permit to allow a ferry flight. This is also applicable to TCCA-issued ADs. (Refer to AC 605-005);
- (e) When these ADs include a reporting requirement to the foreign CAA (e.g. FAA, EASA, etc.), a copy of the report is also sent to Transport Canada at the mailbox Airworthiness Directives (TC) TC.AirworthinessDirectives-Consignesdenavigabilite.TC@tc.gc.ca; and
- (f) When the ADs contain instructions on how to obtain approval of an AMOC with the AD from the foreign CAA, the AMOC application is sent to TCCA instead.

8.1 Airworthiness Directive applicability statement

- (1) The "Applicability" section of each AD identifies the aeronautical product that is the subject of the AD. This section may also contain information such as model, serial numbers, operating conditions, and modification status, as detailed in paragraph 6.0(5)(e) above. Some aeronautical products may have been transferred from one DADH to another and consequently the information on the aircraft data plate may differ from that of the current holder. In such cases, a clear history of the ownership of the TC can be found on the TCDS to help to determine the applicability of the AD to the given aeronautical product.
- (2) Owners/operators/maintainers/persons having legal custody and control of an aircraft carefully review the applicability statement of each AD to determine applicability to their aeronautical product. Subsequently, it may be determined that some ADs are not applicable to the aeronautical product at the time of the review. However, a later change in the modification status of an aircraft (e.g. a change to the type design) may require a subsequent review of an existing AD for potential applicability.
- (3) Owners/operators/maintainers/persons having legal custody and control of an aircraft also need to be aware that ADs may be revised, superseded, or cancelled. Unless otherwise specified, owners/operators/maintainers/persons having legal custody and control of an aircraft always comply with the most recent revision of an AD as it is common practice that previous versions of an AD become void. This applies to both revised ADs and superseded ADs (Ref. paragraph 6.0(6)(c) & (d)).

8.2 How to develop a list of applicable Airworthiness Directives

(1) The CAWIS application provides users the ability to create a listing of all known ADs applicable to aeronautical products on the Canadian registry, based on specific make and model, registration mark, or a certificate holder/manufacturer from the miscellaneous equipment ADs.

- (2) Owners/operators/maintainers/persons having legal custody and control of an aircraft utilise, in addition to the CAWIS database, all other sources of information when creating the initial list of applicable ADs. Sources such as manufacturer's publications or SoD websites may provide information specific to their product not captured in the CAWIS database. Once the owner/operator/maintainer/person having legal custody and control of an aircraft has developed an AD list from CAWIS and/or from other sources, they determine if each AD in the list is applicable to their aeronautical product.
- (3) Owners/operators/maintainers/persons having legal custody and control of an aircraft are responsible to ensure compliance with miscellaneous equipment ADs that apply to parts, appliances, and STCs installed on their aircraft, engines, or propellers. ADs related to parts, appliances, and STCs can be searched in the Miscellaneous Equipment List of the CAWIS AD webpage.

Note: Historically, aeronautical products have been listed in CAWIS by the DADH identified as the manufacturer when originally certificated. This remains unaltered in CAWIS and may not match the current manufacturer or DADH as stated on the product's current TCDS or on the aircraft data plate. Therefore, when searching in CAWIS, you may be required to know the product's DADH/manufacturer history. This information can be found, in most cases, in the notes section of the applicable aeronautical product's TCDS and on the aircraft data plate.

9.0 Alternative Means of Compliance or exemption

- (1) If a person is not able to comply, or has another means of complying, with the specified requirements of an AD, subsections 605.84(3) and 605.84(4) of the CARs provide the regulatory basis by which the Minister may, respectively, grant either an exemption from compliance, or approve an AMOC, with an AD.
- (2) Subsection 605.84(3) of the CARs provides that the Minister grants an exemption where the conditions relating to aviation safety, as specified in appendix H of Standard 625 of the CARs, have been met and where the owner demonstrates to the Minister:
 - (a) Under circumstances specified in the exemption request, compliance is impractical or unnecessary; and
 - (b) The exemption provides a level of safety that is equivalent to that required by the AD.
- (3) Subsection 605.84(4) of the CARs states that the Minister approves an AMOC with an AD, for reasons set out in the approval, where the Minister is satisfied that the proposed AMOC maintains the level of safety that is provided for by the compliance time, the modification, the restriction, the replacement, the special inspection, or the procedure set out in the AD.
- (4) If the AD that is the subject of an approved AMOC is revised (Ref. paragraph 6.0(6)(c)), that AMOC remains valid unless the revised AD specifically states otherwise.
- (5) If the AD that is the subject of an approved AMOC is superseded (Ref. paragraph 6.0(6)(d)), that AMOC is no longer valid unless the superseding AD specifically states otherwise.
- (6) More information on AMOCs and exemptions is found in AC 605-005 and SI 605-002.

10.0 Information management

(1) TCCA ADs are posted in CAWIS and are therefore publicly accessible. For that reason, TCCA ADs do not contain any proprietary or security sensitive information.

11.0 Document history

(1) Not applicable.

12.0 Contact us

For more information, please contact:

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