Trinidad and Tobago
Civil Aviation Authority

TTCAA Advisory Circular

Subject: EXCHANGE AND USE OF CONTINUING AIRWORTINESS INFORMATION
TTCAA Advisory Circular TAC-021B
Date: 05/03/24

PURPOSE

1. (1) This TTCAA Advisory Circular (TAC) provides guidance to operators on the exchange and use of continuing airworthiness information.

(2) This TAC supercedes TAC-021 which is now cancelled and should be destroyed.

REFERENCES

2. (1) TTCAR No.5.

(2) ICAO Doc 9760

CONTINUING AIRWORTHINESS CONCEPT

3. (1) Continuing airworthiness covers all of the processes ensuring that, at any time in its operating life, an aircraft complies with the airworthiness requirements in force and is in a condition for safe operation.

(2) Continuing airworthiness includes the following items, under the control of the respective Civil Aviation Authorities of the State of Design and the State of Registry:

(a) Design criteria which provide the necessary accessibility for inspection and permit the use of established processes and practices for the accomplishment of maintenance;

(b) Preparation, by the organization responsible for the type design, of the specifications, methods, procedures and tasks necessary to maintain the aircraft and publication of this information in a format that can be readily adapted for use by an operator;

(c) Adoption by the operator of specifications, methods, procedures and tasks, using the information provided by the organization responsible for the type design and preparing that material in the form of a maintenance programme suitable for its operation;

(d) The reporting of defects and other significant maintenance and operational information by the operator to the organization responsible for the type design in accordance with the requirements of the State of Registry;

(e) The analysis of defect, accident and other maintenance and operational information by the organization responsible for the type design, the State of Design and the State of Registry and the initiation and transmission of information and recommended or mandatory action to be taken in response to that analysis;

(f) Consideration of and, as deemed appropriate by the operator or the State of Registry, action on the information provided by the organization responsible for the type design or the State of Design, with particular emphasis on action designated as "mandatory";

(g) Accomplishment by the operator of all mandatory requirements concerning the aircraft with particular reference to fatigue life limits and any special tests or inspections required by the certification process or subsequently found necessary to ensure structural integrity; and

(h) Preparation of and compliance with supplemental structural inspection programmes and subsequent requirements related to aging aircraft.

MANDATORY AIRWORTHINESS INFORMATION

Mandatory Airworthiness Information To Be Transmitted By The State Of Design

4. (1) Under ICAO Annex 8, Part II, 4.3.2, the State of Design of an aircraft is required to transmit to every Contracting State which has advised the State of Design that it has entered the aircraft on its register, and to any other Contracting State upon request, mandatory continuing airworthiness information.

(2) Where a State of Design issues mandatory continuing airworthiness information, such information will include the type, model and serial number of the aircraft, engine, propeller, equipment or instrument affected. The mandatory information may require additional or more frequent inspections or maintenance or modifications, and usually with a time limit for compliance in terms of a date, flying hours or number of landings.

(3) Maintenance organizations approved for aircraft types not registered or not operated in Trinidad and Tobago, or approved for parts or equipment not used in Trinidad and Tobago should request the State of Design to provide them with all mandatory airworthiness information on those types and parts.

Action By The Authority and Operator Upon Receipt Of Mandatory Airworthiness Information

5. (1) Legally, the mandatory status of mandatory airworthiness information is limited to the State that has issued that information. In Trinidad and Tobago mandatory airworthiness information issued by States of Design is made mandatory by TTCAR No. 5:20(2) which states that "Whenever a State of Design considers an aircraft or its an associated aeronautical product to be unsafe based on an airworthiness directive by that State, such directive shall be mandatory to Trinidad and Tobago registered aircraft of the type identified in that airworthiness directive.".

(2) Operators of aircraft registered in Trinidad and Tobago are required to obtain all airworthiness directives in English language directly from the State of Design for the respective aircraft types.

(3) Under TTCAR No. 5:20(4) which states "Where the Director General determines that an aeronautical product has exhibited an unsafe condition and such condition is likely to exist or to develop in other aeronautical products of the same type design, he shall, where an airworthiness directive has not been issued by the State of Design, recommend the Authority issue a Special Airworthiness Directive prescribing inspections and the conditions and limitations, where any, under which such aeronautical product may continue to be operated.". Operators and maintenance organizations are required to comply with such Special Airworthiness Directives

(4) Operators should be aware that some States of Design do not issue their mandatory airworthiness information in the form of airworthiness directives, and may instead give mandatory status to service bulletins, etc., by requiring the organization responsible for the type design to include a statement in the service bulletins, etc., that the information has mandatory status for aircraft registered in the State of Design. Some of these States of Design publish summary lists of service bulletins, etc., which they have classified as mandatory.

(5) An operator must accomplish actions made mandatory by the Authority, otherwise the aircraft is not considered airworthy. The operator should also carefully record the actions accomplished.

(6) If an operator wishes to comply in an alternative way or desires an extension of the compliance limit associated with mandatory airworthiness information, such operator is required to obtain approval from the State of Design for the alternative way or extension of the compliance limit for approval by the Authority.

(7) On occasion, compliance with mandatory airworthiness information has to be effected at very short notice. Operators should therefore establish means of communications to be able to receive this information at any time (by telex, telefax, etc.) and to develop the necessary actions.

Mandatory Airworthiness Information Issued By The Authority

6. Under TTCAR No.5:20(4), the TTCAA will only make mandatory requirements additional to those of the State of Design in the form of Special Airworthiness Directives when it is determined that an aircraft or aeronautical product has exhibited an unsafe condition which is likely to exist or develop in other aeronautical products of the same type design. Such mandatory requirements issued by the Authority will be in the form of a Special TTCAA Airworthiness Directive (Special TAD) prescribing inspections and the conditions and limitations, where any, under which the aircraft or aeronautical product may continue to be operated. Where possible, the Authority will consult with the State of Design prior to issuing such mandatory requirements and in all cases will notify the State of Design as soon as practicable.

OTHER AIRWORTHINESS INFORMATION

Transmission Of Information On Faults, Malfunctions And Defects And Other Occurrences

7. (1) TTCAR No.3:76(2)(c) and N0.5:22 require the reporting to the TTCAA and the organization responsible for the type design of an aircraft, any faults, failures, malfunctions defects or other occurrences on any Trinidad and Tobago aircraft which cause or might cause adverse effects on the continued airworthiness of the aircraft. This is achieved through the Service Difficulty Reporting (SDR) system which is described in more detail in TAC-031 as amended.

(2) If the performance of maintenance is either partially or wholly assigned to a maintenance organization, service experience on faults, malfunctions, defects, etc., of both the operator and the maintenance organization should be transmitted to the organization responsible for the type design. The information from the operator should pertain to the operational and maintenance experience of its fleet. The information from the maintenance organization should pertain to its maintenance experience of all aircraft designed by the organization responsible for the type design.

(3) The organization responsible for the type design responds to the reporting operator or organization and includes in the response advice on the actions needed for the reported service difficulty to ensure continuing airworthiness. Appendix A shows what an operator should expect from the organization responsible for the type design in response to a service difficulty report.

(4) Whenever there is evidence that its product is unsafe because of a manufacturing or design defect, the organization responsible for the type design investigates the reason for the defect and reports to the Authority of the State of Design the results of its investigation and any action being taken or proposed to correct the defect. If action is required to correct the defect, the organization responsible for the type design submits the data necessary for the issue of appropriate mandatory airworthiness information.

(5) When the Authority of the State of Design considers that the issue of mandatory airworthiness information is necessary to correct the unsafe condition, the organization responsible for the type design proposes the appropriate design changes and/or required inspections and submit details of these proposals for approval; following the approval of the proposed design changes or inspections, it makes available to all operators appropriate descriptive data and accomplishment instructions. The organization responsible for type design also makes updates to user documents, such as the aircraft service manual, illustrated parts catalogue, etc.

Assessment Of Airworthiness Information And Subsequent Action By The Operator

8. (1) Recommendations by the organization responsible for the type design are normally made by service bulletins, service letters, etc.

(2) Usually these recommendations are approved by the Authority of the State of Design. Operators should be aware that the approvals made by different States of Design may have different meanings. An approval may mean that a recommended modification complies with the applicable airworthiness requirements; however, it may only mean that the modification does not impair airworthiness. It may mean that the Authority of the State of Design agrees that the recommended action solves the problem. The exact nature of the approval is usually not indicated in the service information, and operators should therefore ask the organization responsible for the type design the meaning of the approval.

(3) Although these recommendations are normally not made mandatory by the Authority, an operator should obtain and carefully assess this information. It is clear that the operator needs qualified staff to do so. In general, it is worthwhile to accomplish the recommendations of the organization responsible for type design, as they enhance the reliability and hence availability for service of the aircraft.

(4) Modifications which are optional may still require approval by the Authority as well as the State of Design, since airworthiness requirements (e.g. flammability, crashworthiness and damage tolerance) may still be applicable. Furthermore, each item of equipment should, besides being of an approved design, function properly when installed in the applicable aircraft.

(5) Even if the performance of maintenance is either partially or wholly assigned to a maintenance organization, the operator remains responsible for the continuing airworthiness of the aircraft. This means that the operator should have the expertise and personnel to perform the assessment of all relevant information and inform the maintenance organization, especially if this organization is in a different State, of all information made mandatory by the Authority.

(6) The maintenance organization should have at its disposal all information issued by the organization responsible for the type design relevant to the contracted work.

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Director General of Civil Aviation

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APPENDIX A

RESPONSE TO OPERATORS BY THE ORGANIZATION RESPONSIBLE FOR THE TYPE DESIGN

1. (1) Response to the reporting operator by the organization responsible for the type design includes advice on the actions needed to overcome the reported service difficulty and ensure continuing airworthiness. Communication by the organization responsible for the type design to the operator and the authority in the State of Design should include the following:

(a) A clear discussion of the seriousness and possible causes of the difficulty;

(b) Permissible limits for continued operation;

(c) Special inspection procedures where applicable;

(d) The repeat inspection interval needed if continued operation is permissible;

(e) Repairs or replacement required, and when required; and

(f) Limitations for non-revenue ferry flight.

(2) The organization responsible for the type design should also inform other affected operators of reported service difficulties that affect the continued airworthiness of the aircraft type. Communications should include the following:

(a) A clear description of the difficulty reported using visual aids (photograph or sketch);

(b) A clear discussion of the seriousness of the difficulty;

(c) Applicable part and serial numbers;

(d) Aircraft and/or component time in landings and flight hours when the difficulty was found;

(e) How the difficulty was discovered;

(f) Analysis of the cause, if known;

(g) Recommended actions;

(h) Permissible limits for continued operation; and

(i) Feedback information desired.