



WORKING PAPER

ASSEMBLY — 41ST SESSION

TECHNICAL COMMISSION

Agenda Item 31: Aviation Safety and Air Navigation Standardization

**STATE OF DESIGN RESPONSIBILITIES ON MANDATORY CONTINUING
AIRWORTHINESS INFORMATION (MCAI)**

(Presented by Brazil)

EXECUTIVE SUMMARY

The complexities of the aviation industry are notably increasing every year. As long as multinational companies design and manufacture aircraft through supply chains that connect stakeholders of several States, the final product is often indirectly subjected to multiple sovereign legislation systems. Likewise, aeronautical products may be, to some extent, subject to political and economic dispositions that may affect safety concerns. Considering that multiple legislation systems have an influence in the market for technical publications and continuing airworthiness technical support by manufacturers, as well as the freedom of stakeholders to determine their commercial relations, it is imperative that every contracting State (on the condition of State of Design or State of Registry) acknowledges the Mandatory Continuing Airworthiness Information (MCAI) under the responsibility of the respective State of Design, as established under Annex 8 — *Airworthiness of Aircraft*.

Action: The Assembly is invited to:

- a) support ICAO for the development and dissemination, in the short term, of guidance material to further detail and clarify the boundaries between MCAI and other manufacturer publications to the contracting States; and
- b) support ICAO for the development of further detailed guidance material to Annex 8, including the *Airworthiness Manual* (Doc 9760) and other related publications, to clarify the boundaries between MCAI and other manufacturer publications.

<i>Strategic Objectives:</i>	This working paper relates to the Safety Strategic Objective.
<i>Financial implications:</i>	Resource savings in certification and rulemaking.
<i>References:</i>	Annex 8 — <i>Airworthiness of Aircraft</i> Doc 9760, <i>Airworthiness Manual</i>

1. INTRODUCTION

1.1 In order to maintain the airworthy condition of an aircraft, operators and maintenance organizations depend on relevant technical information developed by the aircraft design organization under the State of Designs' regulatory system. The States of Registry also rely on that information to effectively oversee the airworthiness condition of the aircraft's operating under its regulatory system.

1.2 Annex 8 — *Airworthiness of Aircraft*, Chapter 4 establishes Standards and Recommended Practices (SARPs) that address the responsibilities of the States of Design regarding the information necessary for the continuing airworthiness and safe operation of the aircraft. In order to fulfil its regulatory obligations, access to such information must be assured to the State of Registry.

2. DISCUSSION

2.1 The information necessary to safely maintain an aircraft is usually provided to its owner directly by the aircraft manufacturer when the product is delivered, as required by the respective State of Design regulation. However, it is known that unsafe conditions may be experienced during operation which may require additional actions not originally established in the aircraft initial technical publications.

2.2 The aircraft's State of Design often issues these actions in the form of airworthiness directives (ADs) as mandatory actions to maintain the airworthiness condition of the aircraft. Annex 8 addresses this subject under Chapter 4, item 4.2, "Responsibilities of Contracting States in respect of continuing airworthiness", and describes the "Mandatory Continuing Airworthiness Information (MCAI)" under item 4.2.1.1 a), as follows:

"... any generally applicable information which it [the State of Design] has found necessary for the continuing airworthiness and safe operation of the aircraft, including any engines and propellers..."

2.3 Besides the MCAI issued by the States of Design, operators and the States of Registry make use of other technical publications from the aircraft design organization, such as manuals, service bulletins, and others, in support of activities undertaken to maintain the aircraft. Despite the fact that part of those publications does not characterize MCAI, in most regulatory models, States of Registry often opt to address those publications as mandatory in their regulations, establishing requirements that go beyond the boundaries of Chapter 4 of Annex 8 and, therefore, may not, necessarily, be supported by the State of Design obligations.

2.4 It is imperative to acknowledge that the State of Design, as per Annex 8, must provide all mandatory continuing airworthiness information to the States of Registry of the aircraft. However, it is also fundamental to acknowledge that other technical information published by the manufacturer is not covered by the State of Design obligations under Chapter 4 of Annex 8 and the *Convention on International Civil Aviation* (Chicago Convention, Doc 7300).

2.5 Considering the international interdependence of the aircraft industry design/production chain, these publications usually are subjected to multiple States legislation systems, and consequently, to several States' political and economic scenarios that do not depend on the State of Design definitions.

Consequently, these publications are made available to operators and other interested persons solely under commercial and contractual terms, not necessarily within the States of Design responsibilities.

2.6 In this regard, it is necessary that every contracting State of the Convention of Chicago have a common understanding and expectations on what information composes MCAI under Annex 8 and a clear comprehension of the separation of those pieces of information to other manufacturers' publications.

3. CONCLUSION

3.1 The aircraft operators and maintenance organizations rely on several technical publications to address operational and maintenance needs along the aircraft's operational life cycle. Not all technical information used is mandatory (MCAI) for publication by the States of Design but may hold value for operations and even be addressed by the States of Registry regulation.

3.2 Considering the existence of publications issued by the manufacturer that are not MCAI, the Assembly is invited to:

- a) support ICAO for the development and dissemination, in the short term, of guidance material to further detail and clarify the boundaries between MCAI and other manufacturer publications to the contracting States; and
- b) support ICAO for the development of further detailed guidance material to Annex 8, including Doc. 9760 and other related publications, to clarify the boundaries between MCAI and other manufacturer publications.

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