

September, 30, 2005      First Issue (KOKU-KU-KI-5029)  
June 30, 2011          Amended (KOKU-KU-KI-282)

Circular

Director, Airworthiness Division  
Safety and Security Department  
Civil Aviation Bureau  
Ministry of Land, Infrastructure, Transport and Tourism

Subject: Certification Plan

1. Introduction

This circular specifies objectives, contents and handling procedures of a Certification Plan, which is prepared by an applicant for a Type Certificate or a Change of Type Design for aircraft manufactured in Japan, in accordance with a JCAB Circular No. 1-003, “Procedures for Type Certification of Japanese Manufactured Aircraft”

This circular applies mutatis mutandis for an application of a Type Certificate for an engine or a propeller.

2. Objectives of a Certification Plan

A Certification Plan is to plan methods of compliance including selections of analysis or tests relating to all applicable items specified by Airworthiness Inspection Manual and to make an implementation schedule, etc, prior to having a Type Certification evaluation. The objectives of a Certification Plan are to implement a series of evaluation and inspection works in smooth and efficient manner by coordinating the plan between an applicant and the Civil Aviation Bureau, and to clarify sharing of roles between an approved design organization and the Civil Aviation Bureau for the inspection and evaluation processes.

Upon receipt of the Certification Plan, the Civil Aviation Bureau uses it to understand the outline of the plan in advance, and to use the plan as a base document for “Inspection Plan” as required.

As to a Change of Type Design, it shall be prepared depending on a scope of the design change.

### 3. Submittal and handling procedures of a Certification Plan

When approved organizations having capabilities prescribed by the Civil Aeronautics Act (Law) (hereinafter referred to as “CAL”) Article 20 paragraph 1 and paragraph 5 perform works relating to confirmation prescribed by the Ordinance for Enforcement of the Civil Aeronautics Act (hereinafter referred to as “CAR”) Article 40, each division of the States shall be interpreted as “Approved Design Organization”, and each engineer of the State shall be interpreted as “Certifying Staff who are appropriate for the concerned work and are prescribed by the Approved Organization Exposition”.

#### 3.1 Submittal and agreement of a Certification Plan (draft), Design Plans, Design Document and a part of Manufacturing Plans (draft)

An applicant for a Type Certificate, etc shall submit a Certification Plan (draft) described in 4.1, Design Plans, Design Documents and a part of Manufacturing Plans (draft) (hereinafter referred to as “necessary documents”) prescribed by CAR Article 17 paragraph 2, which are necessary to comprehend the Certification Plan, and shall fully explain them to the Civil Aviation Bureau (the Aircraft Engineering & Certification Center) and perform coordination with the authority at a stage of the pre-coordination. It is recommended that the applicant do the application after an agreement is made between the Civil Aviation Bureau with regard to the contents of the Certification Plan at a stage of pre-coordination.

When contents of the Certification Plan (draft) which has been agreed by the Civil Aviation Bureau is changed before a submittal of the application document, it is recommended that sufficient explanation and coordination is performed and an agreement is made once again between the Civil Aviation Bureau with regard to the changed items.

In case of revising the necessary documents, sufficient explanation and coordination shall be performed with regard to the changed items in consideration of effects on a Certification Plan (draft).

#### 3.2 Submittal and approval of a Certification Plan and necessary documents

When an applicant submit an application documents for a Type Certificate, a Certification Plan and necessary documents shall be submitted to the Civil Aviation Bureau as attachments for the application documents, and they shall be approved by the Civil Aviation Bureau.

If Design Plans, Design Document and Manufacturing Plans are submitted at the application, necessary documents may be included in the concerned appropriate documents.

In case of revising a Certification Plan after approved by the Civil Aviation Bureau, sufficient explanation and coordination shall be performed with regard to the changed items and it shall be approved once again by the Civil Aviation Bureau.

### 3.3 Control of a Certification Plan

In order to control revision history of a Certification Plan, revision history and columns of approval shall be prepared to each document depicted by 4.1.1, or an additional page of a Certification Plan which has revision history and columns of approval for the entire plan shall be prepared and controlled as a part of the Certification Plan.

## 4. Preparation of a Certification Plan (draft)

### 4.1 Composition

In principle, a Certification Plan (draft) and necessary documents shall be comprised of the following documents, additions or omissions may be permitted in accordance with a scope of the application and the verification.

It is desirable to submit all documents at the same time, however it may be allowed to submit a document when it becomes available at appropriate timing.

#### 4.1.1 A Certification Plan (draft)

- ① Items relating to Certification Basis, etc
- ② Items relating to special condition, exemption, and equivalent level of safety
- ③ Items relating to personnel who engage the Type Certificate or Change of Type Design

4.1.2 Necessary documents : The following documents shall be submitted as necessary documents from Design Plans, Design Document and Manufacturing Plans, which are submitted as attachments for the application document.

- ④ Items relating to general descriptions of aircraft basic design or a Change of Type Design
- ⑤ Items relating to general schedules for design and manufacturing
- ⑥ Items relating to new designs and new technologies, etc
- ⑦ Items relating to manufacturing partners and subcontractors
- ⑧ Other items for references

### 4.2 Contents

For a Certification Plan (draft) and necessary documents depicted by above 4.1, the following contents shall be described.

#### 4.2.1 A Certification Plan (draft)

- ① Items relating to Certification Basis, etc

A plan for necessity of certification and certification method, etc shall be described for all

provisions which are considered to be applied including all provisions specified by “Airworthiness Inspection Manual”.

If a part of Type Certificate inspection and review is performed by an approved design organization, sharing of roles which the approved design organization desires shall be included in a Certification Plan (draft) and it shall be coordinated with the Civil Aviation Bureau.

For the time being, until the approved organization system becomes established, the sharing of roles which the approved design organization desires shall be limited to routine inspections such as Conformity Inspections and Test Witnesses, etc, and it shall be decided considering the following information comprehensively. The concerned information shall be provided to the Civil Aviation Bureau by the approved design organization for each project.

- Capabilities and limitations of the approved design organization
- Importance of inspections
- Experience of equivalent or similar inspections and their contents
- Items indicated by the previous JCAB inspection and their contents

If the concerned Conformity Inspections and Test Witnesses are complicated and wide-ranging, and if the sharing of roles is not determined at the preparation of a Certification Plan, a wording of “Per JCAB Circular No. 1-308” shall be entered. If the detailed sharing of roles is determined, a document number and the revision code of a JCAB Circular No. 1-308 appendix-3 shall be entered.

Concerned items can be used as a Compliance Check List by adding progresses of the certification.

An example of this case used as a Compliance Check List is shown in Appendix-2, but this is a sample and different way is permitted.

② Items relating to special condition, exemption, and equivalent level of safety

If the design potentially requires evaluation of special condition, exemption, and equivalent level of safety, its general description, items to be investigated and a proposal to resolve relevant issues shall be entered.

③ Items relating to personnel who engage a Type Certificate or Change of Type Design

The following information shall be entered in order to clarify responsibilities and authorities for personnel who engage a Type Certificate or Change of Type Design.

- (i) A name of person who is responsible for the entire Type Certificate or Change of Type Design, and his/her authority
- (ii) Names of all organizations, such as design, manufacturing, etc, relating to the Type Certificate or Change of Type Design, their authorities and a name of

responsible person of each organization.

- (iii) A name of organization that performs coordination between the Civil Aviation Bureau, a name of person in charge and contact information.

#### 4.2.2 Necessary documents

④ Items relating to general descriptions of Aircraft Basic Design or a Change of Type Design  
They are documents by which outline of Aircraft Specification or Change of Type Design can be understood, and, at least, they shall include the following information.

- (i) Type Certificate case
  - Category of aircraft, class of aircraft and aircraft model
  - Airworthiness category
  - Model of engine and a number of engines
  - A number of propellers (Rotorcraft case)
  - Design overview and major dimensions
- (ii) Change of Type Design case
  - General description of the Change of Type Design

⑤ Items relating to general schedules for design and manufacturing

They are documents that describe relevant information of general schedules expected by the applicant from a submittal of application documents to obtainment of the Type Certificate, and shall include general schedules for the following major steps, major items and other relevant reference items in chronological order.

As to the major steps, a pre-coordination period, a submittal of application document, the preliminary board meeting, middle board meeting (as necessary), pre-flight board meeting, final board meeting and a delivery of Type Certificate shall be included.

The following information shall be included for the major items.

- (i) Preparation and review of drawings and analysis reports relating to Basic Design and Detailed Design work for aircraft, components, or Change of Type Design
- (ii) Manufacturing and inspection of manufacturing process for aircraft and components
- (iii) Ground Test and Flight Test for aircraft, Qualification Tests for property and performance for components

Note: An entire plan shall be reasonable and have allowances.

An example is shown in Appendix-1, but this is a sample and different way is permitted.

⑥ Items relating to new designs and new technologies, etc

When new designs, new technologies, new materials and new manufacturing processes are adopted, its general description, items to be evaluated and a proposal to solve any issues shall be entered.

⑦ Items relating to manufacturing partners and subcontractors

If there are manufacturing partners, names of the manufacturing partners, their work sharing and information of their location shall be entered.

If a part of design or manufacturing is outsourced, names of subcontractors (outsourcing), contents of outsourcing, and information of their location shall be entered.

⑧ Other items for references

5. Minutes

If explanation and coordination of a Certification Plan is conducted, minutes of record shall be prepared by the applicant and it shall be confirmed by both parties in order to clarify contents of explanation, indicated items and items to be improved, items to be investigated and reviewed, and to have common understandings. There is no specific form for the minutes, a form of JCAB Circular No. 1-003 Attachment 2 (JCAB FORM 1-003-2) may be used.

6. Miscellaneous Provisions

In spite of methods specified by item 3 to 5 of this circular, an alternate method can be used for a Certification Plan, if a Director of the Aircraft Engineering & Certification Center accepts for use.

Supplementary Provisions

1. This circular shall be effective on October 1, 2005.

Supplementary Provisions (June 30, 2011)

1. This circular shall be effective on July 1, 2011.

Please contact for questions or comments regarding this Circular to:

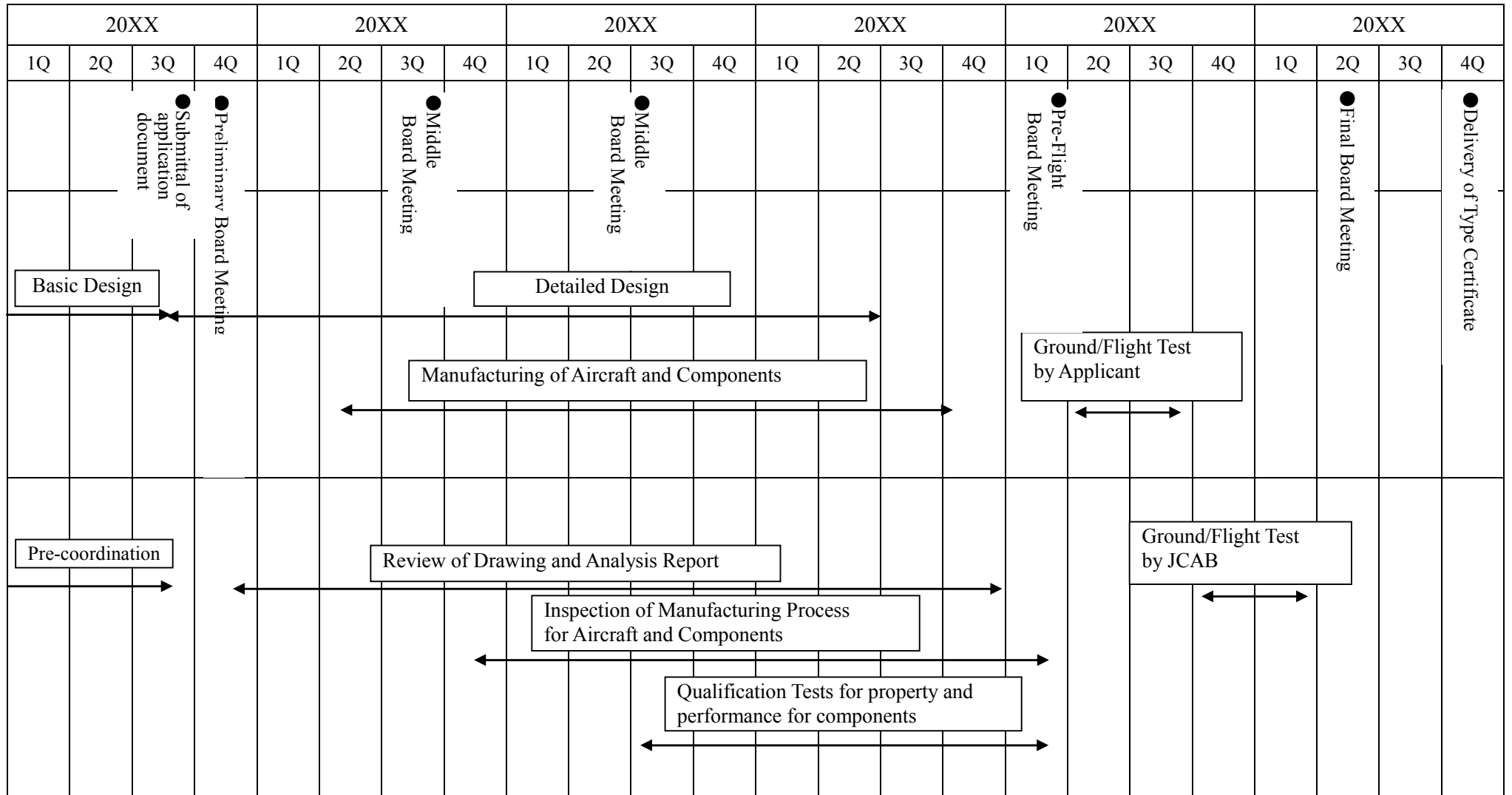
Airworthiness Engineer, Airworthiness Division, Safety and Security Department,  
Civil Aviation Bureau, Ministry of Land, Infrastructure, Transport and Tourism  
2-1-3, Kasumigaseki, Chiyoda-ku, Tokyo, 100-8918

Tel. 81-3-5253-8735

Fax. 81-3-5253-1661

(Example of general schedules for design and manufacturing)

Appendix 1  
As of 20XX-XX-XX



(Example of a Certification Plan showing compliance to applicable requirements, etc (When it is also used as a Compliance Check List))

Attachment 2  
As of 20XX-XX-XX

Chapter 4 : Structure		Applicability	Verificat ion Method	Compliance document		Remarks	Progress	Sharing of roles
Airworthiness Standard Airworthiness Insp. Manual	Nomenclature		Method	Doc. Number	Doc. Name			
①	②	③	④	⑤	⑥	⑦		⑧
(Example)								
4-6-1-1	Pilot Compartment	Y	Drawing			Control panels and a master light shall be verified to be operable without problems for arrangement and visibility.		JCAB
			Analysis					JCAB
			Test					Plan : JCAB Inspection of test article : AO Inspection of test setups : AO Test Witness : AO Report : JCAB
4-6-8-5	Seat, Berth, Safety Belt, & Harness	N				Because berth is not installed		

① : Enter each item number for all requirements of applicable standard, etc

The number should be entered with the minimum unit, however it may be integrated to the upper unit if contents described in ② and on are same.

AO: Approved Organization

② : Enter a nomenclature corresponding to ①.

③ : Enter "Y" if the item is verified at this Type Certificate or Change of Type Design, a previous verification is considered to be effective, or it is verified by equivalency. Enter "N" if the verification is not required because equipment is not installed,etc.

④ : Enter verification methods by drawings, analyses, or tests, etc if it is judged as "Y" at ③.

⑤、⑥ : Enter a document or drawing number and their nomenclature prepared by a proposed verification method of ④.

However no entry is required for a Certification Plan.

⑦ : Enter general descriptions of the verification if it is judged "Y" at ③, enter reasons if it is judged "N" at ③.

⑧ : Enter a proposed sharing of roles if the inspections and Test Witnesses are shared between the JCAB and an approved organization. If the concerned inspections and Test Witnesses are complicated and wide-ranging, and if the sharing of roles is not determined at the preparation of a Certification Plan, a wording of "Per JCAB Circular No. 1-308" shall be entered. If the detailed sharing of roles is determined, a document number and the revision code of JCAB Circular No. 1-308 appendix-3 shall be entered.