



Aviation Procedure

**Aircraft Airworthiness
Certification Department of CAAC**

NO. : AP-21-AA-2012-20

Date : 5th Nov., 2012

Standardization Procedure for Design Approval of Civil Aircraft and Parts

CONTENTS

1	General	1
1.1	Purpose	1
1.2	Authority.....	1
1.3	Cancellation	1
1.4	Related document	1
1.5	Applicability	1
2	Definition	1
2.1	Design Approval.....	2
2.2	Standardization of Design Approval	2
3	Regulation and Standardizing Document	2
3.1	Civil Aviation Law of the People’s Republic of China	3
3.2	Regulations of the People's Republic of China	3
3.2.1	Regulations of the People's Republic of China for the Administration of the Airworthiness of Civil Aircraft.....	3
3.2.2	Regulation on the Nationality Registration of Civil Aircraft of the People’s Republic of China	4
3.3	China Civil Aviation Regulations	4
3.4	Standardizing Document	5
4	Procedure Related with Design Approval	6
4.1	Type Certificate (TC).....	6
4.2	Type Design Approval (TDA)	6
4.3	Supplemental Type Certificate (STC).....	6
4.4	Modification Design Approval (MDA)	7
4.5	Parts Manufacturer Approval (PMA)	7
4.6	Chinese Technical Standard Order Authorization (CTSOA)	7
5	Procedure Related with Designee and Delegation	7
5.1	Designated Engineering Representative (DER).....	7
5.2	Designated Manufacturing Inspection Representative (DMIR)	7
5.3	Designated Organization Representative (DOR).....	8
6	Procedure Related with Training	8
7	Information Exchange	9
7.1	Issuance, Implementation and Feedback of Regulation and Standardizing Document	9
7.2	The Report of Design Approval Project	9
7.2.1	The Report of Type Certification Project that the CAAC-AAD is responsible for ...	9
7.2.2	The Report of Type Certification Project that the Regional Administration is responsible for	10
7.3	Annual Design Approval Work Report.....	11
7.4	Annual Design Approval Conference	12
7.5	Design Approval Seminar.....	12
8	Standardization Inspection	12
8.1	Inspection Plan	13
8.2	Inspection	13
8.3	Report	14

8.4	Corrective Action and Review	14
8.5	Track and Closure of Corrective Action	15
8.6	Annual Standardization Inspection Report	15
9	Supplementary Articles	15
	Attachment Form 1: Annual Design Approval Summary Form (sample).....	16

1 General

1.1 Purpose

In order to ensure and enhance standardization of design approval of aircrafts and parts, this procedure is established.

1.2 Authority

This procedure is developed in accordance with *Certification Procedures for Civil Aviation Products and Parts (CCAR-21-R3)* and *the Notice about Issuing the Responsibilities of Civil Aviation Administration of China, Regional Administration, Safety Oversight Administration (DOC. NO.46[2010] of CAAC)*.

1.3 Cancellation

None.

1.4 Related document

None.

1.5 Applicability

This procedure is applicable to organizations, departments, and persons who work for design approval of aircrafts and parts (except Auxiliary Power Unit) and for standardization inspection.

2 Definition

2.1 Design Approval

Design approval means Type Certificate (TC), Type Design Approval (TDA), Supplemental Type Certificate (STC), Modification Design Approval (MDA), design approval of Part Manufacture Approval (PMA) and design approval of Chinese Technical Standard Order Authorization (CTSOA).

2.2 Standardization of Design Approval

Standardization of design approval means the issuance of a common set of regulations and standardizing documents, a uniform application of procedures, training, information exchange, and monitoring how the organizations, departments and persons of airworthiness certification system perform the works above.

3 Regulation and Standardizing Document

Figure 3-1 shows the airworthiness document system of CAAC:

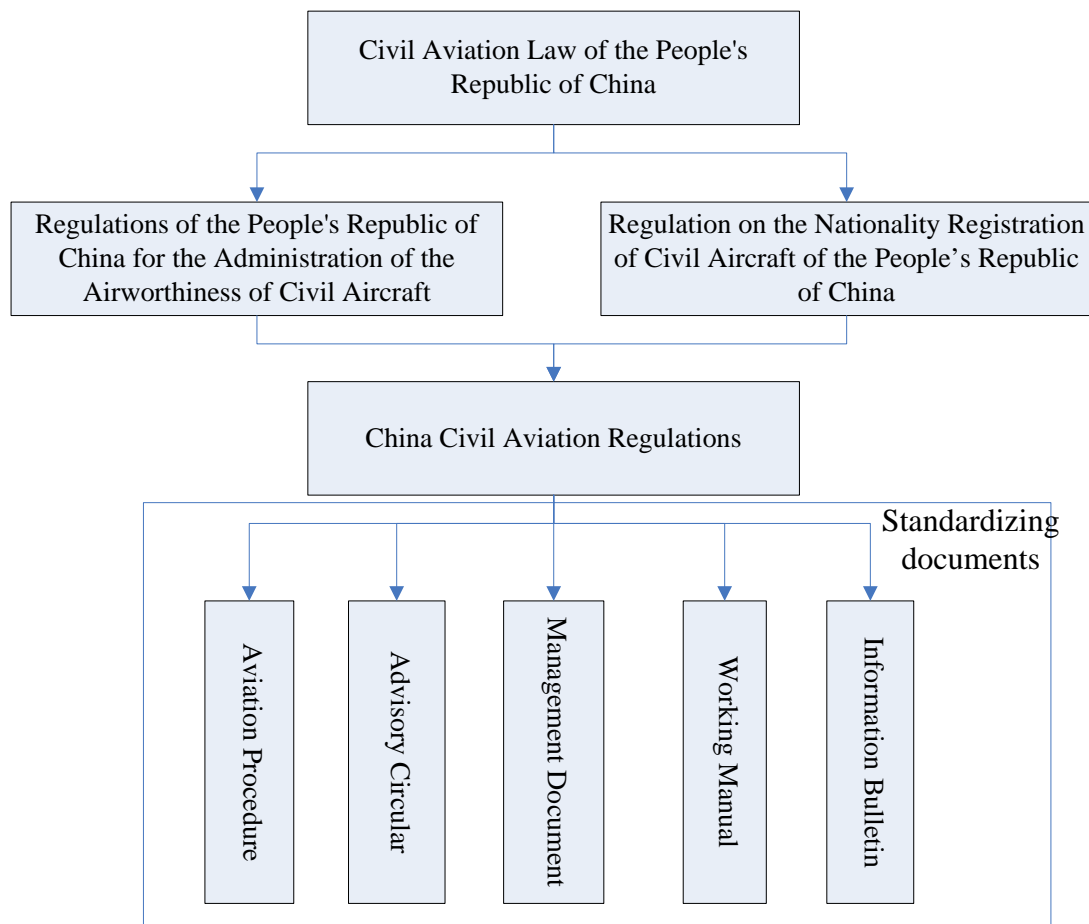


Figure 3-1 airworthiness document system

3.1 Civil Aviation Law of the People's Republic of China

Civil Aviation Law of the People's Republic of China is adopted by the 8th Standing Committee of the National People's Congress and was promulgated on October 30, 1995, and entered into force on March 1st, 1996.

3.2 Regulations of the People's Republic of China

3.2.1 Regulations of the People's Republic of China for the Administration of the Airworthiness of Civil Aircraft

Regulations of the People's Republic of China for the Administration

of the Airworthiness of Civil Aircraft is adopted by the State Council, and entered into force on 4th May, 1987.

3.2.2 Regulation on the Nationality Registration of Civil Aircraft of the People's Republic of China

Regulation on the Nationality Registration of Civil Aircraft of the People's Republic of China is adopted by the state council, and entered into force on 21st October, 1997.

3.3 China Civil Aviation Regulations

China Civil Aviation Regulation (CCAR) is issued by the CAAC.

Form 3-1 shows the Airworthiness Regulations and Environmental Protection Requirements about design approval of aircraft and parts.

They are developed and revised in accordance with *Development and Revision Procedures of Airworthiness Regulations and Environmental Protection Requirements (AP-11-01)*.

Form 3-1 Airworthiness Regulations and Environmental Protection Requirements

Sequence No.	Regulation No.	Regulation Title
1	CCAR-21	Certification Procedures for Civil Aviation Products and Parts
2	CCAR-23	Airworthiness Standards: Normal, Utility, Acrobatic, and Commuter Category Airplanes
3	CCAR-25	Airworthiness Standards: Transport Category Airplanes
4	CCAR-26	Continued Airworthiness and Safety Improvements for Transport Category Airplanes

Sequence No.	Regulation No.	Regulation Title
5	CCAR-27	Airworthiness Standards: Normal Category Rotorcraft
6	CCAR-29	Airworthiness Standards: Transport Category Rotorcraft
7	CCAR-31	Airworthiness Standards: Manned Free Balloons
8	CCAR-34	Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes
9	CCAR-36	Noise Standards: Aircraft Type and Airworthiness Certification
10	CCAR-37	Civil Aeronautical Materials, Parts and Appliances Technical Standard Order
11	CCAR-183	Rules for Designation of Civil Aircraft Airworthiness Representative Individuals and Organizations

Form 3-2 shows the advisory circulars (AC) for special classes of aircraft in § 21.17, primary category aircraft in § 21.24, restricted category aircraft in § 21.25.

Form 3-2 Advisory Circular

Sequence NO.	AC NO.	AC Name
1	AC-21-05	Type Certification – Very Light Airplanes
2	AC-21-06	Primary Category Aircraft Airworthiness Standards: Super light airplanes
3	AC-21-07	Type Certification – Fixed-wing Gliders (Sailplanes), including Powered Gliders
4	AC-21-09	Type Certification – Airship
5	AC-21-25	Airworthiness Management Guidance for Light-Sport Aircraft
6	AC-21-37	Primary Category Aircraft

3.4 Standardizing Document

Standardizing document means civil aviation management related

documents established by the offices, bureau and departments of Civil Aviation Administration of China within their responsibilities for the purpose of fulfilling applicable laws, rules, CAAC regulations and policies, and issued after approval of general director or heads of functional departments with authorization by the administrator of CAAC.

Standardizing document includes Aviation Procedure, Advisory Circular, Management Document, Working Manual, and Information Bulletin.

Standardizing Documents related with design approval of aircraft and parts are developed and revised in accordance with *Procedures for Establishing and Revising of Standardizing Documents (AP-12-01)*.

4 Procedure Related with Design Approval

4.1 Type Certificate (TC)

TC is issued and managed in accordance with *Aircraft Type Certification Procedures (AP-21-03)*.

4.2 Type Design Approval (TDA)

TDA is issued and managed in accordance with *Aircraft Type Certification Procedures (AP-21-03)*.

4.3 Supplemental Type Certificate (STC)

STC is issued and managed in accordance with *Supplementary Type*

Certification Procedures (AP-21-14).

4.4 Modification Design Approval (MDA)

MDA is issued and managed in accordance with *Certification Procedure for Major Modification of Imported Civil Aircraft (AP-21-15).*

4.5 Parts Manufacturer Approval (PMA)

Design approval of PMA is conducted and managed in accordance with *Certification Procedure for Civil Aeronautical Materials, Parts and Appliances (AP-21-06).*

4.6 Chinese Technical Standard Order Authorization (CTSOA)

Design approval of CTSOA is conducted and managed in accordance with *Certification Procedure for Civil Aeronautical Materials, Parts and Appliances (AP-21-06).*

5 Procedure Related with Designee and Delegation

5.1 Designated Engineering Representative (DER)

The DER is designated and managed in accordance with *Procedure for Management and Designation of Designated Engineering Representative (DER) (AP-183-01).*

5.2 Designated Manufacturing Inspection Representative (DMIR)

The DMIR is designated and managed in accordance with *Procedure for Management and Designation Designated Manufacturing*

Inspection Representative (AP-183-02).

5.3 Designated Organization Representative (DOR)

The DOR of civil aviation test equipment is designated and managed in accordance with *Procedure for Designation and Management of Designated Organization Representative of Civil Aviation Test Equipment (AP-183-05)*. The DOR of civil aircraft modification is designated and managed in accordance with *Procedure for Designation and Management of Designated Organization Representative of Civil Aircraft Modification Design (AP-183-07)*.

6 Procedure Related with Training

The training of CAAC airworthiness certification personnel is managed in accordance with *Procedure for Training Airworthiness Certification Personnel (AP-00-01)*, and training courses are listed in *Airworthiness Training Course List (AC-00-02)*.

The training of CAAC flight test pilots and flight test engineers is managed in accordance with *Responsibility, Procedure and Training Requirement for the CAAC Flight Test Pilot and Flight Test Engineer (AP-21-33)*. The training of aviation engineers, flight test pilots and technical personnel about program support is managed in accordance with *Training Plan for Aviation Engineer, Flight Test Pilot and Technical Personnel about Program Support (AP-21-35)*.

7 Information Exchange

Information exchange is handled by *Civil Aviation Safety Net of China-Standardization Information System for Design Approval of Civil Aircraft and Parts* whose application instructions are in *Manual of China-Standardization Information System for Design Approval of Civil Aircraft and Parts*. The manual can be searched in the right side of instruction of <http://safety.caac.gov.cn> after log in.

7.1 Issuance, Implementation and Feedback of Regulation and Standardizing Document

Issued Regulations and standardizing documents are published at www.caac.gov.cn. The organizations related with design approval shall notice the issuance and implement them. Suggestions and advice for updating should be fed back to Aircraft Airworthiness Certification Department of CAAC (CAAC-AAD).

7.2 The Report of Design Approval Project

7.2.1 The Report of Type Certification Project that the CAAC-AAD is responsible for

For type certification project, the authorized organization should develop type certification summary report according to *Aircraft Type Certification Procedures (AP-21-03)* within 4 months after accomplishing a project, and submit the report to CAAC-AAD by a

official document via *Civil Aviation Safety Net of China-Standardization Information System for Design Approval of Civil Aircraft and Parts*.

7.2.2 The Report of Type Certification Project that the Regional Administration is responsible for

Regional administrations should report the information of applicant, introduction of the project, the copy of application and notification of acceptance to CAAC-AAD within 5 working days after accepting the application via *Civil Aviation Safety Net of China-Standardization Information System for Design Approval of Civil Aircraft and Parts*.

For type certification projects, regional administration should develop type certification summary report according to *Aircraft Type Certification Procedures (AP-21-03)* within 4 months after accomplishing a project, and submit the report to CAAC-AAD by a official document via *Civil Aviation Safety Net of China-Standardization Information System for Design Approval of Civil Aircraft and Parts*.

For other projects, regional administration should submit the certification report, the copy of certificate, or the notice of terminating project to CAAC-AAD by a official document via *Civil Aviation Safety Net of China-Standardization Information System for*

Design Approval of Civil Aircraft and Parts within 10 working days after issuance.

For enforcement activities, regional administration should report the following information to CAAC-AAD by a official document via *Civil Aviation Safety Net of China-Standardization Information System for Design Approval of Civil Aircraft and Parts* within 5 working days after making an administrative penalty decision:

- (1) holder's name of certificate and the certificate number
- (2) description of the decision;
- (3) category of the penalty;
- (4) mandatory requirement.

7.3 Annual Design Approval Work Report

Before the end of each January, regional administrations should submit annual design approval work reports including the projects which Airworthiness Certification Center have the authorization from CAAC-AAD to performance about activities last year to CAAC-AAD by a official document via *Civil Aviation Safety Net of China-Standardization Information System for Design Approval of Civil Aircraft and Parts*. Annual work report should at least include followings:

- (1) summarization of design approval projects, such as project quantity, introduction of projects, issued certificates;

- (2) the status of in process certification projects authorized by CAAC-AAD, includes project progress, completed work, existing questions, and schedules.
- (3) the status of in process certification projects under regional administration, includes the progress of project, completed work, existing questions, and schedules.
- (4) reports of designees and delegations management, such as list of designees and DOR, the description of training, performance review, and the description of surveillance for designees, and audit, surveillance and enforcement actions for DOR;
- (5) questions, suggestions, advice for design approval etc.;
- (6) completed *Annual Design Approval Summary Form* (CAAC form AAC-265).

7.4 Annual Design Approval Conference

Before the end of each March, annual design approval conference will be organized by CAAC-AAD.

7.5 Design Approval Seminar

CAAC-AAD will organize design approval seminar when needed.

8 Standardization Inspection

For the purpose of assessing compliance with the requirements of

standardizing documents in design approval activities, the CAAC-AAD conducts standardization inspections in all units which are engaged in design approval every 3 years.

8.1 每年12月31日前

Before the end of each December, CAAC-AAD should prepare a standardization inspection plan for the next year which includes the units and main aspects to be inspected, the expected inspection date and the inspection team. At least one month before inspection, CAAC-AAD should notice the inspected unit about standardization inspection.

8.2 Inspection

Standardization inspection team should establish a check list according to emphasis areas before inspection.

The inspected unit should appoint a coordinator to assist the inspection team during standardization inspection.

During standardization inspection, the inspection team should:

- (1) hold a preliminary meeting with related persons from the inspected unit to define inspection requirements;
- (2) interview related persons from the inspected unit, and review records and data of design approval;
- (3) hold a closing meeting with the inspected unit, and communicate the results of standardization inspection.

8.3 Report

Within one month after completing inspection, the inspection team should submit the standardization inspection report to CAAC-AAD.

The report should mainly include inspection date, summarization of inspection, findings (if applicable), and recommended actions.

The finding should be classified as followings:

(1) Major finding is any non-compliance which could lead to uncontrolled non-compliances with applicable requirements and which could affect the safety of the aircraft.

(2) General finding is any non-compliance which is not classified as major finding.

(3) Potential finding is the item which could lead to non-compliance to related requirement if it isn't corrected.

CAAC-AAD should release the report to the inspected unit within 10 working days after receiving standardization inspection report, and define the findings that the inspected unit should correct (if applicable).

8.4 Corrective Action and Review

After receiving the standardization inspection report, the inspected unit should correct the findings according to following requirements:

(1) for major finding, develop corrective action plan within 5 working days, and submit it to CAAC-AAD;

(2) for general finding, develop corrective action plan within one month, and submit it to CAAC-AAD;

(3) for potential finding, develop improvement action plan within two months, and submit it to CAAC-AAD.

CAAC-AAD should review the corrective action plans or improvement action plans after receiving them, and require the inspected unit newly submit revised action plan to CAAC-AAD for unsatisfied corrective action plan or improvement action plan.

8.5 Track and Closure of Corrective Action

CAAC-AAD should track the execution of corrective actions or improvement actions, and close the findings when corrective actions or improvement actions are carried out.

8.6 Annual Standardization Inspection Report

Before the end of each December, CAAC-AAD should summarize standardization inspection of this year to form annual standardization inspection report, and release it to all regional administrations.

9 Supplementary Articles

9.1 The CAAC-AAD is responsible to explain this Procedure.

9.2 This Procedure comes into effect on 5th, Nov. 2012.

Attachment Form 1: Annual Design Approval Summary Form (sample)

Annual Design Approval Summary Form

ORGANIZATION: _____

ITEM	CONTENT								
Design Approval Certificate	Category	Sequence Number	Certificate NO.	Revision of Data Sheet	Certificate Holder	Type	Model	Date of initial issuance	Date of latest revision
	TC								
	TDA								
	STC	Sequence Number	Certificate NO.	Revision of Data Sheet	Certificate Holder	Type	Description of installation and modification	Date of initial issuance	Date of latest revision
	MDA	Sequence Number	Certificate NO.	Manufacturer	Type	Validation NO.	Description of modification	Date of initial issuance	Date of latest revision

ITEM	CONTENT											
	PMA	Sequence Number	Certificate NO.	PMA List NO.	PMA Holder	Type	Model	Part Name	Part NO.	If it is critical parts	Date of initial issuance	Date of latest revision
	CTSOA	Sequence Number	Certificate NO.	Certificate Holder	CTSOA List NO.	CTSOA NO.	Type	Part Name	Part NO.	Date of initial issuance	Date of latest revision	
Designee and Delegation	Category	Sequence Number	Certificate NO.	Name	Authorization	Employer	Duration	Date of initial issuance	Date of latest revision			
	DER											
	DMIR											
		Sequence Number	Certificate NO.	Name	Category of designation	Duration	Date of initial issuance	Date of latest revision				
	DOR											
Enforcement	Sequence Number	DOC. No. of penalty decision	Punished unit or person name	Issued license	Part related with penalty	Reason of penalty	Date of penalty					

ITEM	CONTENT						
Activities							
Advice and suggestions							

PREPARED BY :

DATE:

APPROVED BY:

DATE:

NOTE: The items that are counted include all items which have been approved.

AAC-265 (11/2012)