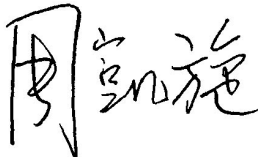


**TECHNICAL ARRANGEMENT  
BETWEEN  
GENERAL ADMINISTRATION  
OF CIVIL AVIATION OF CHINA  
AND  
TRANSPORT CANADA CIVIL AVIATION  
FOR THE CAAC TYPE VALIDATION OF THE  
BOMBARDIER AEROSPACE REGIONAL JET**

Issue 1 dated 21 August, 2000

This Technical Arrangement constitutes an annex to the "MEMORANDUM OF UNDERSTANDING CONCERNING TECHNICAL COOPERATION ON CIVIL AVIATION SAFETY BETWEEN TRANSPORT CANADA AND THE GENERAL ADMINISTRATION OF CIVIL AVIATION OF THE PEOPLE'S REPUBLIC OF CHINA" dated 14 November 1995

**General Administration of  
Civil Aviation of China**  
Aircraft Airworthiness Department

By: 

**Transport Canada Civil Aviation  
Aircraft Certification Branch**

By: 

TECHNICAL ARRANGEMENT BETWEEN  
GENERAL ADMINISTRATION OF CIVIL AVIATION OF CHINA  
AND TRANSPORT CANADA CIVIL AVIATION  
FOR THE CAAC TYPE VALIDATION  
OF THE BOMBARDIER AEROSPACE REGIONAL JET

1. PURPOSE

This Technical Arrangement (TA) defines the working relationships between Transport Canada Civil Aviation (TCCA) and the Civil Aviation Authority of China (CAAC), hereafter the “Authorities”, to facilitate and accomplish the CAAC type validation of the Bombardier Aerospace (BA) Regional Jet CL-600-2B19 and of subsequent type design changes, as well as to define Certificate of Airworthiness for Export and continued airworthiness activities.

2. OBJECTIVES

This TA is intended to accomplish the following objectives:

2.1 to define the working procedures under the respective responsibilities of each Authority

- (a) in the type validation process; and
- (b) in subsequent post type validation activities.

2.2 to minimize redundant inspections, tests, demonstration, evaluations, and approvals.

3. REQUIREMENT AND BASIS

3.1 The requirement for this TA stems from paragraphs 2.1.4 and 2.4.1 of CAAC AP 21-01R1 dated 1 January 2000 (English version), Validation Procedures for Import Civil Aviation Products and Parts.

3.2 The basis for this TA is article II section 2.7 of the Memorandum Of Understanding Concerning Technical Cooperation On Civil Aviation Safety Between Transport Canada And The General Administration Of Civil Aviation Of The People’s Republic Of China, dated 14 November 1995, hereafter the “MOU”.

4. DURATION

This TA shall become effective upon signature by both Authorities. It shall remain in effect for the duration of the type validation activities and as long as post type validation

activities are taking place, unless it is amended as per article V of the MOU or terminated as per section 7.2 of article VII of the MOU.

## 5. CAAC/TCCA COMMUNICATIONS

5.1 Each Authority will identify a project manager for the implementation of the type validation activities of this TA. All formal communications will take place between the two project managers (see appendix 1).

5.2 BA will be the primary source of technical specialists to support CAAC. Request for additional technical specialist support from TCCA will be initiated through and coordinated by the Authority project managers.

5.3 Each Authority will identify individuals responsible for the implementation of the various post-type validation activities of this TA. All formal communications will take place between these individuals accordingly.

5.4 The activities of this TA will be performed through meetings, on site visits and correspondence with TCCA and BA.

5.5 All communications between CAAC and TCCA related to the activities of this TA will be made in the English language or in Chinese language accompanied by an English translation.

5.6 All correspondences between BA and CAAC related to the activities of this TA will be copied to TCCA, unless specified otherwise, in order to enable TCCA to support CAAC and BA as required.

## 6. TYPE VALIDATION ACTIVITIES

### 6.1 General

(a) BA is responsible for showing and verifying the compliance with the CAAC certification basis and for demonstrating this compliance to both Authorities. Subject to paragraph 6.2(c)(ii), any compliance documents provided to CAAC must have been approved by TCCA.

(b) The CAAC type validation of the BA Regional Jet must be accomplished in the respect of all laws and regulations governing both Authorities.

### 6.2 Certification bases

(a) The certification bases for Regional Jet CL-600-2B19 are the following:

(i) for TCCA: as defined in Canadian Type Certificate Data Sheet (TCDS) A-131 at

latest applicable issue; and

(ii) for CAAC: CCAR-25 (including amendment FAR 25-62), FAR 36 and any special conditions necessary to address novel or unusual design features which the standards do not adequately cover, necessary because there are no applicable standards of airworthiness for the aeronautical product, or necessary because the standard does not contain adequate or appropriate safety standard.

(b) CAAC will make a comparison between the TCCA and CAAC certification bases and will notify in writing both TCCA and BA of any requirements necessary for the CAAC type validation. These requirements will be in addition to the requirements in the TCCA certification basis and will be referred to as “Additional Technical Conditions (ATC)”.

(c) TCCA will review the ATC’s to ensure its understanding thereof. As necessary, CAAC will provide TCCA in writing with any interpretative material or any data regarding the means of compliance pertaining to those ATC’s.

(i) TCCA will initiate the finding of compliance process referred to at paragraph 6.4 only once it feels it has acquired the necessary understanding of a particular CAAC ATC.

(ii) CAAC will perform its own findings of compliance on ATC’s for which TCCA did not acquire sufficient understanding to make its finding efficient.

### 6.3 Finding of compliance process

For the CAAC type validation activities, CAAC will define its involvement taking into account paragraph 2.2 of this TA.

### 6.4 Finding of compliance process with ATC’s

Compliance findings with ATC’s will be made by TCCA on behalf of CAAC. TCCA will make the finding of compliance in accordance with the interpretative material and the means of compliance provided, or will use in absence of such interpretative material its own interpretation of the ATC’s.

### 6.5 Formalization of the findings of compliance

(a) For the purpose of finding compliance with the CAAC certification basis, CAAC may issue Issue Papers (IP) and Action Items (AI).

(b) IP’s are normally opened:

- (i) to document the ATC’s (one IP per ATC);
- (ii) to document any controversial technical issue; and

- (iii) to document differences in interpretative material or means of compliance.
- (c) AI's are normally opened to record any non controversial action to be performed by BA.
- (d) CAAC will notify TCCA and BA of the status of each IP and AI. CAAC will request formal TCCA position on the IP's. All IP's and AI's must be closed before the issuance of the CAAC type certificate.

## 6.6 Final statement

TCCA will provide at the end of the process a formal statement attesting that TCCA has found compliance with CAAC certification basis, subject to paragraph 6.2(c)(ii). The CAAC approved type design will be identified in a Chinese TCDS to be produced by BA and to be approved by TCCA.

## 7. POST TYPE VALIDATION ACTIVITIES

### 7.1 Design change approval

- (a) For the design changes affecting the TCCA approved type design which have been introduced after CAAC type validation and embodied on aircraft to be delivered in China, TCCA will verify compliance with the CAAC certification basis. This will be done using the information gained during the type validation activities (see paragraph 6 above).
- (b) TCCA will regularly provide CAAC with a list of design changes which significantly affect the CAAC approved type design. These type design changes will normally be approved by CAAC on the basis of the TCCA statement of compliance without technical investigation. However, CAAC reserves the right to make a technical investigation on some of these design changes and will inform BA and TCCA accordingly. For each of these changes, CAAC will notify its approval. Examples of changes to be considered as significantly affecting the approved type design are provided in Appendix 2.
- (c) The statement of compliance made by TCCA on the Export Certificate of Airworthiness provided to CAAC is considered sufficient to cover other changes which are not considered as significantly affecting the approved type design.

### 7.2 Individual aircraft deliveries

- (a) TCCA will issue an individual Certificate of Airworthiness for Export (TCCA form 24-0049) stating that the aircraft conforms to the CAAC approved type design and is in condition for safe operation.
- (b) The Aircraft Flight Manual will be approved by TCCA on behalf of CAAC.

### 7.3 Service Bulletin approval

(a) All Service Bulletins (SB) have the engineering data approved by TCCA or approved on behalf of TCCA by a delegate in BA and incorporate a statement to that effect.

(b) Airworthiness Directives (AD) issued by TCCA to cover certain SB's incorporate a statement to that effect. Any subsequent revision to such SB's will have the engineering data approved by TCCA or approved on behalf of TCCA by a delegate in BA and incorporate a statement to that effect.

## 8. CONTINUED AIRWORTHINESS

8.1 TCCA will transmit to CAAC any generally applicable information which it has found necessary for the continuing airworthiness of the aircraft and for the safe operation of the aircraft, including any information in respect of components designed and/or manufactured by a supplier under contract to BA. Such information may be under the form of an AD and may refer to a BA SB as per paragraph 7.3(b).

8.2 When the service experience in China indicates the existence of an unsafe condition associated with the design, manufacturing or maintenance of the Regional Jet, CAAC will inform TCCA and BA. TCCA will give expedient attention to this information and consider appropriate action to correct this condition.

## **APPENDIX 1**

### **CAAC and TCCA project certification managers for the BA Regional Jet CAAC type validation**

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## **Appendix 2**

### **Examples of design changes that significantly affect the approved type design**

The following changes are considered to significantly affect the type design approved by CAAC:

- (a) Significant changes to the cabin interior configuration;
- (b) Modifications which would result in changes to the Chinese Type Certificate Data Sheet;
- (c) Modifications which would result in changes to the Limitations Section of the Aircraft Flight Manual (AFM);
- (d) Modifications which result in aircraft configurations not addressed in the CAAC accepted AFM (including supplements);
- (e) Modifications which result in changes to the Airworthiness Limitations of the Instructions For Continued Airworthiness;
- (f) Modifications which have an impact on any Additional Technical Conditions prescribed by CAAC;
- (g) Modifications requiring (or affecting) Exemptions or Findings of Equivalent Safety; and
- (h) Other modifications considered necessary by the manufacturer or TCCA.