

# Areas for Further Technical Confidence Building

Between  
the Federal Aviation Administration (FAA)  
and  
the Civil Aviation Administration of China (CAAC)

## 1. Authorization

This document supplements the Implementation Procedures for Airworthiness (IPA) between the FAA and the CAAC.

## 2. Purpose

This document outlines the FAA's Areas for Further Technical Confidence Building (AFTCB) with the CAAC referenced in 3.5.3.3(o) of the IPA. These AFTCB are one component of the Safety Elements defined in IPA 3.5.3, and are used to determine the applicable validation process, and also to establish both the scope and depth of VA technical review in projects subject to the limited technical validation (LTV) process, as defined in IPA 3.5.5.

## 3. Areas for Further Technical Confidence Building (AFTCB)

### 3.1 All products and approvals

3.1.1 New Technology: New technology is technology that is new to the VA as a whole, not just new to VA team members. For example, if technology used by the applicant were new to the VA team but not new to the VA itself, it would not be considered new.

### 3.2 14 CFR part 23 aircraft

3.2.1 STC projects including amended STC projects:

3.2.1.1 All sections

3.2.2 TC or amended TC projects in the following categories:

3.2.2.1 Turbojet Airplanes

3.2.2.2 Acrobatic Airplanes

3.2.3 For all projects not meeting the criteria in 3.2.1 or 3.2.2, the following AFTCB apply:

3.2.3.1 Structures:

3.2.3.1.1 Damage-tolerance methodology, including the process for establishing inspection methods, thresholds, and intervals.

3.2.3.1.2 Composites for Primary Structure

3.2.3.1.3 Dynamic Seats

3.2.3.1.4 Float and Ski Installation

3.2.3.2 Propulsion systems:

3.2.3.2.1 Diesel Engine Installation

3.2.3.2.2 Autothrottle

- 3.2.3.2.3 FADEC installation
- 3.2.3.2.4 Rotorburst
- 3.2.3.2.5 Hybrid or Electric Propulsion
- 3.2.3.2.6 Non-Type Certificated Engines or Propellers
- 3.2.3.3 Avionics and systems:
  - 3.2.3.3.1 Flight into known Icing (FIKI)
  - 3.2.3.3.2 Coupled Autopilot Installations
  - 3.2.3.3.3 Advanced Avionics and Related Functions (to include but not limited to):
    - 3.2.3.3.3.1 Highly Augmented Flight Control Systems / Fly-by-Wire
    - 3.2.3.3.3.2 Envelope Protection Systems
    - 3.2.3.3.3.3 Autoland Systems
    - 3.2.3.3.3.4 Adaptive Autopilots
    - 3.2.3.3.3.5 Autonomous Flight Systems
    - 3.2.3.3.3.6 Synthetic Vision Systems
    - 3.2.3.3.3.7 Enhanced Vision Systems
    - 3.2.3.3.3.8 Night Vision Imaging Systems
  - 3.2.3.3.4 Airplane level integration of TSO articles that incorporate Non-TSO functions
  - 3.2.3.3.5 Airplane level integration of complex (e.g., integrated avionics systems) Chinese TSO articles.
  - 3.2.3.3.6 System Safety Analysis and Functional Hazard Assessment for complex airplanes/systems

### 3.3 14 CFR part 25 aircraft

- 3.3.1 STC projects including amended STC projects:
  - 3.3.1.1 All sections
- 3.3.2 Subpart A: All sections
- 3.3.3 Subpart B: All sections
- 3.3.4 Subpart C: Sections 25.335(b), 25.361, 25.365, 25.459, 25.497, 25.519, 25.561, 25.562, 25.563, 25.571, 25.581
- 3.3.5 Subpart D: All sections except 25.601, 25.629, 25.671, 25.735, 25.781, 25.785, 25.787, 25.789, 25.791, 25.803, 25.807, 25.809, 25.811, 25.812, 25.813, 25.815, 25.817, 25.820, 25.831, 25.851, 25.853, 25.855, 25.857, 25.858
- 3.3.6 Subpart E: All sections except 25.939, 25.963, 25.1011, 25.1041, 25.1043, 25.1143, 25.1189
- 3.3.7 Subpart F: All sections except 25.1305, 25.1411, 25.1415, 25.1439, 25.1447

3.3.8 Subpart G: All sections except 25.1541, 25.1557, 25.1561

3.3.9 Subpart H: All sections

3.3.10 14 CFR part 26: All sections

3.2 14 CFR part 27 rotorcraft

The FAA will conduct a full technical validation (FTV) of the first CAAC application for a part 27 U.S. TC or STC. After the conclusion of the first program the FAA will document any areas for further technical confidence building under this paragraph.

3.3 14 CFR part 29 rotorcraft

The FAA will conduct a full technical validation (FTV) of the first CAAC application for a part 29 U.S. TC or STC. After the conclusion of the first program the FAA will document any areas for further technical confidence building under this paragraph.

3.4 14 CFR part 31 Manned Free Balloons

The FAA will conduct a full technical validation (FTV) of the first CAAC application for a part 31 U.S. TC or STC. After the conclusion of the first program the FAA will document any areas for further technical confidence building under this paragraph.

3.5 14 CFR part 33 engine

The FAA will conduct a full technical validation (FTV) of the first CAAC application for a part 33 U.S. TC or STC. After the conclusion of the first program the FAA will document any areas for further technical confidence building under this paragraph.

3.6 14 CFR part 35 propeller

The FAA will conduct a full technical validation (FTV) of the first CAAC application for a part 35 U.S. TC or STC. After the conclusion of the first program the FAA will document any areas for further technical confidence building under this paragraph.

3.7 14 CFR §§ 21.17(b) (Special Class), 21.17(f) (Primary Category) and 21.25 (Restricted Category) aircraft

3.7.1 Special Class – To include but not limited to:

3.7.1.1 Gliders (standard and motorized)

3.7.1.2 CS-VLA (JAR-VLA)

3.7.1.3 Airships

3.7.1.4 Unmanned Aircraft (payload and/or passenger carrying)

3.7.1.5 Powered Lift/Hybrid Vertical Takeoff and/or Landing (VTOL) Aircraft

The FAA will conduct a full technical validation (FTV) of the first application for a U.S. TC or

