

**Terms of Reference**

**Special Committee 221**  
**(Revision 2)**

**AIRPLANE SECONDARY BARRIERS AND  
 ALTERNATIVE FLIGHT DECK SECURITY PROCEDURES**

**1. REQUESTER:**

**2. SC LEADERSHIP:**

	Requester	Co-Chairman	Co-Chairman	Designated Federal Official
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**3. COMMITTEE PRODUCT**

**DUE DATE**

Guidance Document - DO-XXX, Recommendations concerning compliance to FAR 121.584, *Guidance for Aircraft Secondary Barriers and Alternative Flight Deck Security Procedures* ..... June 2011

**4. TERMINATION OF COMMITTEE ACTIVITIES**

Activities of the Special Committee will terminate with approval by the Program Management Committee (PMC) of the committee's final document listed in these Terms of Reference. Any change/extension of a committee's work program requires prior PMC approval.

**5. BACKGROUND**

Since September 11, 2001 the Department of Transportation (DOT), the Federal Aviation Administration (FAA), the US Congress, and the International Civil Aviation Organization (ICAO) have issued a series of new standards to protect flight decks from intrusion and small-arms fire. These have

resulted in the installation of a next generation of reinforced airliner flight deck doors by US and international air carriers. These doors provide protection from both intrusion and small-arms fire when they remain closed and locked throughout a flight.

The operational reality, however, is more complex. On many flights the flight deck door cannot remain closed for the entire duration of the flight. On longer flights, pilot crewmembers must be exchanged for rest purposes, or pilots may need to have access to lavatory facilities or meal transfers.

The flight deck access procedures used by crewmembers are just as integral in protecting the flight deck as is the door itself. During the time of opening and closing or “door transition”, the protective anti-intrusion benefits of the reinforced door to protect the flight deck area is reduced, if regulated procedures and/or equipment are not properly utilized by crew members.

Regulators have noted this persistent vulnerability and mandated supplemental procedures during door opening and closing. Both the FAA and ICAO have defined these supplemental procedures. For example, according to FAR: 121.584(a)(1), no one may unlock the flight deck door unless, "The area outside the flight deck door is secure." ICAO provides for similar pilot guidance during door transition. It has become apparent that these longstanding regulations have been defined in only general terms and more specific guidance to the industry is needed.

Regulators have approved at least two different methods for airlines to meet these additional requirements. One method employs a combination of procedures using crewmembers to monitor the area and/or aircraft equipment, including galley trolleys to block access to the flight deck. An additional method, one that two major U.S. airlines have installed on their own initiative, blocks access to the flight deck through the presence of an Installed Physical Secondary Barrier (IPSB) that crew members must deploy prior to opening the flight deck door. Additionally, Boeing and Airbus have designed installed physical secondary barriers as options on certain models of their next generation aircraft.

After nearly seven years of experience with reinforced flight deck doors, the Federal Aviation Administration (FAA) and industry stakeholders have agreed in principle to review supplemental procedures used during flight deck door transitions. RTCA Special Committee #221 (SC-221) has been chartered for this purpose.

The work of SC-221 will focus on four areas: 1) Consensus-based recommendations for interpretation of applicable regulatory requirements; 2) Review of procedures employing crew members and aircraft equipment to “secure” the flight deck area during door transition; 3) Develop and provide recommendations for guidance for IPSB applications; and 4) Provide recommendations for standardization of procedures for usage of “Secondary Barriers” by crewmembers.

The FAA has reminded the RTCA and industry that there is no regulatory requirement for IPSB such as doors or curtains and the FAA does not anticipate any proposed rulemaking.

## 6. SPECIFIC GUIDANCE

The special committee should develop a work program, with schedule and milestones, to accomplish the following terms of reference.

- A. Invite participation from appropriate regulators, industry representation, and other applicable parties, specifically the TSA, Federal Air Marshals, aircraft manufacturers, equipment manufacturers, airlines, modification centers, pilots, flight attendants, and other trade associations.
- B. Review the existing protection procedures employed by crewmembers and aircraft equipment manufacturers relevant to the opening, closing and locking of the flight deck door including “securing” the area outside the flight deck door.
- C. Recommend methodologies that may be employed to comply with applicable regulatory requirements. Develop and recommend guidelines to comply with federal regulations.
- D. Review a representative sample of current aircraft cabin interior layouts to determine IPSB performance criteria and any associated difficulties that particular layouts may pose.
- E. Develop guidelines for IPSB Applications. The guidelines will contain common design characteristics, minimum performance criteria, installation guidance and approval certification guidance for IPSB. It will also contain recommended procedures for use of the IPSB.
- F. Review the standards and procedures used by major airlines that have IPSB to determine if they can serve as the baseline for the special committee recommendations.

## 7. DEFINITIONS

**Advisory Circular:** FAA guidance document issued to assist with assessing air carrier compliance with FAA requirements.

**Secondary Barrier:** Supplemental flight deck security devices and/or procedures intended to impede an intrusion into the flight deck for a period of time within an area outside the flight deck door.

**Installed Physical Secondary Barrier (IPSB):** A secondary barrier that is installed as a permanent feature of an aircraft.

**Door Transition:** Whenever the flight deck door is not closed and locked.

**“Secure”:** Protection against a threat or vulnerability.

**FAR 121.584:** (a)(1), no one may unlock the flight deck door unless, "The area outside the flight deck door is secure."

FAR 121.587: Closing and locking of flight crew compartment door.

[(a) Except as provided in paragraph (b) of this section, a pilot in command of an airplane that has a lockable flight crew compartment door in accordance with Sec. 121.313 and that is carrying passengers shall ensure that the door separating the flight crew compartment from the passenger compartment is closed and locked at all times when the aircraft is being operated.

(b) The provisions of paragraph (a) of this section do not apply at any time when it is necessary to permit access and egress by persons authorized in accordance with Sec. 121.547 and provided the part 119 operator complies with FAA approved procedures regarding the opening, closing and locking of the flight deck doors.]

FAR 121.547: specifying those persons who may be admitted to the flight deck.

FAR 121.313: requires any associated signal or identity confirmation system to be easily detectable and operable by each flight crewmember from his/her duty station. To meet security needs of accomplishing an audio and visual identification, one person on the flight deck is required to visually identify the person seeking access through the viewing port or viewing device.