



## Civil Aviation Advisory Publication August 2004

*This publication is only advisory and summarises the regulatory requirements.*

*Always read this advice in conjunction with the appropriate regulations.*

### Contents...

1. Introduction	3
2. Oral briefings	4
3. Visual information	7

# Passenger safety information: Guidelines on content and standard of safety information to be provided to passengers by aircraft operators

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## References

This CAAP should be read in conjunction with:

- *Civil Aviation Regulations 1988 (CAR 1988) subregulation 253 (4)*
- Civil Aviation Orders (CAO) section 20.11
- CAO section 20.16
- *Civil Aviation Safety Regulations 1998 (CASR 1998) Part 39-105 CASA Schedule of Airworthiness Directives - AD/GENERAL/73 Access to Type III Exits 11/92*
- FAA Advisory Circular (AC) 121-24B *"Passenger safety information briefing and briefing cards"*
- UK CAA Civil Aviation Publication (CAP) 360 Part One Chapter 6 Appendix - Cabin Safety Supplement
- UK CAA Paper 2001/6 - Prepared by Cranfield University *"An Investigation into Methods of Briefing Passengers at Type III Exits"*
- UK CAA Paper 92015 - Prepared by Cranfield University *"Passenger Attitudes Towards Airline Safety Information and Comprehension of Safety Briefings and Cards"*
- National Transportation Safety Board - Safety Study (PB 2000-917002) *"Emergency Evacuation of Commercial Airplanes"*
- FAA/CAMI Report (DOT/FAA/AM-01/2) - *"Access-to-Egress: A Meta-Analysis of the Factors That Control Emergency Evacuation Through The Transport Airplane Type III Overwing Exit"*

## Who this CAAP applies to

Aircraft operators and crewmembers responsible for the provision of safety information to passengers.

## **Why this CAAP was written**

Accident investigations and special studies have shown that the survival prospects of passengers have been jeopardised because of deficiencies and inaccuracies with safety information briefings.

CAO 20.11.14 requires the operator of an aircraft to ensure that all passengers are adequately briefed on safety information applicable to their operation.

This CAAP provides guidance material that may be used to design, develop and update passenger safety information. It also highlights items that are required to be, or should be covered in oral and written mediums used by the operator in relaying that information to passengers.

## **Status of this CAAP**

This is the first issue of this CAAP.

## **For further information**

Contact a CASA Cabin Safety Specialist in a CASA Airline Operations Office.

## **1. Introduction**

1.1 The factors that control aircraft accident survivability and subsequent emergency evacuations are many. The physical factors include - adopting the correct brace position for impact, the correct use of seatbelts, the location and operation of all emergency exits and the configuration of the cabin including aisles, galleys and lavatories, seating arrangements and crew locations.

1.2 Survivability in emergency evacuations is also affected by information factors such as passenger safety information cards, videos, signs, placards, emergency lighting and marking systems, and verbal briefings by crew.

1.3 Trained crewmembers perform the functions necessary to initiate and conduct emergency evacuations. They also provide passenger management functions, intended to produce fast and effective evacuations. Individual passengers have a large, (typically negative) impact on the conduct of emergency evacuations, resulting from their general naiveté regarding aircraft emergencies and ignorance of proper procedures needed to cope with such circumstances

1.4 An informed, knowledgeable person has a much better chance of surviving any life or injury-threatening situation which could occur during passenger carrying operations in civil aviation.

1.5 Therefore, CASA requires a passenger information system that includes, as a minimum, oral or audio visual briefings together with pictorial and other visual safety information eg. safety briefing cards and aircraft placards.

### **1.6 THE RULES**

- Subregulation 253 (4) of CAR 1988 requires operators to detail a crew member to ensure passengers are made familiar with the location of emergency exits and equipment, and the use of the emergency equipment.
- CAO 20.11.14 sets out requirements relating to the briefing of passengers, including handicapped passengers; the provision of supplementary printed material; the requirement for certain operators to include relevant briefing procedures in his operations manual; and additional measures for overwater operations.

- Civil Aviation Order 20.16.3 sets out requirements relating to the stowage and security of loose articles, and the need for aisles, passageways and exits to be clear of obstructions.
- Airworthiness Directive/General/73 specifies requirements for placards for Type III exits.
- Airworthiness Directive/General/4 specifies markings for exit location and exit operating instructions.

1.7 Where information in this CAAP relates to a specific regulation or order, the applicable reference appears adjacent to the heading.

## 2. Oral briefings

### 2.1 PRE-TAKEOFF

2.1.1 The pre-takeoff briefing should be given so that each passenger can clearly hear it and easily see the required demonstration. Crew giving these briefings should speak slowly and distinctly, be animated, and make eye contact with as many passengers as possible. Steps should be taken to eliminate distractions for crew and passengers during the briefing.

2.1.2 Where more than one crew member gives the briefings and demonstration, the crew should be distributed through the passenger cabin at designated positions, as per the company's documented procedures. They should coordinate their actions with the information given in the oral briefing.

2.1.3 Operators must have procedures to ensure that equipment used during briefings and demonstrations is adequately stowed to prevent any impediment to egress from the aircraft. In addition, operators must have alternative briefing procedures for crew members to follow should audio/visual presentation equipment become inoperative.

### 2.2 CONTENT OF BRIEFING (CAO 20.11.14.1.1)

Before each take-off the operator of an aircraft shall ensure that all passengers are orally briefed on each of the following:

- (a) **Smoking.** The briefing should emphasise the prohibition on smoking, including the prohibition of smoking in the toilets.
- (b) **Seatbelts.** Passengers must be briefed on the use and adjustment of seat belts, ie. the method of fastening, tightening and unfastening.

- The briefing should include that seatbelts must be fastened anytime the “seatbelt” sign is illuminated and that any instruction from crew members in relation to the seatbelt must be obeyed.
  - Passengers should be informed that seatbelts are to be worn low and tight, and kept fastened anytime they are seated.
- (c) **Emergency Exits.** Crew members must brief passengers on the location of emergency exits.
- They should also brief passengers as clearly as possible on any additional information about the exits and physically point them out.
  - Passengers seated in exit rows should be provided with an individual briefing.
  - Research and accident studies show that passengers who receive an individual briefing perform better during actual evacuations, are better prepared to operate exits, and are more likely to read the safety card. Individual briefings also remind passengers of their exit seat responsibilities, encourage them to review all safety information and provide an opportunity for them to ask questions about the exit operation and procedures.
  - Benefits to the crew include being better able to ascertain if passengers occupying exit row seats are able to understand crew commands and are capable of performing the function if required.
- (d) **Oxygen.** Crew members must brief passengers on the use of oxygen where applicable.
- This briefing should include locating, donning and adjusting the equipment, and any action that might be necessary to start the flow of oxygen. Passengers should also be given instructions regarding the automatic appearance of the masks (where applicable) and be advised to don their own oxygen mask before assisting others.
- (e) **Flotation Devices.** (see also CAO 20.11.14.2 **Overwater Operations**) Crewmembers must orally brief passengers on the type, location and use of individual flotation devices. This briefing should include:
- ◇ the stowage locations of life jackets

- ◇ removal of life jackets from stowage eg. extraction from pouches
  - ◇ donning
  - ◇ use, including manual and oral inflation methods
  - ◇ instructions on when the equipment should be inflated
  - ◇ the manual operation of accessories
  - If there are significant differences in the donning or operation of life jackets carried on board, passengers should be briefed on those differences where applicable. It is suggested that crew individually brief parents or guardians accompanying small children or infants on the use of life jackets as it applies to them.
  - Where life jackets are required to be carried in accordance with CAO 20.11.5.1.1 or 20.11.5.1.4, the briefing must be accompanied by a demonstration that shows the method of donning and inflating the life jacket.
  - Where life rafts are required to be carried in accordance with CAO 20.11.5.2.1 or 20.11.5.2.2, the oral briefing must include their location.
  - If emergency procedures include the use of passengers to assist in manoeuvring the life raft, relevant instructions on retrieval from stowage and preparation for use should be included in the briefing.
- (f) **Stowage of Hand Luggage.** In order to ensure loose articles are adequately restrained, and that all aisles, passageways and exits are kept clear of obstructions, crewmembers must brief passengers on the requirement for all items in the cabin to be secured in an appropriate location.
- The briefing should include the appropriate stowage locations and conditions relevant to the aircraft and operation.
- (g) **Special Survival Equipment.** Where additional safety equipment is carried eg. for operations through remote areas of Australia, the location of that equipment must be included in the briefing.
- If emergency procedures include the use of passengers to assist in locating, retrieving or using the safety equipment, relevant instructions should be included in the briefing.

### **2.3 SUPPLEMENTAL INFORMATION**

2.3.1 The following information should be included in the oral briefing to ensure understanding and compliance with all safety requirements:

- (a) requirement for passengers to abide by crewmember instructions and passenger information signs eg. lighted information signs, placards;
- (b) the location of safety information cards and the fact that they contain additional safety information that the passengers should read; and
- (c) instructions regarding passenger pre-takeoff requirements ie. position of seatbacks, traytables and any other item that is not in its appropriate stowage location.

### **2.4 BRIEFING FOR HANDICAPPED PASSENGERS (CAO 20.11.14.1.2)**

2.4.1 Handicapped passengers, and any persons assisting them, must be given an individual briefing, appropriate to the needs of the passenger, in the procedures to be followed in the event of an emergency evacuation of the aircraft. The individual briefing should include:

- which emergency exit to use
- when to move to that exit
- discussion as to the most appropriate manner of assisting the handicapped person so as to prevent pain or injury to that person

## **3. Visual information**

### **3.1 SAFETY INFORMATION CARDS (CAO 20.11.14.1.3 AND 4)**

3.1.1 The passenger safety briefing must be supplemented with a pictorial safety notice relevant to the type of aircraft and its safety equipment. Information contained in the card must be consistent with information given in the oral briefing.

3.1.2 The passenger safety information card should be designed and located so that the seated passenger will be able to see and have access to the card when it is placed in its normal location aboard the aircraft. It should be large enough so that passengers will be able to visually locate the card, and it should have an eye-catching title or symbol that identifies it as safety or emergency instructions.

3.1.3 The method used to depict the operation of equipment and passenger actions should be diagrammatic or pictorial, keeping the use of written information to a minimum. The use of international symbols is encouraged. All depictions should be easy to understand and not complex.

3.1.4 The cards should bear the name of the air operator and the aircraft type and should contain only information that is essential to safety.

3.1.5 They should be interesting, attractive and uncluttered so passengers will want to read them. For example, a multicoloured card that has pictures and drawings will be picked up and read more often than a black and white printed card or a card that contains too much text.

3.1.6 The cards should be sufficiently large enough so as to compete with magazines for attention.

3.1.7 Safety information cards must include:

- (a) diagrams of the emergency exits and methods of operating;
- (b) other instructions necessary for the use of emergency equipment; and
- (c) the brace position for emergency landing or ditching.

## 3.2 CONTENT

3.2.1 Safety briefing cards that provide information to passengers should include the following:

- **Passenger compliance**
  - The instructions on the card should advise passengers that they must comply with safety instructions including signs, placards and instructions of crewmembers. The importance of complying with the seatbelt sign should be emphasized.

- **No smoking**
  - The card should clearly indicate when smoking is not permitted.
- **Seat belts**
  - The card should have instructions for fastening, tightening, and unfastening seatbelts and indicate they must be fastened during takeoff, landing and whenever the fasten seatbelt sign is on.
- **Seatbacks**
  - The cards should contain information that seatbacks must be upright for takeoff and landing.
- **Exit locations**
  - The cards should give the location of every available exit in the cabin. The cards should encourage passengers to familiarise themselves with the location of exits other than the one they entered.
- **Exit operations**
  - The cards must contain diagrams depicting the opening of each exit type, and any manual operations necessary to successfully complete an evacuation, such as manual inflation of the evacuation slide or the recommended placement of the hatch on the seat or outside the aircraft.
  - Illustrations should depict a person operating the exit with the direction of the movement of handles clearly indicated. Showing more than one method of operating an exit could be confusing. Past experience has also indicated that confusion is sometimes created by a diagram or picture that demonstrates operation of an exit peculiar to only one side of the aircraft. If, for instance, all emergency door handles rotate toward the rear of the aircraft, this should be explained on the cards.
  - The cards should also explain not to bring carry-on baggage to the exit.

- **Evacuation slide use**
  - The card should contain instructions consistent with the manufacturer’s recommended procedures (e.g for passengers to jump outward in the seated position with legs extended, and not to stop and sit at the door sill). Use of the slide or other assist means should be consistent with the exits on that aircraft.
- **Overwing/underwing exit use**
  - The card should contain instructions illustrating the proper method of evacuating through an overwing or underwing exit. The card should also direct passenger movement on any surface that leads to an exit and give direction and route of escape after leaving an overwing exit.
- **Floor proximity emergency lighting**
  - Where an aircraft is equipped with lighting which directs passengers to exits, the card should inform passengers of its location.
- **Brace position**
  - The cards should contain information about various protective brace positions to be assumed by passengers, including children and infants, seated in forward and aft facing passenger seats (NB: FAA AC 121-24B Appendix 4 provides guidelines on the “Brace-for-Impact” position. The Aeromedical Research Branch of the Civil Aeromedical Institute, Protection and Survival Laboratory, conducted research and tests with respect to establishing “brace-for-impact” positions for passengers (including children and infants) and crew.)

*Note 1: Operators should refer to [CAAP 235-2\(1\)](#) for CASA’s recommendations on Carriage and Restraint of Infants.*

*Note 2: Some foreign Regulators do not require infants to be restrained, however CASA legislation requires all aircraft occupants to be restrained at prescribed times.*

- **Oxygen masks**
  - The cards should contain instructions on the location, donning and means for adjusting oxygen masks; any further actions needed to start the flow of oxygen; and instructions to passengers to don their own oxygen mask before assisting children.
- **Life jackets**
  - The card should depict the stowage location and contain instructions concerning removal of the devices from their stowage locations, extraction from stowage pouches or packages, manual or oral inflation systems, use in the water and the manual operation of survivor locator lights and accessories, as appropriate
- **Liferafts**
  - When life rafts are required to be carried, the cards should depict life raft and slide raft stowage, launching and securing locations outside the aircraft together with the method of detaching from the aircraft.
- **Portable electronic devices**
  - The cards should inform passengers of permissible times, conditions and limitations when various portable electronic devices may be used.

### **3.2 AIRCRAFT TYPE (CAO 20.11.14.1.4)**

3.2.1 The safety information cards must contain information that is pertinent to the type and model of aircraft being used for the flight. Different seating configurations for a particular aircraft may be included on one card, providing the oral briefing includes advice of the configuration in use.

3.2.2 The information should be consistent with the operators procedures. In addition, when aircraft equipment is substantially different, even within the same model of aircraft, depictions on these cards would be more easily understood if aircraft differences were presented on a separate card. Merely labelling exits or other equipment with the pertinent aircraft type, model or configuration does not provide enough information to the average passenger and may be confusing.

### **3.3 OPERATIONS MANUAL (CAO 20.11.14.1.5)**

The procedures to be followed in the briefing must be specified in the aircraft's operations manual or in another document specified in the operations manual.

### **3.4 AIRCRAFT PLACARDS AND DECALS**

It is essential that passengers seated adjacent to emergency exits are readily able to determine the correct method of opening and disposing of (where applicable) those exits in an emergency.

### **3.5 ACCESS TO TYPE III EXITS (AD/GENERAL/73)**

3.5.1 Requirements in relation to placards for Type III exits include:

- (a) can be read by all persons who are seated adjacent to and are facing a passageway to the exit;
- (b) accurately state or illustrate the correct method of opening the exit, including the use of handholds; and
- (c) if the exit is a removable hatch, state the weight of the hatch and indicate an appropriate location to place the hatch after removal.

3.5.2 To ensure consistency and to minimise confusion for passengers, it is important that the information provided on the safety cards is comparable to the instructions on the placard; ideally these illustrations should be identical. Differences in style and technical content between the two forms of information can at best be confusing and at worst can provide conflicting information. Operators should review the content of the safety cards and placards to ensure that it is essentially the same.

3.5.3 The method of opening the exit should take into account the ergonomics of the exit design eg. if the exit is to be operated from the seated position, then this should be clearly depicted.

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