

(R) Passenger Safety Briefing Materials

RATIONALE

This revision is intended to update information, improve standardization, and enhance comprehension of briefing materials used to convey safety-related information to passengers on board transport and commuter aircraft. The title is being changed to reflect the scope of the changes.

1. SCOPE

These recommendations are to aid the international air transport industry by identifying a standard, minimum amount of safety instructions that shall be provided in passenger safety information briefing materials (generally cards and videos). Aircraft operators are encouraged to customize the passenger safety information briefing materials to their own operations.

1.1 Purpose

The purpose of this ARP is to assist airlines, as well as corporate and private operators, in producing safety information briefing cards and videos which will reinforce and expand passenger knowledge of the safety equipment and procedures designed for passenger use in emergencies.

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

AIR4740 Safety Considerations – Smoking in Lavatories of Transport Aircraft

AIR4771 Recommended Brace Positions

ARP5655 Safety Briefings for Passengers in Exit Rows

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on this Technical Report, please visit
<http://www.sae.org/technical/standards/ARP1384D>**

2.1.2 FAA Publications

Available from Federal Aviation Administration, 800 Independence Avenue, SW, Washington, DC 20591, Tel: 866-835-5322, www.faa.gov.

FAA Advisory Circular No: 121-24, Passenger Safety Information Briefing and Briefing Cards

FAA Technical Standard Order TSO C72c, Individual Flotation Devices

FAA Technical Standard Order TSO C13f, Life Preservers

FAA Advisory Circular No: 121-29, Carry-On Baggage

FAA Advisory Circular No: 91-62, Use of Child Seats on Aircraft

2.1.3 U. S. Government Publications

Available from U. S. Government Printing Office, 732 North Capital Street, NW, Washington, DC 20401, Tel: 202-512-0000, www.gpoaccess.gov.

United States Code of Federal Regulations, Title 14, Parts 91/121/125/135

2.1.4 Applicable References

Reference 1. Criteria for Safety Symbols, Annex B, ANSI Z535.3-1998, National Electrical Manufacturers Association, Rosslyn, VA 22209, Available through Global Engineering Documents, 15 Inverness Way East, Englewood, CO 80112

Reference 2. 14 CFR 121.585 & 135.129, Exit Row Seating

Reference 3. Etienne Grandjean, "Design of VDT Workstations", Chapter 11, Handbook of Human Factors, Edited by G. Salvendy, Wiley, New York, 1987

2.2 Mandating and recommending Words

- a. SHALL indicates a mandatory criterion.
- b. SHOULD indicates a criterion for which an alternative, including non-compliance, may be used if it is documented and justified.

3. GENERAL REQUIREMENTS

3.1 Content

3.1.1 Briefing materials shall provide the information described in Section 4, at a minimum.

3.1.2 Briefing materials shall provide safety and survival equipment information that passengers could find necessary in an emergency. Operators are encouraged to provide additional information that would be helpful to passengers, beyond these minimum recommendations. The presence of trained cabin crewmembers on board an aircraft mitigates the need for passengers to receive instructions on locating and using fire extinguishers, first aid kits, and survival kits.

3.1.3 Briefing materials shall accurately depict the important details of aircraft safety equipment and its function. The information shall be specific to the type and model of aircraft on which the materials (e.g. briefing card) card are placed. The briefing materials shall depict the actual safety equipment aboard the aircraft.

3.1.4 Briefing materials shall be tested for comprehension in accordance with Reference 1. Every method employed, whether verbal, symbolic, pictorial, picture, and/or video, should be evaluated with regard to comprehension of any topic to which it has been applied. A comprehension score of 85% is required for transfer of the safety information to be considered successful.

3.2 Presentation Style

3.2.1 Simplicity and Familiarity

3.2.1.1 Briefing materials should be rendered as simply as is possible to convey the safety information. Cluttered and/or complex pictures, videos, pictorials, and pictograms often mask individual elements that are crucial to understanding.

3.2.1.2 Briefing materials that incorporate familiar elements, i.e., things or situations that passengers encounter on a daily basis, or that take advantage of equipment functions that are analogous to activities performed regularly, provide passengers with implicit understanding based on habits they have acquired in those situations.

3.2.2 Directing and Holding Passengers' Attention

Briefing materials should use various approaches to gain and hold passengers' attention. For example, briefing cards would benefit from the appropriate use of color and layout, with regard to pictorials and pictograms; videos benefit from the use of interesting actors, attractive music and sound effects, and unusual visual effects, including graphics. Highlighting the importance of the information is also helpful, as passenger attention has been shown to correlate positively with perceived importance. Other factors such as novelty and enjoyability have also been shown to facilitate passenger attention to safety briefings.

3.2.3 Primarily Pictorial

Briefing materials shall rely primarily on pictorial presentation of information, in consideration of potential language barriers. However, addition of words or other clues may be necessary to achieve successful comprehension by passengers.

3.2.4 Languages

Briefing materials incorporating words shall be rendered in the primary language(s) understood by those passengers expected to be travelling on the aircraft.

3.2.5 Passengers with Limitations

Briefing materials insufficient for any passenger identified as being limited, either physically or mentally, shall be augmented by an individual pre-flight crewmember briefing appropriate to the passenger's needs. Likewise, an individual pre-flight safety briefing shall be presented to any passenger who is responsible for a passenger with limitations.

3.2.6 Competing Presentations

Briefing materials shall be presented in such a way and at such time that the safety message shall receive maximum attention by passengers. The cabin crewmembers shall direct passengers to attend fully to the presentation, which shall not be diluted by the inclusion of service information or advertising.

4. MINIMUM INFORMATION REQUIREMENTS

4.1 Smoking

Briefing materials shall provide information on smoking restrictions on board the aircraft, and shall include the information in ARP4740.

4.2 Portable Electronic Devices

Briefing materials shall indicate restrictions on the type and use of portable electronic devices during taxi, take off and landing, and in other appropriate circumstances.

4.3 Carry-On Baggage

4.3.1 Briefing materials shall instruct passengers on how and where to stow carry-on baggage for taxi, takeoff and landing.

4.3.2 Briefing materials shall caution passengers about the danger of articles falling when opening and retrieving items from overhead compartments.

4.3.3 Passengers shall be instructed not to stow items in compartments where emergency equipment installed.

4.4 Passenger Seats

4.4.1 Tray Tables, Personal Video Screens (Monitors), Seatbacks, Telephone/Handsets, and Foot Rests

Briefing materials shall instruct passengers about the appropriate placement and stowage of tray tables, personal video screens/monitors (where applicable), telephones/handsets, seat backs, and foot rests (where applicable) for taxi, takeoff, and landing.

4.4.2 Exit Row Seating

Briefing materials shall instruct passengers sitting in an overwing exit row that they may be required to operate the exit in an emergency and that they shall inform a crew member if they are unable or unwilling to do so. The information in ARP5655 shall be provided. The minimum criteria for exit row occupants, and the responsibilities those occupants incur, are generally provided in national aviation regulations (see Reference 2).

4.5 Passenger Restraints

4.5.1 Adult Restraint Systems

4.5.1.1 Briefing materials shall provide instructions for fastening and tightening safety belts low and tight across the hips for landings and takeoffs, and for unfastening safety belts. Passengers shall be instructed to keep their safety belts fastened while seated due to the danger of turbulence.

4.5.1.2 Briefing materials shall indicate the correct use of shoulder straps (e.g., over the forward shoulder on side facing seats) if such equipment is provided.

4.5.2 Child/Infant Restraint Systems

Briefing materials shall indicate the proper use of a child/infant restraint system if such equipment is provided. Passengers shall be instructed to use the restraint system during taxi, takeoff, landing and whenever else the child/infant is in the seat.

4.6 Oxygen Masks

Briefing materials shall indicate the oxygen mask stowage locations (e.g., PSU, seat backs, arm rests). Instructions on how to don, adjust, and perform any actions necessary for initiating oxygen flow shall be provided. If a reservoir bag is depicted, it shall not be shown inflated. Instructions to help others don their masks only after the passenger has donned a mask shall be provided. The need for urgency in donning oxygen masks shall be emphasized.

4.7 Brace for Impact Positions

Briefing materials shall depict all applicable brace positions, as described in ARP4771, and emphasize the word or phrase the crew is trained to give in an emergency during takeoff or landing in which there is a need for passengers to assume a protective brace position.

4.8 Flotation Means

Briefing materials shall indicate stowage locations and instructions for use of individual flotation devices. The briefing materials shall depict the actual devices carried on board the aircraft.

4.8.1 Flotation Seat Cushions

Briefing materials shall provide instructions for retrieval and use of seat cushions for flotation (see FAA TSO C72c), including proper manner of holding and use of the straps.

4.8.2 Life Preservers

Briefing materials shall provide instructions for retrieval and use of life preservers (see FAA TSO C13f), including the following information:

- a. Removing the life preserver from its stowed location
- b. Opening the package, donning and adjusting the life preserver
- c. Using the manual and oral inflation systems
- d. Operating the survivor locator light if manual operation of such lights is required
- e. Donning procedures for both adults and children, if different

4.8.3 Infant Flotation Devices

Briefing materials shall provide instructions on the use of crewmember-provided infant flotation devices to be made available to adults travelling with infants. The information may be presented verbally, provided on separate briefing materials at the time the flotation devices are distributed, or printed on the flotation devices themselves.

4.8.4 Flotation Platform

Briefing materials shall indicate that the escape slide can be used as a flotation platform, where applicable.

4.9 Passenger Exits

Briefing materials shall indicate the locations of all emergency exits. Exits to be used following a water landing, if different from those used during a land evacuation, shall be indicated.

4.9.1 Exit Path Marking System

Briefing materials shall indicate the location, appearance and function of the exit path marking system. The relationships among the light patterns or colors, the exit signs, and the exit locations shall be shown.

4.9.2 Emergency Exit Operation

Briefing materials shall present instructions on how to open, in the emergency mode, each type of exit located in the passenger cabin. All operations needed to ensure a successful emergency evacuation (e.g., placement of removable hatches, manual operation of escape devices, positioning of passenger helpers) shall be included.

4.9.3 Emergency Evacuation

Briefing materials shall instruct passengers not to bring any carry-on baggage to the exit during an emergency evacuation. The fact that baggage can cause injuries and slow evacuations should be explained. On aircraft equipped with inflatable escape devices (slides, slide/rafts, rafts), passengers shall be instructed to remove spike-heeled shoes and other sharp objects before reaching the exit and using the device. Since shoes may provide protection when moving away from the aircraft, passengers shall be instructed to carry them and put them back on once outside.

4.10 Emergency Descent Assisting Devices

4.10.1 Inflatable Escape Slides

4.10.1.1 Briefing materials shall provide instructions on the proper procedures for deploying and using inflatable escape slides, including the need to jump outward in the seated position and not to sit at the doorsill when entering the escape slide, unless jumping is not recommended because of unusual height of the doorsill, narrowness of the slide, or attitude of the aircraft. Instructions to help other evacuees at the bottom of the slide and then to move rapidly away from the slide shall be provided.

4.10.1.2 Hand Held (Non-Inflatable) Evacuation Slides

Briefing materials shall provide instructions on the proper procedures for deploying and using non-inflatable escape slides and indicate that the first passengers out of the aircraft should hold the bottom of the slide outward from the doorsill while other passengers use the slide. Passengers shall be instructed to sit at the doorsill and not to jump onto the hand held slide.

4.10.1.3 Alternate Descent Assisting Means

Briefing materials shall provide instructions for deploying and using descent devices other than escape slides (e.g., stairs). If no descent assisting device is provided, the method of reaching the ground from the exit shall be depicted.

4.10.2 Escape Routes

4.10.2.1 Deplaning Away from an Airport

Briefing materials shall indicate the directions and escape routes to be used after leaving each aircraft exit in an emergency evacuation at a location other than an airport.

4.10.3 Deplaning Onto the Airport Tarmac

Briefing materials shall indicate that passengers deplaning onto the tarmac shall follow ground crew instructions and proceed directly to the terminal building. They shall also be cautioned about smoking restrictions and the hazards of rotor wash, jet blast, propellers, pilot tubes, and vehicle traffic.

4.11 Extended Overwater Flights

Briefing materials on aircraft operated on extended overwater flights, i.e., operations over water at a horizontal distance of more than 50 nautical miles from the nearest shoreline, or, with respect to helicopters, an operation over water at a horizontal distance of more than 50 nautical miles from the nearest shoreline and more than 50 nautical miles from an off-shore heliport structure, shall indicate stowage locations of life preservers, life rafts and slide/rafts, instructions on life preserver and life raft retrieval, preparation for use, inflation, securing life rafts to and detaching them from the aircraft, and locations for launching life rafts from the aircraft. Instructions for inflating, boarding and detaching slide/rafts shall be provided.

4.12 Aircraft Without Cabin Crew

Briefing materials on aircraft operated without cabin crewmembers shall additionally indicate the stowage locations and procedures for retrieval and use of portable emergency safety and survival equipment, such as fire extinguishers, first aid kits, and emergency locator transmitters.