



400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE RECOMMENDED PRACTICE

SAE ARP4387

REV.
A

Issued 1992-09
Revised 2000-03

Superseding ARP4387

Accommodation for Passengers with Ambulatory Disabilities in Transport Category Aircraft Cabins with Seating Capacities Greater than 44

1. SCOPE:

The methods and designs presented herein shall not be construed as being the only means of accomplishing these accommodations.

This document applies to all transport category aircraft using features required by Department of Transportation Regulations CFR382.

Passengers with ambulatory disabilities and for whom provisions shall be made on each airplane type and location(s) for their seating are defined in 14CFR382.

The goal is to provide cabin service comparable to that available to other travelers without jeopardizing the safety of fellow passengers. This necessitates consideration of physical, neurological and sensory capabilities, and limitations of mobility impaired persons. With proper consideration and design implementation, it will be possible to serve the needs of the majority of the disabled population.

1.1 Purpose:

This document provides considerations for the design of cabin facilities to accommodate passengers with ambulatory disabilities while traveling aboard transport category aircraft.

2. 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.

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2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

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| ARP1315 | Lavatory Installation |
| AIR1815 | Safe Carriage of Impaired and Disabled Passengers |
| ARP4120 | Foldable Onboard Wheelchairs for Passengers With Disabilities |
| ARP4192 | Passenger Safety Video Briefings |
| AIR4496 | Cabin Stowage of Personal Wheelchairs |

2.2 Other Publications:

- 2.2.1 Available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.
 - 2.2.1.1 Department of Transportation Regulations OST 14CFR382
 - 2.2.1.2 Federal Aviation Administration Regulations 14CFR121
- 2.2.2 Recommended Guidelines for Design of Accessible Aircraft Lavatories - Air Transport Association

3. TECHNICAL REQUIREMENTS:

- 3.1 In providing equipment for use aboard an aircraft, care must be taken to follow the systems approach to design and to consider the following:
 - a. The interaction of the many elements of the total system. The primary elements are:
 1. The passengers with disabilities
 2. Cabin crew members
 3. Other nondisabled passengers
 4. The provisions, equipment, and fixtures within the aircraft interior
 - b. The disabled person's degree of mobility, access of disabled persons to passenger cabin furnishings and compartments, use of provisions by the passengers with disabilities, and assistance required of them.
 - c. The disabled traveler's limitations and capabilities; namely boarding, seating, garment removal and stowage, onboard baggage stowage, lavatory use, food and beverage consumption, and all of the other amenities afforded the airline passenger.
 - d. Seating of passengers with disabilities as related to emergency preparedness, egress, and exit locations. Federal Aviation Administration Regulations set strict limits on who may be seated at an exit row.

3.2 Passenger Seat With Movable Armrest:

- 3.2.1 Functional Problem: A fixed passenger seat armrest impedes transfer to and from an onboard wheelchair.
- 3.2.2 Solution: While the fixed armrest may be valuable leverage for many passengers with disabilities, after being seated it is an obstruction which is difficult to maneuver over and has the potential for injury.

A movable armrest which moves out of the transfer path is desired and must comply with minimum FAA aisle dimension clearance when stowed. Use shall be easy to accomplish, without a tool, and be secure in normal armrest position. When the movable arm is deployed, it must not impede access to seats in the next row back of it. Passengers with disabilities may not be seated in exit rows per FAA Regulations.

3.3 Other Optional Items:

- 3.3.1 Functional Problem: There is within the airplane cabin environment equipment peculiar to air travel (e.g., attendant call button) that many disabled persons cannot reach or manipulate even with experience. Also, the close proximity of other passengers can make dining difficult for those with impaired limb control or handgrip.
- 3.3.2 Solution: The airplane cabin should be designed to allow equipment access and ease of manipulation by disabled persons. Cabin equipment which does not require use of adaptive devices should be strongly encouraged. However, dining aids which include tray and plate guards, adaptive devices, or eating utensils and cup, and placement for securing food tray to support surface may be necessary. Given the variety of disabilities present, in some cases, assistance from nearby passengers may be necessary (small children cannot reach overhead call buttons).

3.4 Transportation and Transfer Areas:

- 3.4.1 Functional Problem: The passenger with ambulatory impairments arrives at the cabin entry either in their own wheelchair or in one provided by the airline or appropriate governing authority. In most circumstances, this vehicle is not small or maneuverable enough to transport the individual to the appropriate passenger seat. Transfer at the cabin entry door to a smaller wheelchair is necessary.

Transfer should be accomplished so as to minimize discomfort, exposure to injury and excessive exertion of physical effort on the part of the passenger with disabilities and assisting airline personnel. Although many passengers with disabilities exercise personal control measures to avoid the necessity of using the lavatory, it may be expected that such need will be necessary, particularly during a longer flight profile.

The passenger with disabilities normally cannot utilize lavatory facilities without being transported to them via an onboard wheelchair.