

Passageway Door Operation

RATIONALE

This document has been reaffirmed to comply with the SAE 5-Year Review policy.

1. SCOPE:

The purpose of this SAE Aerospace Recommended Practice (ARP) is to provide recommendations which will lead to the standardization of passageway door operation in all transport aircraft, by providing in the design, features which will result in minimum exit passage blockage and jamming.

2. REFERENCES:

2.1 Applicable Documents:

The following publications form a part of this specification 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 specification and references cited herein, the text of this specification 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, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

ARP577 Emergency Placarding - Internal and External

2.1.2 FAA Publications: Available from Federal Aviation Administration, 800 Independence Avenue, SW, Washington, DC 20591.

Code of Federal Regulations, Title 14, Parts 25, Airworthiness Standards: Transport Category Airplanes

Code of Federal Regulations, Title 14, Parts 121, Certification and Operations: Domestic, Flag, Supplemental Air Carriers and Commercial Operators of Large Aircraft

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2007 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)
Tel: 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: CustomerService@sae.org
SAE WEB ADDRESS: http://www.sae.org

3. DEFINITION:

Passageway doors are those doors, other than the approved emergency exit, connecting passenger compartments (lavatories, berths, etc.) or providing access to approved emergency exits, but not flight deck doors.

4. DETAIL RECOMMENDATIONS:

The following detail criteria are recommended:

- 4.1 The method of operation of the door release handle should be an obvious motion in a single plane and should be consistent with proper ergonomic standards.
- 4.2 Passageway doors should be of such size and direction of operation as not to impede a 95% male passenger's movement during evacuation.
- 4.3 On passageway doors which are normally closed during flight, means should be provided to secure the door in the open position. The door shall be capable of remaining in its open secured position under the crash inertia forces specified in the civil air regulations.
- 4.4 Passageway doors and their attachment means should be designed to preclude collateral damage or injury during survivable crash load conditions and rapid decompressions and should remain attached.
- 4.5 The door and the areas around the door opening shall have no sharp edges or protrusions which could cause injury or present a hazard to safe movement under normal or emergency conditions.
- 4.6 When a door is installed between the occupied areas of the passenger cabin and an emergency exit, a suitable placard¹ should be installed (where necessary) directing the occupants' attention to the exit.
- 4.7 When in the open position, passageway doors should not block the egress of occupants from seats or from any areas of the aircraft.
- 4.8 Handles or knobs should "unlock" when gripped and turned in either direction when moving in the same plane.
- 4.9 The design of passageway doors, their supporting structures and frames, attachment means, and locking, latching, and/or release mechanisms shall be such that, in the event of such doors being jammed or locked in the closed position in an emergency situation, the doorway can be opened and cleared with the application of bodily force by a 5th percentile female without injury to the person.

1. Reference ARP577, Emergency Placarding - Internal and External