

EXITS AND THEIR OPERATION - AIR TRANSPORT CABIN EMERGENCY

Issued 8-15-57
Revised

1. INTRODUCTION: The purpose of this Aeronautical Recommended Practice is to provide recommendations which will lead to standardization of methods of exit closure opening operations in all transport aircraft, by establishing criteria for easily operated actuating mechanisms, and by recommending mechanical features which will result in minimum exit closure jamming and exit passage blockage.

NOTE: a. It is not the purpose of this Aeronautical Recommended Practice to specify the design methods or specific mechanism to be followed in the accomplishment of the objective of this Aeronautical Recommended Practice.

- b. It is not intended to cover specifically in this specification, the closing operation of exits. Such operations are always the responsibility of the operating personnel of the airline. Cabin occupants other than company personnel are specifically prohibited from the operation of closing, fastening, or locking of doors or exits. (The exception being doors, etc., leading to lavatories, lounges and/or staterooms)

2. DEFINITIONS:

Exit: An exit is an opening intended for emergency evacuation of the aircraft cabin. This will include the following:

Class A: Openings nominally for passenger use.

Class B: Secondary openings for servicing or passenger use.

Class C: Auxiliary openings nominally for emergency evacuation use.

3. DETAIL RECOMMENDATIONS: The following detail criteria applying in general to all exit closures are recommended:
 - 3.1 The method of operation of the release handle or lever and the axis and direction of rotation should be obvious and natural to the operator.
 - 3.2 All handles should be capable of operation by one person.
 - 3.3 The direction of motion required to open or unlock the mechanism from the exterior or the interior should be indicated in plain view on or in the immediate vicinity of the operating handles. The letters or markings should be easily readable from a distance of 30 inches with illumination available. (See ARP 577 on placards - See ARP 503 on illumination).

-2-

- 3.4 The entire operation of the operating handle should be in a continuous motion without any sharp changes in direction throughout the general movement except for pulling from countersunk recesses on external installations.
 - 3.5 The handle dimensions should take into consideration the normal hand grip limitations including adequate handle to hand contact areas to reduce to a minimum possible personnel injury under high load applications to the handle.
 - 3.6 All external handles should provide clearances to allow gripping of both external or countersunk handles with gloved hands.
 - 3.7 The operation of the internal door handles should override any external operated closure door locking mechanism.
 - 3.8 It is desirable to locate the operating handle as far away from the exit closure hinges or axis of rotation as possible.
 - 3.9 The operating handle should not restrict the opening in case of partial exit opening because of closure jamming.
 - 3.10 Sufficient provisions should be made to prevent icing up of the outside or external handle mountings to allow normal operation.
 - 3.11 The design should enable the operator to open the exit closure even with ice accumulation, seal vulcanization and reasonable amount of fuselage distortion.
 - 3.12 Internal exit closure handles or their protective covers should be designed so that they cannot be hidden by the window curtains, stowed clothing, etc.
 - 3.13 Increasing cabin differential pressure should act so as to increase the security and retention of the exit closure.
 - 3.14 Means should be provided to prevent opening of the exit closure to a dangerous extent in flight.
 - 3.15 Consideration should be given to the operation and release of exit closures when aircraft is in other than an upright position.
 - 3.16 No secondary operation should be necessary as moving or unlocking such devices as locks, catches, stops, bolts, bars, etc. Only the single operation of pulling or pushing the exit closure into the clear should be necessary. This does not preclude the use of an easily removable or operable non-tampering protective cover.
4. CLASS "A" Specific Recommendations: The following specific criteria are recommended:
 - 4.1 Rotating handle mountings should be provided with external visible stops or other means to indicate their range and direction of operation.