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# AEROSPACE RECOMMENDED PRACTICE

## ARP 495A

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### PASSENGER ESCAPE DEVICES - CIVIL AIR TRANSPORT

#### 1. PURPOSE

The purpose of this Aerospace Recommended Practice is to establish criteria for design and installation of devices which will ensure rapid and effective occupant evacuation in the event of emergency.

#### 2. DEFINITION

This ARP deals with emergency evacuation devices installed for the purpose of rapidly assisting the occupants to the ground or water from emergency exits and/or flight surfaces.

NOTE: This ARP does not intend to specify design methods, mechanisms or equipment to be used in accomplishment of the objectives set forth herein.

#### 3. DETAIL RECOMMENDATIONS

The following detail criteria are recommended:

##### 3.1 Ground Escape Devices

3.1.1 The configuration of the device when erected, should impart a sense of security and confidence in its use by the occupant so that maximum rates of escape may be maintained.

3.1.2 The evacuation device at each exit or flight surface should be capable of providing for the maximum escape rate consistent with escape flow potential of the exits.

3.1.3 The device should be of a type which would also permit ambulatory persons, young children, and aged persons to descend rapidly and with a minimum probability of incurring injury.

3.1.4 The device should be installed in such a manner that in the event of emergency, it will be available for immediate use.

3.1.5 The device should be automatically deployed and erected. The device should be capable of being actuated by untrained evacuees and the method should be conspicuously and clearly indicated by brief instruction placards. Placards and emergency lighting should be in conformity with ARP 577 and ARP 503 respectively.

3.1.6 Use of the device after deployment must be self-evident.

3.1.7 The device should not normally depend upon persons on the ground for operation. However, where practicable, the device should provide a means whereby two or more persons on the ground may provide the necessary support.

3.1.8 The device should be of a length to provide for assisting occupants to the ground from various heights assumed by the exit under all possible landing gear conditions. Displacement of the aircraft longitudinal axis under such conditions should not interfere with the effective functioning of the device and the safe descent of the occupants.

3.1.9 The device should not impede evacuation in configurations where its use is not required.

3.1.10 The device should be effective under all weather conditions including rain and snow.

3.1.11 The device should not be adversely affected by winds of up to 30 knots.

3.1.12 There should be no hazardous effect of an inadvertent activation of the device.

3.1.13 Any device with an automatic activation system should also have a back-up manual activation system. It should be possible to readily deactivate the automatic activation feature before the opening of a door.

3.1.14 Any device having positive buoyancy when extended should be able to be readily disconnected from the aircraft so that it could also be used as an emergency flotation device.

3.1.15 It should be possible to replace or restore the device, once it has been activated, to a state of operational readiness within 15 minutes.

3.1.16 The evacuation system should be designed as an integral part of the aircraft.

##### 3.2 Ditching Escape Devices

3.2.1 The configuration of the device when extended, should impart a sense of security and confidence in its use by the occupant, so that maximum rates of escape may be maintained.

3.2.2 The evacuation device at each exit or flight surface should be capable of providing for the maximum escape rate consistent with escape flow potential of the exits.

3.2.3 The device should be of a type which would also permit ambulatory persons, young children, and aged persons to effect its use rapidly and with a minimum

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