
SUBJECT: EMERGENCY EVACUATION AND DITCHING DEMONSTRATIONS

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1. OBJECTIVE

1.1.1 This circular provides direction and guidance to inspectors for planning, observing, and evaluating emergency evacuation and ditching demonstrations.

2. GENERAL

2.1.1 Effective emergency evacuation procedures have significantly reduced the number of casualties in survivable aircraft accidents. The AAC (Agência de Aviação Civil) considers an operator's ability to perform these procedures an extremely important factor of aviation safety.

2.1.2 It is AAC policy that AOC holders engaged in passenger-carrying operations must conduct a full-capacity or a partial aborted takeoff evacuation demonstration for any aeroplane with a seating configuration of more than 44 passenger seats. AOC holders engaged in passenger-carrying operations must conduct a full-capacity or partial ditching evacuation demonstration for any land aeroplane intended for extended overwater operations. The need to conduct full-capacity or partial demonstrations depends on whether another AOC holder engaged in passenger-carrying operations, or the aeroplane manufacturer, had previously accomplished a full-capacity demonstration. These demonstrations specifically test the following areas:

- (1) The operator's emergency training program and crewmember competency.
- (2) The operator's emergency evacuation and ditching procedures.
- (3) The reliability and capability of the emergency equipment on the aeroplane.

2.1.3 A transport category aeroplane manufacturer must conduct emergency evacuation demonstrations. The demonstrations must be conducted in accordance with regulations applicable to the type certification and the State of aircraft design. Observation and evaluation of this demonstration is the responsibility of the AAC. This demonstration tests the following:

- (1) The basic aeroplane design and the efficiency with which passengers can be safely evacuated from it
- (2) The emergency evacuation systems on the aeroplane
- (3) The manufacturer's/operator's AAC approved emergency evacuation procedures

3. REGULATORY REQUIREMENTS

3.1.1 Civil Aviation Regulation (CVCAR) 9.B.325 and Implementing Standard (IS) 9.B.325 specifies the requirements for conducting these demonstrations. The regulation cites when they must be performed, how they are to be conducted, and the specific criteria that must be met by the operator or manufacturer.

3.1.2 These regulations specify the following four types of evacuation demonstrations:

3.1.2.1 Full-Capacity Aborted Takeoff.

- (1) CVCAR 9.B.325 (a) requires an AOC engaged in passenger carrying operations to conduct a full-capacity emergency evacuation demonstration for the aircraft configuration in 90 seconds or less. It is AAC policy that this CVCAR is applicable to each type and model aeroplane with a configuration of more than 44 passenger seats that is used in passenger carrying operations. A full-capacity emergency evacuation demonstration simulates an aborted takeoff. Before initiation of the demonstration, a passenger participant must occupy each installed passenger seat.
- (2) After the initiation signal, all passenger participants and crewmembers must be evacuated using the aeroplane's emergency evacuation equipment and not more than 50 percent of the emergency exits and slides. The demonstration must show that the aeroplane and its emergency equipment, using the operator's emergency procedures, allows for the evacuation of its full seating capacity, including crewmembers, in 90 seconds or less. Additionally, if an operator proposes to use a type and model aeroplane with a seating configuration greater than has ever been previously demonstrated for that particular type and model, the operator must conduct a full-capacity demonstration with that type and model of aeroplane.

Note: Criteria for demonstration of actual full capacity emergency evacuations are not within the scope of the Civil Aviation Regulations. The procedures and guidance that follows supports IS: 9.B.325, as it applies to partial emergency evacuation and ditching demonstrations.

3.1.2.2 Partial Aborted Takeoff. CVCAR 9.B.325 (b) specifies conditions under which an AOC holder may be permitted to conduct a partial emergency evacuation demonstration in accordance with CVCAR 9.B.325 (c). No passenger participants are used in a partial demonstration. A partial emergency evacuation demonstration simulates an aborted takeoff and requires that, before initiation of the demonstration, the cabin attendants occupy their normal takeoff positions. After the initiation signal, the aircraft's emergency evacuation equipment and 50 percent of the required emergency exits and slides must be ready for use in 15 seconds or less. A partial emergency evacuation demonstration must be conducted in the following situations:

- (1) When an operator intends to place in service a type and model of aeroplane that is new to the company but which has previously had a full-capacity emergency evacuation demonstration conducted in accordance with applicable CV-CARs and airworthiness standards.
- (2) When an operator "significantly changes" the number of cabin attendants, their seating location, their evacuation duties, or emergency procedures. "Significant change," as used in the preceding subparagraph 3.1.2.2 (2), is a determination made by the AAC inspectors when an operator proposes to change the number of cabin attendants, their seating location, their evacuation duties, or emergency procedures.

- (a) Number. When a change in seating configuration requires the addition of a cabin attendant or allows the reduction of cabin attendants required by CVCAR 9.C.120, a partial demonstration is required if that operator has not previously demonstrated that the seating capacity with that complement of cabin attendants. A change in seating capacity, which does not result in the addition of a required cabin attendant usually does not constitute a "significant change" and a partial demonstration usually is not required. In addition, if there is a reduction in the seating capacity but the air carrier does not wish to operate the aircraft with a reduction in the number of flight attendants, a partial demonstration is not required. In some cases, however, depending on changes in cabin attendant duties and/or procedures, a change in the seating capacity which does not result in the addition or reduction of a cabin attendant may require a partial demonstration.
 - (b) Location. When an operator proposes to change a cabin attendant seating assignment, for any reason, the AAC inspectors must consider if that action significantly changes the cabin attendant's duties and/or responsibilities. For example, changing a cabin attendant's seating assignment from one floor level exit to an adjacent floor level exit may not constitute a "significant change" in cabin attendant duties. However, if an operator changes the seating location because of a new procedure, which requires, for the first time, cabin attendants to open overwing window exits, that action would constitute a "significant change" and would require a partial demonstration.
 - (c) Duties and procedures. When an operator proposes to change emergency evacuation duties or procedures, the AAC inspectors must consider the scope and character of the change in determining the requirement for a partial evacuation. For example, if the degree of change requires cabin attendant actions or knowledge, which has never been previously required or demonstrated a partial demonstration is required. If the change in duties or procedures is minor or can adequately be dealt with through the operator's training program, a demonstration may not be required. Most of the time, changes in flight attendant duties will constitute a significant change, for example, if a flight attendant will now be required to open two doors instead of one door, or if a flight attendant position has a new exit responsibility at the overwing exits.
- (3) When an operator proposes to "significantly change" the number, location, type of emergency exits, or type of opening mechanism on emergency exits available for evacuation.
- (a) A change in the number of exits is usually not a significant change especially if the exits are all the same type as other exits and are located in the same area. For example, if the variant airplane has two pairs of overwing exits instead of one pair, this would not be a significant change if all the exits were of the same type and operated the same way.
 - (b) A change in the location of exits could be a significant change, but usually is not. If the exits are the same identical type and the only change in location is several feet, this might not be a significant change.
 - (c) Evaluation of training and procedures is one of the reasons for conducting partial evacuation demonstrations. A change in the opening mechanism of an exit is a significant change and a partial evacuation demonstration should be required so that the AAC may assess training on the new opening mechanism.
- (4) Whenever an operator proposes to make one of the changes previously discussed, the AAC inspectors, in determining the degree and significance of the change, must consider cabin attendant knowledge, experience and the operator's training program. The increase in

complexity of the duties for each cabin attendant in terms of additional exits, seats, or briefing responsibilities should also be considered.

(5) IS: 9.B.325 specifies the criteria used for evaluating a partial evacuation demonstration. The operator must demonstrate the effectiveness of its crewmember emergency training and evacuation procedures by accomplishing the following:

- (a) Conducting a demonstration without passenger participants using the operator's line operating procedures
- (b) Opening the exits as selected by the AAC and deploying the slides, if applicable so that the exits and slides, area "ready for use" within 15 seconds.
- (c) Using company cabin attendants who have completed the approved training program for the type and model of aeroplane being demonstrated
- (d) Opening 50 percent of the required non-floor-level exits, if the operator developed procedures require cabin attendants to open those exits.
- (e) Deploying 50 percent of the exit slides, if applicable.

Note: Failure to open all exits selected by the AAC will constitute a failure of the demonstration.

(6) The following information should be taken under consideration when defining the term "ready for use":

- (a) Floor level exits with slides are defined as "ready for use" when the exit is fully opened and the emergency exit slides are completely deployed or inflated and properly positioned in a manner which would not impede passenger or crewmember egress. The inflation cylinder may still be making a hissing sound and the slide may not actually touch the ground until the first passenger uses the slide. Neither one of these situations would prevent the slide from being "ready for use."
- (b) Floor level exits with stairs are defined as "ready for use" when the exit is fully opened, the stairs are fully extended, and the bottom of the stairs is within six inches of the ground.
- (c) Exits not equipped with a means of escape present some different considerations when defining "ready for use." In this case, it is important for the AAC Team Leader to determine what the operator's procedures are and to use those company procedures to define when the exit is "ready for use." For example, in the case of an overwing exit, the crewmember must simulate placement of the hatch in accordance with airline procedures. In the case of a floor level plug/hatch on some smaller aircraft, this might mean that the hatch falls out of the aircraft and lands directly under the door sill.

3.1.2.3 Ditching. CVCAR 9.B.325 (d) requires an operator who intends to operate a land plane in extended overwater operations to conduct a ditching demonstration. IS: 9.B.325 (e) prescribes the conditions applicable to the conduct of the ditching evacuation demonstration.

Note: With respect to aircraft other than helicopters, CVCAR 8.1.1.2 (a) (15) defines "extended overwater operations", as an operation over water at a horizontal distance of more than 50 nm from the nearest shoreline; and to helicopters, an operation over water

at a horizontal distance of more than 50 nm from the nearest shoreline and more than 50 nm from an offshore heliport structure.

4. THE ABORTED TAKE-OFF EMERGENCY EVACUATION DEMONSTRATION PROCESS

4.1 PHASE ONE

4.1.1 The regulatory requirements previously outlined in this circular identify the three occasions when an AOC holder engaged in passenger carrying operations must conduct an emergency evacuation demonstration. An emergency evacuation demonstration is required when the operator proposes to operate a specific aeroplane type and model:

- (1) For the first time (either a new, or existing operator).
- (2) When there is a "significant change" in the number of cabin attendants, their seating location, their evacuation duties, or emergency procedures (as determined by the AAC inspectors).
- (3) When there is a change in the number, location, type of emergency exits, or type of opening mechanism on the emergency exits used for aircraft evacuation (as determined by the AAC).

Note: It is AAC policy that if an operator proposes to conduct operations with an aircraft configured with less than 44 seats (even though the aircraft may have been previously type certificated with more than 44 seats) neither a full-capacity nor a partial demonstration is required.

4.1.2 When an operator's situation meets one or more of these conditions, the AAC inspector or Project Manager (PM) must determine the requirement for either a full capacity or a partial aborted takeoff evacuation demonstration.

- (1) A full-capacity demonstration is required in the following situations:
 - (a) When the aeroplane type and model and its proposed full passenger seating capacity has not been previously demonstrated by another AOC holder or by a domestic or foreign manufacturer in accordance with airworthiness regulations applicable to the state of design.
 - (b) When an aeroplane has undergone a change in its exit configuration and/or design (as determined by the AAC)
- (2) A partial demonstration is required in the following situations:
 - (a) When an operator takes delivery of a new type/model of an aeroplane (new to an operator) has previously had a full-capacity demonstration, conducted by an AOC holder or manufacturer, for the maximum seating configuration to be used by the operator acquiring the aeroplane.
 - (b) When the operator is undergoing original certification.
 - (c) If the AAC inspectors determines a "significant change" has occurred in the number of cabin attendants, their location, or their duties and emergency procedures.

- (d) If the AAC determines a change has occurred in seating configuration, exits, or some other material alteration of the aeroplane's original design that would require a partial demonstration.

4.1.3 The most commonly performed demonstration is the partial aborted takeoff emergency evacuation demonstration. The general criteria (with the exception of the 15 second time limit and passenger participants) are similar to the full-capacity aborted takeoff demonstration. For the purposes of this circular, the discussion of the partial and full-capacity evacuation demonstration process is combined into one section.

4.1.4 Briefing the operator on demonstration requirements

4.1.4.1 After the AAC inspectors (PM if applicable) determine whether a partial or full-capacity demonstration is required, the operator must develop a plan outlining the manner in which the demonstration is to be conducted. AAC inspectors must meet with the operator as often as necessary to ensure the operator clearly understands which documents and information are required for the plan to be accepted for evaluation.

4.1.4.2 The operator may not practice, rehearse, or describe the demonstration for the passengers (when passengers' actions are required by the operator's procedures) nor may any participant have taken part in this type of demonstration within the preceding six months.

4.1.4.3 Company officials, such as directors of operations and maintenance, must be available at the site for either a full-capacity or partial demonstration. These individuals must have authority to direct modifications to the emergency evacuation demonstration plan at the time of the demonstration. Additionally, they must be able to respond to AAC requirements for specific corrective actions due to deficiencies that may occur during the demonstration. Other company personnel present at the demonstration site should have a direct role in conducting the demonstration. The company should be informed that, although other company personnel may observe the demonstration, it is the company's responsibility to ensure that these persons do not pose a distraction or affect the demonstration's outcome.

4.1.4.4 Non-company personnel, who are not AAC personnel, must have specific reasons to observe the emergency evacuation demonstration. Usually, these individuals will be representatives of the aircraft manufacturer, manufacturers of other items of equipment used during the demonstration, or other such organisations that have a direct interest in aviation safety.

4.1.4.5 The cabin attendant complement must consist of the minimum number of cabin attendants that the operator proposes to use on the aeroplane in commercial air transport passenger-carrying operations, and in no case shall the minimum number be less than that specified in CVCAR 9.3.1.7.

4.1.4.6 The aeroplane must be positioned in a normal ground attitude and configured for takeoff. Each passenger compartment door or curtain must be positioned as it would be for a normal takeoff.

4.1.5 The operator's plan

4.1.5.1IS: 9.B.325 (b) requires the operator to obtain AAC approval before conducting the emergency evacuation demonstration (full-capacity or partial). The operator should submit the plan as far in advance as possible. AAC policy is that the plan be submitted at least 15 working days in advance of a partial demonstration. The operator's plan shall contain the following information:

(1) Letter of Request. A letter of request which states the following:

- (a) The applicable regulation [CVCAR 9.B.325 (a) or (b)], that requires a full-capacity or partial emergency evacuation demonstration be conducted.
- (b) The aeroplane type and model and full seating capacity (including crewmembers) to be demonstrated.
- (c) The number of cabin attendants and their duty assignment positions to be used during the demonstration.
- (d) The proposed date, time, and location of the evacuation demonstration.
- (e) The name and telephone number of the company's evacuation demonstration coordinator (spokesperson).
- (f) A clear description of how the operator proposes to initiate the demonstration, the signal to be used for the purpose of timing, and how the operator intends to block exits which are not to be used, must also be in the plan. The operator must understand that the signal has to be given to both cabin and ground personnel simultaneously to initiate the demonstration. It should be emphasised that the operator is responsible for developing the initiation procedure and the method for blocking exits. The team leader will thoroughly review this procedure for adequacy.

(2) A diagram, representative of the aeroplane to be demonstrated, which includes the following:

- (a) The location and designation of all exits by type and the designated exit pairs.
- (b) The assigned seating location of each required crewmember during takeoff.
- (c) The interior cabin configuration showing the location of each passenger seat, the galleys, aisles, lavatories, and passenger compartment partitions and bulkheads.
- (d) The location and type of emergency equipment on the aircraft including:
 - (i) Fire extinguishers
 - (ii) Portable oxygen bottles/masks
 - (iii) Megaphones
 - (iv) Crash axes
 - (v) Emergency ropes/tapes
 - (vi) Life rafts/slide rafts/ emergency stairs
 - (vii) Individual floatation devices or life preservers

- (viii) First aid and emergency medical kits
 - (ix) Protective Breathing Equipment
 - (x) Survival Kits (if applicable)
- (3) Copies of the appropriate portions of the manual describing emergency evacuation duties and responsibilities.
- (4) A copy of the passenger safety information briefing card which will be used on the aircraft during revenue operations.
- (5) A description of the emergency equipment installed on the aircraft including at least the type and model of each item of equipment, as applicable.
- (6) A list of crewmembers (both flight deck and cabin) who are or will be qualified to participate in the demonstration must be in the operator's plan.
- (a) The flight crew must be qualified in the aircraft to be used, however, the initial operating experience requirement need not be completed.
 - (b) Cabin attendant personnel (in accordance with IS: 9.B.325 (c) (2) and (3)) must have completed an AAC approved training program and passed drills and competence check on the type aircraft, emergency equipment, and procedures. Cabin attendants designated by the AAC to participate in the demonstration shall not be provided emergency training or aircraft emergency equipment familiarisation more than that specified in the operator's approved training program before the demonstration.

Note: The flight crew must take no active role in assisting others inside the cabin during the demonstration.

- (7) Description of Plans to Ensure Dark of Night. A description must be in the plan of how the operator will ensure the demonstration is conducted in the "dark of the night," or in conditions which simulate the "dark of the night." The regulations do not define "dark of the night." For the purpose of emergency evacuation demonstrations, "dark of the night" mean a level of illumination that approximates the natural illumination that occurs 90 minutes after official sunset under clear sky conditions. This lower level of illumination is needed to properly evaluate the aeroplane's emergency lighting system and passenger and crewmember performance in darkened conditions. Levels of illumination significantly darker can interfere with a proper evaluation of the demonstration. Therefore, this approximate level of illumination should be maintained by natural or artificial means. The most effective way of controlling the level of illumination is to conduct the demonstration in a darkened hangar. It is AAC policy that such conditions are required for evaluating the aircraft's emergency lighting system and crewmembers' performance in a darkened environment.
- (8) Description of Position. A description of how the operator plans to ensure that the aeroplane is positioned in a location, either indoors or outdoors, which will allow the unobstructed deployment of all emergency stairs, evacuation slides or slide rafts, as applicable

4.2 PHASE TWO

- 4.2.1 When the operator's emergency evacuation demonstration plan is submitted, the AAC inspectors or the certification team, if applicable, must make a cursory review of the submission to ensure

all the required information and documents discussed in phase one are included. While a thorough analysis of the submission is conducted during phase three, in phase two the AAC should respond to the operator's plan in a timely manner. Minor omissions or deficiencies can often be resolved by contacting the company's evacuation demonstration coordinator. If discrepancies can be resolved quickly, the process moves to phase three. If the operator's plan has a significant number of required items or documents missing or is obviously incomplete, the entire submission must be returned to the operator with a written explanation of why it is unacceptable. The operator/applicant shall be advised that the AAC will take no further action until an acceptable plan is submitted.

4.3 PHASE THREE

4.3.1 During phase three the AAC inspectors, or the certification team, if applicable, conduct a thorough analysis and evaluation of the operator's plan.

4.3.2 The AAC inspectors (or PM, if applicable) must ensure that the information in or attached to the operator's letter of request is acceptable and consistent with the proposed type of demonstration. During this analysis and review the AAC inspectors shall ensure the following:

- (1) AAC has approved operator's emergency training program.
- (2) Evacuation procedures in the operator's manuals, including individual crewmember assignments, are realistic, can be practically accomplished.
- (3) The passenger safety information briefing card is understandable and consistent with the type and model of aeroplane to be demonstrated.
- (4) The emergency equipment is acceptable for the type of operation proposed.

4.3.3 On-Site Evaluation. Certain items in the proposal may require on site evaluations. For example, the hangar or ramp area the operator intends to use for the demonstration should be inspected for its adequacy. The inspector should determine that the operator has, or is making provisions for participant safety during the demonstration including the use of safety observers, stands, padding, mats, and any other appropriate safety measures.

4.3.4 Resolving Deficiencies. Deficiencies noted during this analysis and review must be resolved with the company's evacuation demonstration co-ordinator. If major discrepancies surface during the AAC evaluation or if the AAC and the operator are unable to resolve significant issues, the operator's plan must be returned with a letter explaining why it is being returned. The operator shall be informed that the discrepancies outlined in the letter must be corrected and a plan resubmitted before the AAC takes further action. If, after a detailed evaluation, the submission is found acceptable, the operator shall be notified that the AAC has accepted it.

4.4 PHASE FOUR

4.4.1 During phase four, the AAC plans, observes, and evaluates the operator's aborted takeoff emergency evacuation demonstration. The planning segment of this phase is particularly important and normally requires thorough co-ordination and clear instruction and guidance for both the AAC and company participants to ensure that the demonstration is conducted and evaluated objectively. Specific guidance and instruction for planning and conducting the full-capacity and partial aborted takeoff evacuation demonstrations are in section 3.

4.5 PHASE FIVE

4.5.1 Upon successful completion of an aborted takeoff emergency evacuation demonstration, the operator shall be immediately notified at the site of the demonstration. The results of the demonstration are reported as specified in section 6. The aircraft make model must be listed in the operations specifications.

5. ABORTED TAKE-OFF DEMONSTRATION PROCEDURES

5.1 THE DEMONSTRATION TEAM

5.1.1 The AAC team responsible for evaluating the emergency evacuation demonstration shall be headed by a team leader. For an initial certification, the Project Manager (PM) serves as the demonstration team leader. When an existing operator conducts a demonstration, the AAC will normally assign one of the AAC inspectors to serve as the demonstration team leader. The team leader should be assigned as early as possible in the process, and no later than the beginning of phase three. The team leader is responsible for planning, conducting, and evaluating the emergency evacuation demonstration. The team leader serves as the focal point and central spokesperson for the AAC on all matters pertaining to the demonstration. Other members of the AAC team should be assigned as needed and consist of operations, and airworthiness inspectors familiar with commercial air transport operations and applicable regulatory requirements.

5.2 PRE-DEMONSTRATION MEETING WITH OPERATOR

5.2.1 After reviewing and thoroughly evaluating the operator's plan (phase three), the AAC team leader should meet with the operator's evacuation demonstration coordinator. During this meeting the AAC team leader should accomplish the following:

- (1) Review the operator's plan and ensure that the operator is thoroughly familiar with the applicable criteria to be used during the demonstration.
- (2) Ensure that the operator is aware of its responsibilities regarding participant safety including provisions for safety observers, stands, ramps, padding, and ambulance coordination, as applicable.
- (3) Review the method and signals for initiating the demonstration and timing criteria.
- (4) In coordination with the operator, determine the signal to be used to terminate the demonstration such as an air horn, or some other clear, distinguishable audible signal. (Experience has demonstrated that a whistle blast may not be adequate.) A suitable device should be agreed upon as early as possible in the planning stage, and tested to assure its adequacy.
- (5) Resolve any unanswered questions or issues the operator may have before conducting the demonstration.

5.3 AAC TEAM PLANNING

5.3.1 The AAC team leader shall conduct a meeting with AAC team members to assure each team member has a specific assignment during the demonstration. This includes timekeeping, position (inside or outside the aeroplane), and inspecting the emergency equipment, the aeroplane, and any applicable documents. The team leader should distribute an aircraft diagram to each

inspector showing his or her assigned locations for the demonstration. The team must determine which emergency exits shall be opened and the manner in which other exits will be blocked.

5.4 CREW CRITERIA

- 5.4.1 Select "typical" crewmembers to be used in the demonstration from the list provided by the operator of at least two full crew complements. Normally, typical crewmembers should not include those used in previous demonstrations, emergency procedures instructors, supervisors, check airmen, union safety representatives, or others who may have an above average level of experience or exposure to emergency evacuation requirements.
- 5.4.2 The qualifications of the crewmembers used in the evacuation demonstrations should be consistent with qualifications of line crewmembers. Normally, crewmembers used in these demonstrations should have been "line crewmembers" for the last two years. In addition, whenever possible crewmembers should not have been used in a demonstration within the last six months. There are smaller airlines where this may not be possible. When this is the case; document and include the former experience in the report regarding the demonstration. When the AAC determines that crewmembers to be used in the evacuation demonstrations have been allowed to "practice" opening the doors/exits, they should not allow these crewmembers to be used in the evacuation demonstration, unless the operator's AAC approved training program includes this additional training.

Note: "Practice" is any training conducted outside of normally scheduled training programs.

- 5.4.3 The air carrier should present a minimum of two complete crews for the demonstration(s).
- 5.4.4 When an airline is new, typical line crewmembers may not be available. When this is the case, the carrier must train the first cadre of flight attendants; it is quite possible that these flight attendants will also be instructors. Nevertheless, they should not be given instruction or experience that will not be given to flight attendants who will be expected to serve as flight attendants on this aircraft on the line. For example, they should not have had "train the trainer" training until after their participation in the evacuation demonstration. Chief flight attendants or flight attendant managers who are in charge of the air carriers over all flight attendant programs should not be used as crewmembers during evacuation and ditching demonstrations, unless no other flight attendants have been hired.
- 5.4.5 The AAC encourages whenever possible the use of separate crewmembers for the emergency evacuation demonstration and the ditching demonstration. Some new entrant air carriers may not be aware of the stress level the crews are facing by participating in these types of demonstrations. Additionally, by providing separate crewmembers for each demonstration, it provides the AAC with a better assessment of the training program. In the event of a non-flight attendant demonstration failure (e.g., equipment failure), it is recommended that a new flight attendant crew be selected from the remaining flight attendant group.
- 5.4.6 The team leader must make certain each team member is aware of the signal to be used to initiate the demonstration and the signal to be used to terminate the demonstration. During the AAC meeting, regulatory requirements and demonstration criteria should be reviewed to assure common understandings.

5.5 SELECTING EXITS

- 5.5.1 The team leader should evaluate the air carrier's procedures when determining the exits to be used and blocked. Fifty percent of required floor level exits must be opened and the slides or slide/rafts ready for use within 15 seconds. The remaining exits must be blocked.

- 5.5.2 If emergency evacuation procedures dictate that flight attendants are assigned to open non-floor level exits as part of the cabin attendant duties , these exits must be opened as part of the demonstration within the same 15 seconds. These floor level exits (doors) and non-floor-level exits (windows or plugs) may be used provided they are designated as exits to be opened by a cabin attendant in the company's evacuation procedures. Ventral (stairs) and tail cone exits should not be used unless they are paired with another exit. If there is any doubt as to which exits are paired, consult the State of aircraft design responsible for the type certificate of the aircraft make/model. In aeroplanes having an even number of exits not more than 50 percent of the total number of exits and slides may be opened and deployed. When an aeroplane has an odd number of emergency exits a careful determination should be made before subtracting or adding exits. The exits which are used in the demonstration do not have to be part of an exit pair. Team leaders in charge of the evacuation demonstration should consult with the Flight Safety director before making a determination of adding or subtracting an exit.
- 5.5.3 Any emergency exit assigned to a flight attendant as part of his or her evacuation duties may be selected for use during the evacuation demonstration. For the purpose of this document, a primary exit is one that is assigned to a flight attendant as the first exit he/she is assigned to open in the event of an emergency. A secondary exit is the next exit to which a flight attendant is assigned. For example, a flight attendant manual stipulates that a flight attendant sitting next to the floor level exit at L1 would open that exit and then proceed to the floor level exit at R1 and open that exit. When this is the case the primary exit is the L1 door and the secondary exit is the door at R1. If the first exit is blocked then the flight attendant would proceed to the secondary exit and open it and then inflate the slide or slide/raft. When the flight attendant opens the first exit, the only actions required at the second floor level exit (secondary exit) are to assess conditions and to redirect passengers away from the unusable exit. Then the flight attendant should return to the usable exit and command passengers out of the usable exit.
- 5.5.4 The team leader must carefully review the operator's emergency evacuation procedures. When deciding which doors or exits are to be opened during a partial demonstration, the AAC shall not select a door that is not designated as a primary cabin attendant duty to open, or a secondary door or exit that could not possibly be opened and ready for use in 15 seconds. It is recommended that one exit from each exit pair be selected. Exit pairs should be identified by the operator in the interior configuration diagram. After determining which exits will be used, the team should not divulge that information to the operator.

5.6 BLOCKING EXITS

- 5.6.1 The operator should propose the method for blocking exits. The demonstration team must review the proposal to determine its acceptability. The method that is selected for blocking of exits must require flight attendants to assess the exit.
- 5.6.2 The following are examples of acceptable methods of blocking exits during an emergency evacuation demonstration:
- (1) Tape a swatch of red cloth covering each door window and window exit. Secure a line to the covering long enough to reach the ramp or hangar floor. At the initiation signal, designated inspectors will pull the lines to remove the coverings from the door windows or window exits that are to be used and leave the coverings on the windows that are not to be used.
 - (2) Position inspectors inside the aeroplane at each door or window exit before starting the demonstration. When the evacuation is initiated, the inspectors positioned in front of exits to be opened shall move from that position as quickly as possible. Inspectors positioned in front

of exits not to be used will block the exits by raising their hands and stating, "this exit is blocked." This is the most effective method for blocking overwing exits.

- (3) To simulate a fire at the blocked exits, rig red lights (which when illuminated simulate fire) in front of the appropriate door windows or window exits. The lights at the exits to be blocked must be illuminated simultaneously with the initiation signal.

5.6.3 When a method of blocking exits has been determined, the AAC team leader must notify the company's project coordinator of AAC concurrence with the method and ensure the company will provide the required maintenance and logistical support to prepare the exit blocking methods.

5.6.4 The crewmembers should see the blocking signal on the aircraft in the same ambient conditions that will be present during the demonstration. This could be in addition to a video, a photo, or a demonstration of the signal in a briefing room. It is very important that the flight attendants have the opportunity to see exactly what they will be seeing on the aircraft during the evacuation demonstration.

5.7 INITIATION SIGNAL

5.7.1 Timing of the emergency evacuation demonstration is very important. Fifteen seconds is allowed for the completion of a successful demonstration. Fifty percent of the floor level exits must be opened within 15 seconds and the slide or slide rafts are ready for use. The timing should start at a prearranged signal. The signal should be agreed upon by the AAC and the operator. It is essential that AAC team members be aware of the demonstration initiation signal. The operator should propose a method that provides the same initiation signal for participants inside the aeroplane and AAC team members outside the aeroplane. The preferred method is for a company employee to interrupt the aeroplane's normal source of power by one of the following actions:

- (1) Disconnecting, or turning off an external source of power or a ground power unit
- (2) Disconnecting or turning off the auxiliary power unit
- (3) Power interruption from the cockpit

5.7.2 This method of initiating the demonstration provides a clear initiation signal in the following ways:

- (1) Inside the aeroplane, the cabin attendants and AAC team members will observe the normal cabin lighting extinguish followed by the illumination of the emergency lighting system as their signal to commence the evacuation demonstration. It should be noted that these are not simultaneous events and there could be a second or two delay between the cabin lights extinguishing and the illumination of the emergency lighting system. For timing purposes, the demonstration commences when the cabin lights are extinguished.
- (2) Outside the aeroplane, AAC observers (stationed at each exit) and the team leader (who serves as the timekeeper) will observe the external lights (for example, taxi lights, anti-collision lights, position lights, and logo lights) extinguish. This is the signal to initiate the timing and other necessary observation actions of the AAC team.
- (3) The timing stops when that exit and slide or slide raft is ready for use.
- (4) Timing for slide readiness should be done from outside the aircraft and stops when the slide or slide/raft is ready for use.

- (5) Timing for stair readiness should be done from outside the aircraft and should stop when the stairs are fully extended and the bottom is within six inches of the ground.
- (6) Timing of exits not equipped with an escape means is often done better from the inside of the airplane. The operator must follow their procedures as provided in the appropriate parts of the manual. The inspector should insure that the exit is ready for use and then stop the timing.
- (7) The timing stops for evacuation demonstration when the designated exits have been opened and the slides or slide/rafts are ready for use.

5.7.3 When there is no crewmember assignment to open an exit, the team leader may still require a crewmember (either a flight attendant or a flight deck crewmember) to open these exits; however this should not be part of the timed evacuation demonstration. This is one method of determining that the operator's training and procedures are adequate for the airplane and are consistent with the intent of CV-CAR 9. This requirement could be needed when the aircraft is equipped with stairs, gull wings, overwing exits with slides, tailcones, or when the opening mechanism is new. The team leader could establish a time limit for opening these "unassigned" exits.

5.7.4 Ensure the crewmembers are briefed and aware of the initiation and blocking signals. It is recommended the crewmembers see and/or hear the initiation signal and the exit blocked signal on the aircraft in the same ambient conditions that will be present during the emergency evacuation demonstration. It is particularly important for the flight attendants to be familiar with the blocking signals. The blocking signal must be clear, specific, and unambiguous and placed in the same location and position as they will find during the evacuation demonstration. It would be permissible for flight attendants to assess their exits for familiarity with the blocking signal.

5.8 PARTICIPANTS

5.8.1 Due to the complexity involved in conducting an emergency evacuation demonstration, only those individuals who have a genuine need or concern should be present during the demonstration. Examples of persons who have a genuine need or concern would be representatives from the air carrier's training department, aircraft manufacturer, or slide manufacturer. Interested but unessential personnel may present hazards, interfere, or in other ways affect the outcome of the demonstration.

5.8.2 The operator is responsible for all non-AAC personnel who observe the demonstration. Those not directly involved in the demonstration should be kept at a reasonable distance from the aeroplane by some means such as ropes or lines.

5.8.3 The AAC team leader is responsible for AAC personnel who observe the demonstration. AAC observers should be limited to those who are required to evaluate the conduct of the demonstrations or need to be involved for specific reasons such as the following:

- (1) AAC inspectors from other authorities whose operators will be acquiring the same or similar type aircraft as the one being demonstrated.
- (2) AAC inspectors completing on-the-job-training (OJT).
- (3) Government officials or designees.

- (4) AAC personnel from any other AAC office concerned with technical or engineering components of the aircraft.

5.9 PRE-DEMONSTRATION INSPECTION

5.9.1 Before the demonstration, the AAC team must inspect the aeroplane and emergency and safety equipment. The aircraft must be configured and equipped for takeoff, in accordance with the operator's manuals and procedures. The aeroplane must be configured in the proposed full passenger-seating configuration with all appropriate emergency and safety equipment installed. The team must inspect each of the following items to ensure regulatory compliance:

- (1) Hand fire extinguishers for crew, passenger, and cargo compartments.
- (2) Protective breathing equipment.
- (3) First aid equipment.
- (4) Crash axe.
- (5) Megaphones.
- (6) Interior emergency exit markings.
- (7) Floatation devices or life preservers.
- (8) Lighting for interior emergency exit markings.
- (9) Emergency light operation.
- (10) Emergency exit operating handles.
- (11) Emergency exit access.
- (12) Exterior exit markings.
- (13) Exterior emergency lighting and escape route.
- (14) Floor level exits.
- (15) Additional emergency exits.
- (16) Ventral or tail cone exits.
- (17) Portable lights.
- (18) Seats, safety belts, and shoulder harnesses.
- (19) Emergency equipment required for extended overwater operations.
- (20) Public address system.
- (21) Passenger information signs/placards.
- (22) Aeroplane fire detection and protection system (operational test).

- (23) Passenger information cards.
- (24) Cockpit escape system.
- (25) Slides and sliderafts.

Note: For the purpose of a partial evacuation demonstration only, the slides may be beyond scheduled inspection criteria. However, the operator must request this option in its demonstration plan and state that it accepts full responsibility for any failure of the demonstration due to a malfunction of the slides. The AAC team leader or a higher authority will have the option to either accept or deny this proposal.

5.10 PRE-DEMONSTRATION BRIEFINGS

5.10.1 Before the actual demonstration, three separate briefings should be conducted for the following participants:

- (1) Crewmembers involved in the demonstration.
- (2) Passenger participants (if applicable).
- (3) The AAC team.

5.10.2 The company's evacuation demonstration co-ordinator should provide crewmembers with certain information regarding the demonstration. The AAC team leader must be in attendance at this briefing to resolve any questions to ensure the following information is included:

- (1) The purpose of the demonstration is to evaluate the following:
 - (a) The effectiveness of the company's training program as reflected by the crewmembers' actions.
 - (b) The adequacy of the company's emergency procedures.
 - (c) The effectiveness and reliability of the aeroplane emergency equipment.
- (2) The initiation signal, which begins the demonstration, must be clearly specified. Ensure the crewmembers are briefed and aware of the initiation and blocking signals. It is recommended the crewmembers see and/or hear the initiation signal and the exit blocked signal on the aircraft in the same ambient conditions that will be present during the emergency evacuation demonstration. It is particularly important for the flight attendants to be familiar with the blocking signals. The blocking signal must be clear, specific, unambiguous and placed in the same location and position as they will find during the evacuation demonstration. It would be permissible for flight attendants to assess their exits for familiarity with the blocking signal.
- (3) The significance of the 90 second time limit (for full-capacity evacuations) or the 15 second time limit (for partial evacuation), as appropriate, should be discussed.
- (4) The signal to be used by the AAC team leader for terminating (stopping) the demonstration such as an air horn, or some other clear audible means should be described. Any evacuation activity in progress must immediately cease with a "stop" signal.

- (5) The importance of safety during the demonstration including crewmember responsibilities, safety observer duties, and limitations should be emphasised.

5.10.3 The AAC team leader shall brief the AAC team as follows:

- (1) State the objectives of the demonstration.
- (2) Review the initiation signal.
- (3) Review observer assignments with regard to exits to be used or blocked.
- (4) Review the signal that stops the demonstration.
- (5) Remind the team members not to discuss the results of their observations with persons other than the team leader.

5.11 CONDUCTING THE DEMONSTRATION

5.11.1 The team leader shall ensure all pre-demonstration briefings and inspections are conducted before the actual demonstration. The following sequence of events represents an acceptable means, derived from past experience, for conducting the demonstration.

5.11.2 For both full-capacity and partial demonstrations cabin attendants shall accomplish the following:

- (1) Prepare for a normal departure in accordance with the operator's procedures, including closing and securing all exits, galleys, and arming the emergency evacuation system for takeoff.
- (2) Conduct a passenger briefing in accordance with CVCAR 8.I.120 and the company's procedures.
- (3) Be seated at their assigned positions with their restraint systems fastened.

5.11.3 The AAC team then ensures that each external door and exit, and each internal door or curtain is in position for a normal take-off.

5.11.4 Before the initiation signal, the flight crew shall accomplish all tasks on appropriate checklists and configure the aeroplane for a normal take off. The flight crew must be seated in their normal positions with their restraint systems fastened.

5.11.5 After completing all required pre take off actions, the captain shall inform the AAC team leader (who is positioned forward of the nose of the aircraft), by ground interphone, that he/she is ready for take-off.

5.11.6 Once the AAC team leader has been told that the crew is ready, he/she must make certain all AAC team members and company safety observers (if used) are ready and in position. The team leader will then issue a warning signal (air horn or whistle blast) which should precede the initiation signal by approximately 30 seconds. Depending upon the method approved by the AAC (as in the operator's plan) the team leader shall inform the company evacuation demonstration coordinator to initiate the demonstration.

- 5.11.7 The AAC team leader will coordinate the timekeeping with two stopwatches (a primary and a back up). The timing will begin when the external aeroplane lights extinguish. The timing will end when all selected exits/slides or slide/rafts are ready for use. At the end of the appropriate time period (90 or 15 seconds, as appropriate) the team leader shall issue a clear, audible signal terminating (stopping) the demonstration.
- 5.11.8 For a partial demonstration, each AAC observer assigned to exits which are to be used, shall be responsible for determining that his/her assigned exit was opened and each slide or slideraft (as applicable) was ready for use before the team leader's termination signal. Any exit, slide, or slideraft that was not ready for use before the termination signal constitutes an unsatisfactory demonstration.
- 5.11.9 The AAC team members assigned to the cabin shall ensure that all required equipment worked properly (for example, floor proximity lighting, emergency exit lights).
- 5.11.10 It is important that team members do not discuss the results of their observations with company personnel or passenger participants. After the demonstration has been terminated, the AAC team shall confer immediately on the observation of each team member and the overall conduct of the demonstration before advising the operator of the demonstration results.

6. DITCHING DEMONSTRATIONS

6.1 GENERAL

6.1.1 An applicant or certificate holder who proposes to operate a landplane (passenger or all cargo) in extended overwater operations must conduct a ditching demonstration. This demonstration is conducted in accordance with the requirements specified IS: 9.B.325 (e) and the direction and guidance provided in this circular. The purpose of the demonstration is to evaluate the operator's ability to safely prepare the passengers, aeroplane, and ditching equipment for a planned water landing. During the demonstration the following four areas are evaluated:

- (1) Emergency training program.
- (2) Ditching procedures.
- (3) Crewmember competency.
- (4) Equipment reliability and capability.

6.1.2 Ditching and water landing are defined differently. Ditching as commonly used in aviation is a planned event. When the airplane lands in the water without warning, this is an unplanned water landing. A ditching demonstration will simulate a planned water landing. The preparation for ditching is similar in nature to the preparation for a planned evacuation.

6.2 REGULATORY REQUIREMENTS

6.2.1 Ditching Demonstration. CVCAR 9.B.325 (d) requires an operator to conduct a ditching demonstration if the proposed type and model of land plane is to be used in extended overwater operations.

6.2.2 Implementing Standard 9.B.325 (e) provides requirements for a partial ditching evacuation demonstration. During a partial demonstration the AOC holder's assigned cabin attendants shall:

- (1) Prepare the cabin for ditching within 6 minutes after the intention to ditch is announced.
- (2) Remove each liferaft from storage (one liferaft or slideraft selected by the AAC, shall be inflated and properly launched); and,
- (3) Cabin attendants shall enter the raft and completely set it up for extended occupancy.
- (4) The raft shall include all required emergency equipment.
- (5) Cabin attendants shall demonstrate their knowledge and use of each item of required emergency equipment.

6.3 CREWMEMBER CRITERIA.

- 6.3.1 The selection and number of crewmembers to be used in the ditching demonstration is very important.
- 6.3.2 The qualifications of the crewmembers used in the ditching demonstration should be consistent with the qualification of line crewmembers. Whenever possible, crewmembers used in this demonstration should have been “line crewmembers” for the last 2 years. Experience gained prior to the previous 24 months should not be a consideration when selecting crewmembers for possible use in the demonstration. In addition, when possible crewmembers should not have been used in a demonstration within the last 6 months. There are smaller airlines where this may not be possible. When this is the case, the former experience should be documented and included in the report regarding the demonstration. When the AAC determines that crewmembers to be used in the evacuation and ditching demonstrations have been allowed to “practice” opening the doors/exits they should not allow these crewmembers to be used in the ditching demonstration, unless this additional training is included in the operator’s AAC approved training program.
- 6.3.3 The air carrier should present a minimum of two complete crews for the demonstration(s).
- 6.3.4 It is very important that the “back-up” crewmembers that may be used if the first demonstration fails are not given any information about the first demonstration. Sometimes, this is best accomplished by having these crewmembers isolated in an area which is physically removed from the first ditching demonstration. However, if these back-up crewmembers are not held in an area away from the demonstration they should stay in a group with an AAC inspector present so the inspector can insure they are not given any information about the first demonstration.
- 6.3.5 When an airline is new, typical line crewmembers may not be available. When this is the case, the carrier must train the first cadre of flight attendants; it is quite possible that these flight attendants will also be instructors. Nevertheless, they should not be given instruction or experience that will not be given to trainees who will be expected to serve as flight attendants on this aircraft in operations. For example, they should not have had “train the trainer” training until after their participation in the ditching demonstration. Cabin attendant managers who are in charge of the air carrier’s overall flight attendant program should not be used as crewmembers during the demonstration, unless no other flight attendants have been hired.
- 6.3.6 Crewmembers who are used in evacuation demonstrations may also be used in the ditching demonstration. However, the AAC encourages whenever possible the use of separate crewmembers for the emergency evacuation demonstration and the ditching demonstration. Some air carriers may not be aware of the stress level the crews face by participating in these

types of demonstrations. Additionally, by providing separate crewmembers for each demonstration it provides the AAC with a better assessment of the training program. In the event of a non-flight attendant demonstration failure (e.g., equipment failure) it is recommended that a new flight attendant crew be selected from the remaining flight attendant group.

6.4 THE DITCHING DEMONSTRATION PLAN

6.4.1 The ditching demonstration is normally conducted after the satisfactory completion of the aborted takeoff emergency evacuation demonstration.

6.4.2 In these situations, the same team leader and AAC team members should conduct and observe the ditching demonstration. However, if an operator plans to initiate flights into extended overwater areas for the first time, with an aeroplane that it previously operated over land areas, the operator must conduct a ditching demonstration.

6.4.3 If the operator plans to conduct the ditching demonstration in conjunction with the emergency evacuation aborted takeoff demonstration, the operator's aborted takeoff demonstration plan must include information applicable to the ditching demonstration such as the following:

- (1) Copies of the operator's manual relating to crewmembers ditching duties and responsibilities.
- (2) A description of applicable emergency equipment used for ditching (such as liferafts, survival gear) including the type and model of the emergency equipment.

6.4.4 If the operator must conduct a ditching demonstration that is not in conjunction with an emergency evacuation aborted takeoff demonstration, the operator's demonstration plan must be submitted at least 15 working days before the date of the actual demonstration. This plan must include the information in subparagraph 6.4.3 above and the following additional information:

- (1) The aeroplane type and model which will be used.
- (2) The proposed date, time, and location of the ditching demonstration.
- (3) The name and telephone number of the company's ditching demonstration co-ordinator.
- (4) A representative diagram of the aircraft which includes the following:
 - (a) Location and designation of each exit.
 - (b) Location of each item of emergency ditch equipment including:
 - (i) Life rafts/slide rafts.
 - (ii) Survival radios.
 - (iii) Pyrotechnic signalling devices.
 - (iv) Passenger/crewmember life preservers or individual floatation devices.
- (5) A list of all crewmembers (both flight crew and flight attendants) that are qualified to participate in the demonstration must be in the operator's plan. The crewmembers must be qualified in the aircraft to be used; however, the initial operating experience requirement need

not be completed. Cabin attendant personnel must have completed an AAC-approved training program for the type and model of airplane being demonstrated. Cabin attendants designated by the AAC to participate in the demonstration shall not be provided emergency training or aircraft emergency equipment familiarization more than specified in the operator's approved training program before the demonstration.

- (6) NOTE: Some operator's manuals stipulate the use of passengers to aid the crew when conducting a post ditching evacuation, usually to assist in launching liferafts. If the operator's procedures require the use of passengers, the necessary passengers must be aboard the aircraft and participate in the demonstration. The operator may not practice, rehearse, or describe the demonstration to the passenger participants in a manner other than the briefing described in the operator's manual.

6.4.5 Copies of the appropriate crewmember manual pages describing ditching duties and responsibilities, including cabin preparation time parameters for both planned and unplanned ditching.

6.5 REVIEW OF THE DITCHING DEMONSTRATION PLAN

6.5.1 When the ditching demonstration plan has been submitted, the AAC inspectors must review the proposal to ensure the following:

- (1) The proposed demonstration will meet the criteria in IS: 9.B.325 (e).
- (2) The emergency training program and ditching procedures in the operator's manual must have been approved and accepted and provide for safe operating practices.
- (3) The ditching duties and responsibilities, including cabin preparation time parameters for both planned and unplanned ditching is realistic and is understood by all.

6.5.2 The AAC team must plan for the observation and evaluation of the ditching demonstration. Normally, the demonstration is conducted after the completion of a successful aborted takeoff emergency evacuation demonstration. If an aborted takeoff emergency evacuation demonstration is not conducted, the CHO manager shall appoint a AAC ditching demonstration team and a team leader in the same manner as was accomplished for the aborted takeoff demonstration.

6.6 CONDUCT OF THE DITCHING DEMONSTRATION

6.6.1 The ditching demonstration shall be conducted in the following manner:

- (1) Before the ditching demonstration the team shall inspect each item of emergency ditching equipment for compliance with appropriate airworthiness and other relevant circulars.
- (2) The AAC team leader ensures inspectors and crewmembers are at their assigned positions and then advises the captain to commence the demonstration.
- (3) The captain initiates the demonstration by ordering (according to the operator's procedures) the crewmembers to prepare for ditching.

Note: It is imperative that emergency equipment, crewmember competency, and emergency procedures provide for rapid evacuation since during an actual ditching situation, the aeroplane may remain afloat for only a short time. During the demonstration, emphasis is on crewmember ability and efficiency in the time period between the decision to ditch and the actual water

landing. Six minutes is considered the maximum time acceptable for ditching preparation beginning with the ditching announcement to the simulated water landing. This preparation means participating crewmembers must correctly put on life preservers, brief passenger participants (if applicable), secure the cabin, and complete all required checklists and procedures within 6 minutes of the ditching announcement. Failure to be prepared at the end of 6 minutes constitutes an unsatisfactory demonstration.

- (4) The AAC team leader begins timing when the captain issues the prepare for ditching order. At the end of the 6 minute "planned ditching" period the crew must be prepared for a simulated water landing. After the simulated water landing, all liferafts must be removed from stowage. This action is not specifically timed, however the crewmembers must demonstrate competency in removing the rafts from stowage and the raft must be capable of being removed from the aeroplane for deployment in a reasonable period of time. For full-capacity demonstrations all liferafts and slide rafts will be launched and inflated. During a partial ditching demonstration one liferaft (or slideraft), designated by the AAC team leader, is launched and inflated. For the purpose of this demonstration "launching" a liferaft means to remove it from stowage, manipulate it out of the aeroplane (via stands or ramps), and position it on the ground before inflation. "Launching" a slideraft means to inflate it in a normal manner and then lower it to the ground.

Note: For ditching demonstrations on aircraft configured with sliderafts, it is not necessary to detach each slideraft from its respective door mounting. However, each slideraft must be inspected for its airworthiness. Any liferafts stowed inside the aeroplane must be removed from stowage and placed on the cabin floor for inspection.

- (5) Crewmembers assigned to any inflated raft shall be questioned about actual launch procedures then enter the raft and locate and describe the use of each item of emergency equipment within the raft.

7. EVALUATING EVACUATION AND DITCHING DEMONSTRATIONS

7.1 AREAS TO BE EVALUATED

7.1.1 During phase four of the aborted takeoff, emergency evacuation demonstration, or the ditching demonstration, the AAC team must evaluate the following areas:

- (1) Crewmember compliance and effectiveness in performing assigned duties and responsibilities. For example, a cabin attendant's effectiveness in assessing outside conditions, opening exits, and passenger evacuation commands. Another example is passengers assisting in launching liferafts during a ditching demonstration. The cabin attendant's instructions to the passengers must conform to the information provided in the operator's manual.
- (2) The flight crews effectiveness in exercising command responsibilities and the co-ordination and communication between the flightcrew and cabin attendants.
- (3) The capability of each item of emergency equipment (whether it performed its intended functions). Any shortcomings, deficiencies, or delays caused by the emergency equipment
- (4)
- (5) All designated exits and slides were opened, deployed, and "ready for use" within the appropriate time limits. For a full-capacity evacuation demonstration, that all designated exits and slides were properly operated and all passengers and crewmembers were properly

conditions, opening exits, and passenger evacuation commands. Another example is passengers assisting in launching liferafts during a ditching demonstration. The cabin attendant's instructions to the passengers must conform to the information provided in the operator's manual.

- (2) The flight crews effectiveness in exercising command responsibilities and the co-ordination and communication between the flightcrew and cabin attendants.
- (3) The capability of each item of emergency equipment (whether it performed its intended functions). Any shortcomings, deficiencies, or delays caused by the emergency equipment
- (4)
- (5) All designated exits and slides were opened, deployed, and "ready for use" within the appropriate time limits. For a full-capacity evacuation demonstration, that all designated exits and slides were properly operated and all passengers and crewmembers were properly evacuated within 90 seconds. For a partial evacuation demonstration, that all designated exits were opened and slides were "ready for use" within 15 seconds.
- (6) For ditching demonstrations, that the cabin, passenger and cabin attendants were made ready for a water landing within 6 minutes. The liferafts were efficiently removed from storage, and all designated life vests, liferafts, and or sliderafts were properly inflated. The capability of each item of emergency equipment to perform its intended function

7.2 DETERMINING RESULTS OF DEMONSTRATIONS

7.2.1 **Unsatisfactory Demonstrations.** Failing to meet a specified time limit is automatic grounds for an unsatisfactory demonstration. Deficiencies in other areas such as crewmember effectiveness, or equipment malfunctions that occur even when timing criteria is met, may be grounds for determining the demonstration unsatisfactory. The severity of the deficiency and the basic cause must be carefully considered. If the cause of a relatively severe deficiency was due to improper company training, procedures, or maintenance, the demonstration should be judged as unsatisfactory. For example, if all emergency lighting failed to illuminate due to a maintenance problem, there is sufficient grounds for determining the demonstration unsatisfactory. Minor deficiencies can usually be resolved with responsible company personnel without having to declare the demonstration unsatisfactory.

7.2.1 **Satisfactory Demonstrations.** When the operator meets the specified time limits and any minor discrepancies are resolved, the demonstration is considered satisfactory.



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