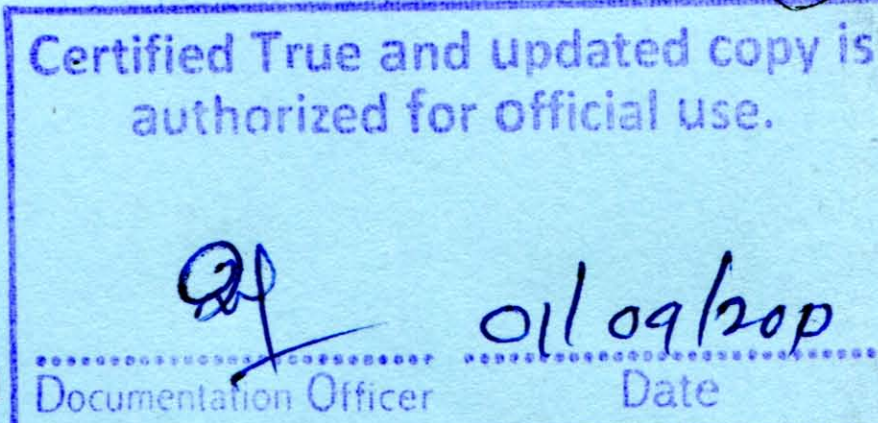




Civil Aviation Authority of Sri Lanka



AVIATION SAFETY NOTICE

ASN No: 069	Ref No: OPS/2005/06	File Ref: OP/21/10/2
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- Recipients : 1. Holders of Air Operator Certificate issued by DGCA,
2. Prospective applicants for Air Operator Certificate for commercial Air Transport Operations.
01. Subject : Communication and Coordination Between Flight and Cabin Crew Members
02. Nature : Compulsory
03. Issue No : 01
04. Status : New
05. Effective Date : With immediate effect
06. Validity : Until further notice
07. Contact Person : Inquiries may be directed, preferably by letter to, Assistant Director Operations, Civil Aviation Authority, No. 64, Galle Road, Colombo 3, Sri Lanka. Telephone: 94 11 2 441 523
08. Availability : A copy of this document is available for reference at the technical library of the Civil Aviation Authority. Copies can be collected at reproduction cost.
09. Applicability : Holders of Air Operator Certificate issued by DGCA for commercial air transport operation.
10. Comments : Comments (if any) on the contents of this Aviation Safety Notice may be forwarded to the contact person. However the Aviation Safety Notice will come into effect on the date shown therein notwithstanding any objection or comment made by any person or party unless and until an amendment to the Aviation Safety Notice is issued afresh by the Director General.

11. Notice : Requirements for Flight Operations to be satisfied by holders of Air Operator Certificates issued by DGCA for operation of aircraft for commercial purposes is specified in the Attachment hereto.
12. Action Required : For strict compliance by the holders of Air Operator Certificates for Commercial Air Transport Operation.
13. Checklist : Not applicable

H M C Nimalsiri,
Director General of Civil Aviation and
Chief Executive Officer

Civil Aviation Authority of Sri Lanka, No. 64, Supreme Building,
Galle Road, Colombo 03. Telephone: 94 11 2433213, Fax: 94 11 2440231 E-mail: caasl@sri.lanka.net

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COMMUNICATION AND COORDINATION BETWEEN FLIGHT AND CABIN CREWMEMBERS

1. PURPOSE

This ASN presents information on common problems associated with crew coordination between flight and cabin crewmembers as well as how these issues shall be avoided.

2. BACKGROUND

The purpose of the flight and cabin crewmember coordination research was to review difficulties that have arisen with crew communication and coordination, to determine the extent to which the current status of crew coordination could be improved, and to generate specific recommendations for training and Standard Operating Procedures (SOPs) to help ensure that flight and cabin crewmembers work together effectively.

4. DISCUSSION

In certain circumstances it is important for flight and cabin crewmembers to act as one cohesive crew, even though they are trained, scheduled, and generally regarded as two, independent crew. When it is necessary to act as one crew, the activities of the flight deck and cabin should be coordinated. One of the prerequisites for crew coordination is effective communication between all crewmembers. In a survey of pilot safety representatives and cabin crewmembers, only 37% of the cabin crewmembers and 60% of the pilots said that they thought that communication between the flight and cabin is adequate. The key to improving coordination between flight and cabin crew members lies not only in improving communication between crew members, but also in increasing the awareness of each others duties and concerns. 17% of the cabin crewmembers and 12% of the Pilots surveyed said that their training did not cover each other's duties during emergencies; 51% of the cabin crewmembers and 24% of the pilots said they did not cover each other's duties before takeoff and landing. During normal Operations, it is important that each crewmember be familiar with the duties of the other crewmembers at every stage of the flight so that they can be sensitive to the other's level of workload. Such knowledge helps to avoid miscommunication, unrealistic expectations, and inappropriate requests of other crewmembers. During emergencies, each crewmember should know exactly what to expect from the other crewmembers so they can work together effectively.

5. FLIGHTDECK-TO-CABIN COMMUNICATION

- a. **Takeoff and Landing.** It is vitally important that cabin crewmembers are given adequate time to prepare the cabin and themselves for takeoff and landing, especially since most accidents occur during these critical phases of flight. Even when cabin crewmembers are informed that takeoff is imminent, problems can





arise that result in cabin crewmembers not being properly seated for takeoff, particularly with unusually short taxi times. Similar problems arise when cabin crewmembers do not have adequate time to prepare the cabin for landing and take their crew seats. The potential for problems is heightened when meal or beverage service is offered on very short flights (30 minutes or less). The most effective remedy for these problems is to have a cabin crewmembers inform the captain, either by interphone or signal, that the cabin is secured for takeoff or landing. This procedure was regarded as important by 96% of the pilots and 91% of the cabin crewmembers surveyed.

- b. **Turbulence.** It is important that cabin crewmembers receive timely notification of turbulence from the flight crewmembers. Flight crewmembers generally warn cabin crewmembers of anticipated turbulence so that lack of such notice is not a common problem. However, it is one that can result in severe injury, particularly to cabin crewmembers, since the majority of the serious injuries that occur as a result of turbulence are incurred by cabin crewmembers. A member of the flight crew should inform the cabin crewmembers of anticipated turbulence prior to the flight, since notification en route may come too late to prevent injury. This is best accomplished by discussing en route weather in a flight /cabin crewmember preflight briefing. While air operators consider this practice to be standard operating procedure, **it is not always done**. Only 56% of the cabin crewmembers surveyed said that en route weather is typically covered in a captain/cabin crew briefing. (However, 84% of the pilots surveyed reported covering it.) During the flight, cabin crewmembers need to be informed of the immediacy and severity of unexpected turbulence so that they may determine whether to secure the cabin or to be seated immediately. On large turbojet airplanes, turbulence experienced in the flight deck may be much less than that experienced in the cabin. So, in some cases, cabin crewmembers should advise the flight crewmembers about the severity of turbulence so that the seatbelt sign can be illuminated.
- c. **Emergencies.** The most common examples of problems in communication during emergencies involve the flight crew members not informing the cabin crews of the nature of the emergency, the time available to prepare the cabin, and the necessary special instructions (e.g., to use only one side of the aircraft in the evacuation which is known as **NITS** briefing **N**- Nature, **I**- Intention, **T**- Time Available, **S**- Specific details). This problem has arisen several times, despite instructions in flight manuals to relay such information to the cabin crewmembers. The quality and timing of the information given to the cabin crewmembers is extremely important in an emergency. Communications from the flight crew should be clear, precise, and instructional. A vague description of the situation without specific instructions may be misinterpreted and result in valuable time being misspent. The timing of the information transfer is as important as the quality of the information.

For example, when an aircraft will be landing without a functional nose gear. The captain decides to prepare for an emergency evacuation and to move passengers to the rear of the airplane. The cabin crewmembers should be informed of the decision to move passengers at the same time that they are informed of the





emergency. They are then aware of all the conditions before they select and instruct passengers to assist them in the evacuation. Also, in any emergency or unusual situation, it is important that the cabin crewmembers be informed before the passengers, so that they have time to prepare.

6. CABIN-TO-FLIGHTDECK COMMUNICATIONS

Just as with flight -deck-to-cabin communications, the timing and quality of the cabin-to-flight-deck communications are critical. When cabin crewmembers convey information to the flight crewmembers, the information should be timely and specific. The most common problem with cabin-to-flight-deck communications can be divided into two categories: the failure of the cabin crewmembers to convey important safety-related information to the flight crewmembers and inappropriate requests for information by cabin crewmembers (i.e., breaking the "sterile flight- deck" rule for reasons unrelated to safety). Both of these types of communications problems are related to the "sterile flight-deck" issue. There are two major problems associated with cabin crewmembers observance of sterile cockpit procedures; sterile flight deck time and sterile flight-deck meaning.

- a. **Sterile flight-deck Time.** It is difficult for the cabin crewmembers to judge when sterile flight deck procedures are in effect. Cabin crewmembers have no way of knowing when the aircraft is at 10,000 feet or at the appropriate sterile flight deck altitude, unless they are told or signaled in the same way. Some air operators have advocated the 10-minute rule, i.e.; sterile flight deck procedures should be in effect for 10 minutes after takeoff and 10 minutes before landing. However, it is very difficult to estimate a time interval before an event.
- b. **Sterile Flight-Deck Meaning. "Sterile Flight Deck" procedures are defined in Flight Operations Safety Manual (Cabin Safety Manual)**

Many cabin crewmembers do not have a clear understanding of what "sterile flight deck" means. 80% of the pilots and 86% of the cabin crewmembers surveyed said this concept needs to be clarified for cabin crewmembers. That is, cabin crewmembers need to be given specific information about the purpose and meaning of the regulation and what type of information merits contacting flight crewmembers during the sterile period. There have been many instances of cabin crewmembers going into the flight deck to request passenger information (e.g., on connections) or for other reasons not related to safety when sterile flight-deck procedures were in effect. Such interruptions can distract flight crewmembers and have a detrimental effect on their performance. However, hesitancy or reluctance on the part of a cabin crewmember to contact the flight crewmembers with important safety information because of a misconception of the sterile flight deck rule is potentially even more serious than the unnecessary distraction caused by needless violations of the sterile flight deck. Cabin crewmembers have failed to communicate to flight crewmembers important information, for example; fire in a galley trash container, a loud noise with vibration, and changes in cabin pressure, for fear of violating sterile flight deck procedures. Cabin crewmembers should be aware that it is always important they report unusual noises and abnormal situations to flight crewmembers as soon as possible and be specific in their report.



7. EMERGENCY PROCEDURES

Training is widely regarded as the most effective means of improving crew coordination. Statements in manuals, without the appropriate training, may not lead to the proper response in an emergency. Training for good crew coordination should include instructing flight crewmembers and cabin crewmembers on each others emergency procedures, codes, signals, and safety-related duties. In an emergency, it is imperative that each crewmember interprets emergency signals and codes in the same way. For example, code words or signals for hijacking or evacuation are useless unless each crewmember is aware of their meaning. Furthermore, emergency procedures for flight and cabin crewmember should be compatible. For example, if cabin crewmembers are taught that a crewmember will occupy a cabin seat in preparation for a ditching in a certain aircraft, then flight crewmembers should be informed of this in their training. When manuals for flight and cabin crew members are written and revised independently, they should be cross-checked for consistency. Training administrators should ensure that the emergency procedures and other safety-related information presented to flight crewmembers is compatible with the information been presented to the cabin crewmembers. In any emergency, the cabin crewmembers should know the nature of the emergency, the time available to prepare the cabin, what the bracing signal will be, and if there are any special instructions. When possible, the flight crewmembers should be ready to give the cabin crewmembers this information in a timely manner. A well-orchestrated preparation for an emergency evacuation, or the handling of any other emergency, requires stressing the appropriate procedures in training for all crewmembers so that they act as a well-coordinated crew.

8. NORMAL OPERATIONS

- a. Coordination between flight crewmembers and cabin crewmembers during normal operations also requires appropriate training. Crewmembers should be instructed on each other's safety-related duties and workload during preflight, takeoff, cruise, and landing. Such training helps to avoid miscommunication, unrealistic expectations and inappropriate requests of other crewmembers. Additionally, training should stress the types and quality of information that one crewmember expects from another. This is best accomplished by either having flight and cabin crewmembers in classes together or by having the same instructors teach flight and cabin crewmembers. The training material may also be covered by a cabin crew instructor participating in flight crewmember training and a representative of the flight crew (e.g., instructor or check pilot) participating in cabin crewmember training. A videotape or slide presentation on each crewmember's duties can also be extremely effective, as well as cost effective, when presented by an instructor and discussed.
- b. Crew Resource Management (CRM) programs present an ideal opportunity to cover communication and crew coordination between flight crewmembers and cabin crewmembers during flight training. However, training for flight deck/cabin communication should not be limited to captains, as "Crew" Resource

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Management programs often are. First officers and crewmembers usually act as the communication link between the flight deck and the cabin.

- c. Cabin crew should receive special instruction regarding "sterile flight-deck" procedures so that they neither naively violate them nor hesitate to communicate relevant information to the flight crewmembers. They should be given a clear, operational definition of the regulation and instructed as to when, and with what information, to contact the flight crewmembers. Cabin crewmembers are typically instructed that they should not contact the flight crewmember with information unless it is "safety-related." This directive alone leaves much room for interpretation. While it would be impossible to describe the kinds of information that should be relayed to the flight crewmembers, perhaps it would be helpful to give a few examples in training. The quality of the decisions (as to whether or not to contact the flight crewmembers) made by the cabin crewmembers will be directly related to the information they received in training. The clearer the cabin crewmember's understanding of sterile flight-deck procedures and flight operations, the better these decisions will be.

9. PRACTICES AND PROCEDURES

There are many simple practices that can help to enhance the working relationship between flight and cabin crewmembers, which may be used to foster an atmosphere that is conducive to good communication. These practices include: respectful introductions, displays of common courtesy, announcements from the flight deck during delays to keep cabin crewmembers and passengers informed, and the captain being supportive of cabin crewmembers when problems arise in the cabin (e.g., a disorderly passenger). Perhaps the single most important procedure for setting the stage for good coordination between flight and cabin crewmembers on any flight is a through captain's preflight briefing.

- a. **Flight-Deck /Cabin Preflight Briefing.** A good flight deck/cabin preflight briefing gives the cabin crewmembers the names of the flight crewmembers, the in-flight weather, the estimated flight time, and any unusual circumstances expected during the flight. Other topics can also be covered such as flight deck entry procedures, a review of emergency communication procedures, details of the meal service, or any topic that any crewmember considers to be important. The briefing should allow crew members to solicit information from each other and, to bring to the attention of the other crewmembers any information that they believe to be relevant.
- b. **Other Recommended Practices.** Most of the recommended procedures are stated as company policy for many air operators. This indicates a need for these practices to be stressed during crewmember training as procedures to be followed on every flight. In addition to a flight deck/cabin preflight briefing, the following practices are highly recommended for optimizing crew coordination:

- (1) Warning from the flight crewmembers to the cabin crewmembers when the time between taxi and takeoff will be shorter than expected and when arrival





time will be sooner than expected to give the cabin crewmembers an indication of the time available to prepare the cabin for takeoff and landing;

- (2) Notification to the flight crewmembers from the cabin crewmembers when all pre-takeoff and pre-landing duties have been completed and the cabin is secured;
- (3) Pre-takeoff and pre-landing signals or announcements from the flight crew members to allow sufficient time for the cabin crewmembers to be seated;
- (4) Use of public address system to alert cabin crewmembers and passengers of anticipated in-flight turbulence;
- (5) Notification to cabin crewmembers when turbulence is severe enough to cease in-flight meal and beverage service and/or be seated with their restraints fastened, and when it is safe for them to resume their duties; and
- (6) Notification to cabin crewmembers when "sterile flight deck" procedures are in effect. For example, an indicator light above the flight deck doors or on the annunciator panel that is illuminated during the sterile flight deck interval, or an audible tone (as long as it cannot be confused with another signal).

10. ACTION

Air Operators are now required by the DGCA to implement the information contained in this ASN as relevant procedure, in training of both Flight Deck and Cabin Crew Members.



CN/TLB/40-0065