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Communication from the Cabin Crew To the Cockpit Crew

Communication by cabin crew with the cockpit can involve difficult decisions for the cabin crew because of the requirements imposed by the so-called "Critical 11 Minutes."

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by

The Editors of Japan Air Lines' Flight Safety Magazine

Within Japan Air Lines the "Critical 11 Minutes" refers to the three minutes after takeoff and the eight minutes before landing when the cabin crew is prohibited from attempting to communicate with the cockpit except on matters critical to the safety of the flight and passengers, and the cockpit crew is required to refrain from any activity not associated with the control of the aircraft. This practice stems from the fact that 80 percent of accidents involving commercial aircraft occur within these two periods, when an aircraft is most vulnerable to many dangers.

There is no specific announcement made to inform the crew of these periods, but the three-minute takeoff period is normally considered to extend until the "no smoking" sign is turned off, and the point where the aircraft descends through 10,000 feet is accepted as the beginning of the eight-minute period that continues until the aircraft lands.

Cabin crews appear to have a good grasp of when these restrictions are in effect. Yet, numerous accident reports indicate some of them may not be aware of what constitutes sufficient justification for communicating with the cockpit during critical periods.

"Essential Communication" Does Not Stop — Even During the Critical 11 Minutes

The operations manual states, as examples of "essential communication," that the cabin crew have the responsibility of immediately communicating to the captain the existence of any situation which may lead to the necessity of carrying out an emergency evacuation of the aircraft, including:

- any outbreak of fire
- the presence of smoke in the cabin
- any abnormality in the attitude of the aircraft during takeoff or landing
- the existence of any abnormal noise or vibration, and
- the observation of any fuel or other leakages.

In a 1987 Japan Air Lines (JAL) Retraining Program, which focused on the subject of coordination between cockpit and cabin crew, many cabin crew members expressed uncertainty about what should be communicated to the cockpit, and when. There were many and varied points raised during this training but the following summarizes the consensus that was reached on how cabin crew members should be directed to communicate with the cockpit.

WHEN: Cabin Crew Are to Make an Immediate Emergency Call Upon Discovery of Any Abnormality

The chime sounded in the cockpit alerts the captain to the existence of an emergency.

During the takeoff run, the interphone cannot be answered, but make repeated efforts to get through if necessary.

It is difficult for the cabin crew to assess the best timing for such a call, so they should attempt to make contact whenever they discover an abnormality.

WHAT: Even in Circumstances Where You are Not Absolutely Sure, Make the Call

The information you provide will assist the captain in assessing the situation.

Whenever you feel that something is not normal, communicate with the cockpit. Information regarding any abnormality with the aircraft is vital.

HOW: Use the Pilot Call For Emergency Communication

Upon discovery of any abnormality, establish contact with the cockpit quickly by using the Pilot Call and clearly explaining the nature of the problem.

Use of the All Call will involve too many people at one time, making the smooth relaying of information much more difficult.

Poor Timing and Content Mar Communication

An example of what can happen if a hazardous situation is not communicated immediately and in full detail is provided by the instance of a cabin fire in the rear lavatory which occurred aboard an Air Canada DC-9 in June 1986. In this incident, four minutes were wasted between the initial report of the fire being made to the captain and the commencement of the emergency descent.

The stewardess who discovered the fire first made an attempt to extinguish it but, because of the large volume of smoke, she closed the door without locating the source of the fire and requested another stewardess make a report to the purser. The second stewardess was able only to report that a fire had been discovered in the lavatory and the purser's report to the captain thus contained no details regarding the extent of the flames and smoke or the exact origin of the fire. This lack of detail was compounded by the captain apparently making no effort to elicit the extent of the problem.

Because of the delay, the captain passed up an opportunity to make an immediate emergency landing at an airport closer than the one where the aircraft finally landed. There were 23 fatalities among the 46 occupants.

This incident illustrates that, just as with communication from the cockpit, information directed to the cockpit must not only be timely but must contain sufficient detail for an accurate assessment of the situation.

Unfortunately, as the following incident illustrates, we are not always quick to learn from the mistakes of the past.

128 Seconds From Landing to Evacuation

A DC-9 was just into its descent toward its destination airport when one of the passengers noticed smoke issuing from the seam where the side-wall and floor meet.

He informed a flight attendant, and, after visually checking the situation, she used the interphone at the rear station to notify the cockpit what was occurring and that

the source of the smoke could not be determined. At the same time, she directed one of the other flight attendants to commence fire-fighting activity.

This second flight attendant assumed that a cigarette had fallen on the floor and she discharged a water-based extinguisher in the area while the forward duty flight attendant removed seat cushions in a vain attempt to locate the source of the fire.

A dead-heading cockpit crew member, who had been alerted by one of the flight attendants, noted that the floor in the area had become hot and distorted. He ordered a flight attendant to inform the cockpit that an emergency landing was advisable.

Soon after, the dead-heading crew member used the interphone in an attempt to advise the cockpit crew about the condition of the floor and to recommend that they arrange for fire-fighting equipment to be ready to meet the aircraft when it landed. However, apparently because he was not aware of the correct method of operation for the handset, he was unable to make the first officer understand clearly what he was saying.

Based on the garbled report received from the dead-heading crew member and the call from the flight attendant, the first officer recommended to the captain that he declare an emergency and land as soon as possible. The captain, meanwhile, recalled that the aircraft had had a problem with the APU on the previous leg and assumed that this was the cause of the smoke and decided to make a normal landing.

The landing was accomplished approximately 10 minutes after the smoke had been reported. At this point the dead-heading crew member was finally able to inform the cockpit clearly that the situation in the cabin posed a danger to the safety of the occupants and recommended an emergency evacuation. The evacuation commenced two minutes and eight seconds after the landing.

Fortunately, this incident was concluded with no casualties.

The committee investigating this incident identified the cause of the fire as improper wrapping that led to the development of a chemical reaction in a package. It recommended that the shipper review the method of wrapping and that the airline strengthen its checks of such materials when accepting them for carriage.

The report also pointed out weaknesses in the communication process between the cockpit and cabin crews, cit-

ing the cockpit crew for playing down the importance of what they were told by the cabin crew, and the cabin crew for failing to make clear to the cockpit crew the seriousness of the situation. Also included in the report was a recommendation that joint training for cockpit and cabin crews be investigated as a way of overcoming such problems.

Ensuring a sufficient level of communication between cockpit and cabin crews is a precondition for good crew coordination. Our attention should be directed toward determining how this can be achieved.

Use Every Opportunity To Gain An Understanding of Each Others' Working Situation

The cabin crew should understand the stresses faced by the cockpit crew in accomplishing a landing or takeoff, and the cockpit crew should know what the cabin crew has to accomplish at these times. An awareness beforehand what can be expected of the other group, and what it needs to know in an emergency situation, contributes to an informed decision in an emergency.

To know each of our colleagues on an individual basis has become virtually impossible due to the great number of crew members. We must think in terms of possessing an understanding of their respective jobs and their specific tasks to serve as a basis for communication. The individuals we work with on each flight may change, but their functions will remain the same, so it is only natural that smooth communication should be based upon this unchanging element.

Cockpit crew members have the opportunity of observing the content and flow of cabin crew duties when they fly as dead-head crew. They also have the opportunity of practicing emergency procedures together with cabin crew during regular emergency training sessions. Cockpit crew members have an informed idea of what preparations have to be made and how long these can be expected to take in an emergency. On the other hand, the cabin crew has only a partial acquaintance with the flow of work handled by the flight deck crew.

To provide a better basis for communication between the two crews, some airlines include cockpit observation as part of their training for cabin crews. CRM training (Cockpit Resource Management) for cockpit crews is being studied with the idea of including the cabin crew as one more factor to be included.

JAL is studying the idea of giving each cabin crew trainee an opportunity to observe cockpit crew duties from pre-

flight briefing through the parking check at the conclusion of the flight.

Our operations manual already provides for the cabin crew to increase their knowledge of all aspects of flying by requesting admission to the cockpit and observing the work performed there. Consideration is being given to allowing cabin crew members to observe cockpit procedures when flying dead-head trips.

Briefing With Cockpit Crew Sets Stage for Good Communication

Just as cabin crews use their service briefing to confirm the points that will make their service to passengers timely and efficient, the briefing they have together with the cockpit crew is the time at which confirmation is made of the established ways in which they will work together to promote the safety and security of the flight and passengers. In any emergency, both the cockpit and cabin crews, acting with the procedures they have confirmed together, will be able to provide the maximum professional efficiency.

But do we, as cabin crew, make full use of the opportunity represented by the briefing with the cockpit crew? The usual elements of introducing ourselves to each other and confirming such basic information as the flight time and so on are all necessary, but can we make more effort to address specifics regarding the handling of issues such

as the Critical 11 Minutes, cabin fire, hijacking, and other non-routine subjects?

One Result of Good Communications

What happens when good communication practices are followed? Here is one instance of how good crew coordination was achieved in a difficult situation.

A JAL flight was beginning its descent toward Narita after a flight from New York, when a fire broke out in the right rear coatroom.

Two cabin crew members began fighting the fire and a third informed the purser who informed the cockpit crew. The captain immediately declared an emergency and sent the off-duty flight engineer to assist the cabin crew. The fire was quickly extinguished, passengers relocated away from the fumes, and the landing was made without further incident. There were no injuries, and the passengers were deplaned normally at the terminal.

The crew displayed good coordination in fighting the fire and in preventing panic among the passengers as the crew worked together to control a potentially life-threatening situation. They were later commended by the ministry of transportation.

Communication is the key to creating good crew coordination and it is made obvious by examples such as this. ♦

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