



FLIGHT SAFETY FOUNDATION CABIN CREW SAFETY

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For Everyone Concerned with the Safety of Flight

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Special ASRS Reporting Form Designed for Cabin Crew

Cabin crew reporting of safety-related incidents to the U.S. National Aeronautics and Space Administration Aviation Safety Reporting System has remained infrequent. Nevertheless, cabin crew reports are a valuable part of the program, and the new form is intended to be more appropriate and convenient.

FSF Editorial Staff

Aviation safety incidents in which witnesses are able to report what they observed can provide valuable information about the conditions leading to the incident. To this end, the Aviation Safety Reporting System (ASRS) was created in 1976 by the U.S. Federal Aviation Administration (FAA) in cooperation with the U.S. National Aeronautics and Space Administration (NASA). Although the ASRS solicits incident reports from any aviation-professional source — including cabin crew — the reports submitted by cabin crew members or referring to cabin crew members represented less than 1 percent of all ASRS reports submitted between 1986 and 1994.¹

Since the inception of ASRS, more than 320,000 incident reports have been submitted. Table 1 (page 2) shows the yearly numbers of reports received from cabin crew, the yearly numbers of reports that referred to cabin crew and the yearly total numbers of ASRS reports, from 1988 through 1996.¹ The number of reports that *refer* to the cabin crew increased by nearly 300 percent between 1988 and 1996, but the number of reports submitted *by* cabin crew members has shown no corresponding increase.

It appears that lack of awareness is one reason for the low number of ASRS report submissions by cabin crew members.



In a study conducted in 1993, more than 90 percent of the cabin crew members sampled had never heard of the ASRS.² The reporting medium has been another probable reason for the low number of submissions. The form used for reporting aviation safety incidents contained items related to specialized flight and technical information that cabin crew members might not be aware of as a result of performing their normal duties.¹

To encourage ASRS reporting by cabin crew members, a special reporting form was created for them. Developed by a team of government and industry representatives, the new form centers on issues that are specific to aircraft cabin safety. After it was drafted, the proposed form was submitted to four flight attendant unions and five airlines for their comments. These comments were incorporated into the finished product, NASA ARC 277C. Figure 1 (page 3) shows the front page of the form; the reverse side includes a large blank area for a description of the incident in the reporter's own words ("the narrative").

There are now four forms in the NASA ARC 277 series for reporting aviation safety incidents. Form ARC 277A is for air traffic controller use; ARC 277B is for general use, including pilots; ARC 277C is for cabin crew; and ARC 277D is for use by maintenance personnel.

Table 1
Cabin Crew Incidents as a Percentage of Total Number of Full-form Aviation Safety Reporting System (ASRS) Reports, January 1988–December 1996

	1988	1989	1990	1991	1992	1993	1994	1995	1996
Reports from Cabin Crew	9	6	5	7	3	9	4	10	23
Reports Referencing Cabin Crew Involvement	55	74	102	113	129	183	216	231	205
Total Database Full-form Incident Reports	4,302	6,748	7,832	7,040	6,598	6,860	6,769	9,130	8,038

Data references ASRS reports that have received full-form analysis and include reporter narratives.

Source: U.S. National Aeronautics and Space Administration Aviation Safety Reporting System

The purpose of the ASRS is to receive, process and analyze reports of aviation incidents voluntarily submitted by participants or observers. The information is maintained in an active database for use in research, especially of the human factors involved in aviation safety, and evaluation.

[Editorial note: Report forms may be obtained from the FAA or from NASA ASRS at P.O. Box 189, Moffett Field, California 94053 U.S. The form may also be downloaded from the ASRS site on the Internet World Wide Web at <http://www.afo.arc.nasa.gov/ASRS/ASRS.html>.]

FAA Advisory Circular (AC) No. 00-46D describes the ASRS: “This cooperative safety reporting program invites pilots, controllers, flight attendants, maintenance personnel and other users of the National Airspace System (NAS) ... to report to NASA actual or potential discrepancies and deficiencies involving the safety of aviation operations.”³

The FAA determined that the ASRS’s effectiveness would be enhanced if the receipt, processing and analysis of raw data were conducted by NASA rather than by the FAA. The person reporting the incident and others involved in the reported occurrence would thus remain unknown to the FAA.

The operations covered by the ASRS program embrace all aspects of aviation, including departure, en route, approach, landing, air traffic control, communications between aircraft and air traffic control personnel, aircraft cabin operations, aircraft movement on the ground, near-midair collisions, maintenance and record keeping, and airport condition and services.

The incident report is designed to protect the identity of the reporter. Except for reports involving accidents or crimes, the top of the form — the identification (ID) strip — is removed, time-stamped and returned to the sender. This action removes the sender’s identity from the report, provides proof that the report was submitted and acts as a receipt. During the 20 years of ASRS operation, the confidentiality of a reporter has never been violated.¹

If the incident report involves an accident or a criminal offense, the report will be referred intact (ID strip attached) to the FAA and to the U.S. National Transportation Board (NTSB) or the U.S. Justice Department, respectively.

To further encourage participation, the FAA has agreed to provide immunity from disciplinary action to any reporter filing an ASRS report in the event of a violation of a regulation. The conditions for such immunity are that:

- “1. The violation was inadvertent and not deliberate;
- “2. The violation did not involve a criminal offense, or accident, or action under 49 U.S.C. [Title 49, United States Code, the source of the FAA Administrator’s authority] ... which discloses a lack of qualification or competency, which is wholly excluded from this policy;
- “3. The person has not been found in any prior FAA enforcement action to have committed a violation of 49 U.S.C. ... , or any regulation promulgated there for a period of five years prior to the date of the occurrence; and,
- “4. The person proves that, within 10 days after the violation, he or she completed and delivered or mailed a written report of the incident or occurrence to NASA under ASRS.”³

In a paper delivered at the 13th Annual International Aircraft Cabin Safety Symposium, Linda J. Connell, research scientist, and William D. Reynard, ASRS director, said, “One of the primary reasons the ASRS exists is to identify and constructively address safety issues in a timely way. The immunity provisions, although a strong motivation for submission, are not the sole reason for reporting to ASRS. Even if an event or incident is not a violation or does not qualify for immunity provisions, it still may contain information of safety value to crew members, operators, regulators and researchers.”¹

ASRS Form NASA ARC 277C for Incident Reports from Flight Attendants (Page 1 of 2)

IDENTIFICATION STRIP: Please fill in all blanks to ensure return of strip. NO RECORD WILL BE KEPT OF YOUR IDENTITY.
This section will be returned to you.

(SPACE BELOW RESERVED FOR ASRS DATE/TIME STAMP)

TELEPHONE NUMBERS where we may reach you for further details of this occurrence:

HOME Area ____ No. ____ - ____ Hours ____

ALTERNATE Area ____ No. ____ - ____ Hours ____

NAME _____ **TYPE OF EVENT/SITUATION** _____

ADDRESS/PO BOX _____ **DATE OF OCCURRENCE** _____

CITY _____ **STATE** _____ **ZIP** _____ **LOCAL TIME (24 hr. clock)** _____

**DO NOT REPORT AIRCRAFT ACCIDENTS AND CRIMINAL ACTIVITIES ON THIS FORM --
ACCIDENTS AND CRIMINAL ACTIVITIES ARE NOT INCLUDED IN THE ASRS PROGRAM AND SHOULD NOT BE SUBMITTED TO NASA.
ALL IDENTITIES CONTAINED IN THIS REPORT WILL BE REMOVED TO ASSURE COMPLETE REPORTER ANONYMITY.**

PLEASE FILL IN APPROPRIATE SPACES AND CHECK ALL ITEMS WHICH APPLY TO THIS EVENT OR SITUATION

REPORTER

EXPERIENCE

- Flight Attendant (FA) Trainee
- FA in charge Off-Duty FA
- Extra FA
- Other _____

Total years as Flight Attendant _____
 Total years as FA with your current airline _____
 Number of aircraft types currently qualified to work on _____
 Percent of duty time in past year on aircraft type involved _____

FLIGHT INFORMATION

Type of Aircraft (Make/Model) _____
 number of seats _____ number of pax on board _____ number in cabin crew _____
 number of exits: floor level _____ window _____ tailcone _____

Flight Segment flight origin _____ destination _____ departure time _____
 time since takeoff _____ hrs/mins nearest city/state (if known) _____

Cabin Activity (check all that apply)

- boarding beverage service cart service movie
- deplaning meal service tray service other _____
- safety related duties, specify _____

OPERATOR

FLIGHT PHASE

WEATHER

LIGHTING

- air carrier
- commuter
- corporate
- charter
- other _____

- predeparture descent
- taxi approach
- takeoff landing
- climb gate arrival
- cruise other _____

- clear cloudy
- rain fog
- turbulence snow
- thunderstorms ice
- unknown

- | | |
|------------------------------|--------------------------------|
| <u>CABIN</u> | <u>OUTSIDE</u> |
| <input type="radio"/> bright | <input type="radio"/> daylight |
| <input type="radio"/> medium | <input type="radio"/> night |
| <input type="radio"/> dark | |

EVENT CHARACTERISTICS

Reporter's location in aircraft at time of event _____
 Reporter's activity at time of event _____

Was a passenger directly involved in the event? <input type="radio"/> Yes <input type="radio"/> No	Was fire/smoke involved in the event? <input type="radio"/> Yes <input type="radio"/> No
Did this event result in an injury? to passenger? <input type="radio"/> Yes <input type="radio"/> No to crew? <input type="radio"/> Yes <input type="radio"/> No	Was there an evacuation during or as a result of this event? <input type="radio"/> Yes <input type="radio"/> No

Figure 1

When an incident occurs, the reporter uses the appropriate ASRS form to provide a summary of the incident. The form includes information about the type of aircraft, type of operation, qualifications of the reporter, the weather and other pertinent data.

Connell and Reynard said, “The most vivid detail of the incident event, however, is provided in the narrative section of the report where the reporter recounts the actual events preceding, during and following the incident. This combination of information is the single largest advantage. ... The reporters involved in the event are able to relate the conditions surrounding the incident, but they are also able to relate how they detected and resolved the problem.

“Although small compared to other reporters, the cabin sets of incident reports remain valuable. ... Each incident alone is instructive when gathering information concerning [flight] safety. A collection of several incidents, often with common characteristics, [is] also illustrative of safety issues.”

Three examples of reports submitted to the ASRS by cabin crew members are included in “Incident Reports Submitted to ASRS by Cabin Crew Members” (page 5).

(The ASRS emphasizes that its database cannot be used to ascertain the rate of any type of incident reported. It has issued a memorandum that says, in part: “ASRS reports are submitted voluntarily. The existence in the ASRS database of reports

concerning a specific topic cannot ... be used to infer the prevalence of that problem within the [NAS].

(“Reports submitted to ASRS may be amplified by further contact with the individual who submitted them, but the information provided by the reporter is not investigated further. Such information may or may not be correct in any or all respects. At best, it represents the perception of a specific individual who may or may not understand all of the factors involved in a given issue or event.”⁴)

Each ASRS report submitted to NASA is analyzed by a team of retired pilots, air traffic controllers, cabin crews and other persons with knowledge and experience in the area concerned. The ASRS analysts categorize each report on the basis of the incident’s underlying cause. The categories are:

- Nonadherence to U.S. Federal Aviation Regulations (FARs);
- Nonadherence to published procedure;
- Aircraft equipment problem — critical;
- Aircraft equipment problem — less severe; and,
- Emergency.¹

Figure 2 shows that the largest number of reports during a recent eight-year period concerned nonadherence to FARs, representing 37 percent of the total number of reports. Second

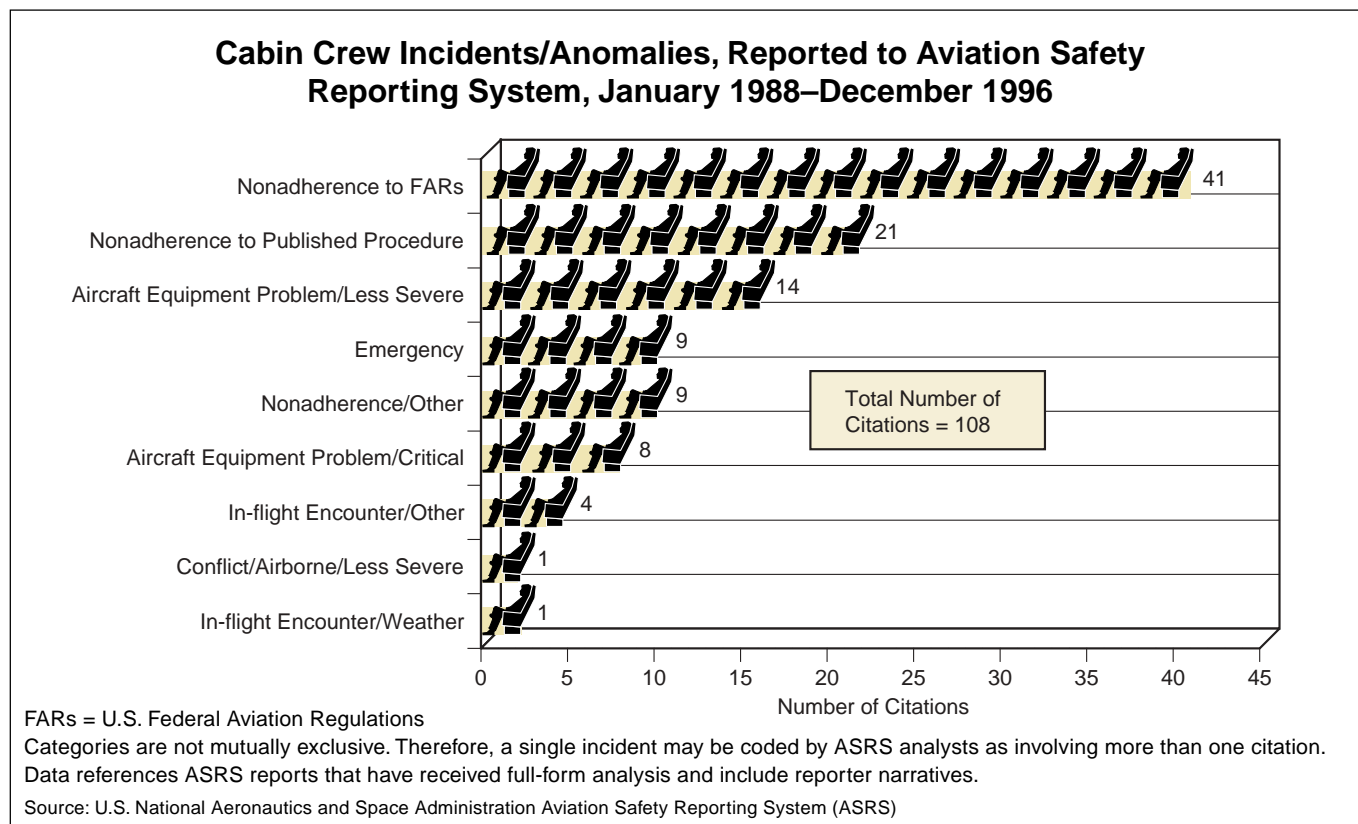


Figure 2

Incident Reports Submitted to ASRS by Cabin Crew Members

The following three excerpts represent the narrative portions of incident reports submitted by cabin crew members to the U.S. National Aeronautics and Space Administration (NASA) Aviation Safety Reporting System (ASRS).

"I discovered the Halon extinguisher was pinned behind seat 12B during my preflight check of this ATR-42. This aircraft had already flown a few legs since cabin maintenance was informed several days prior to my schedule. Cockpit crew informed me that maintenance crew would move seat forward to remedy problem. Seat was moved and we departed close to schedule time. I was told that when cabin was maintained and carpet was replaced, ... the passenger seats were reinstalled improperly, and this created a problem. My concerns are: (1) This plane flew with Halon that couldn't be available. (2) How many other planes (that had similar maintenance) have the same problem? (3) Why are the seats reinstalled improperly? (4) Why aren't the flight attendants checking their equipment? I feel as a flight attendant that our company puts a lot of pressure on 'on-time performance' and service. Cash incentives are offered for this 'on-time' thing. It is important, however, safety must be first. We also lose pay if we do not fly in the event a plane needs maintenance that is not scheduled. All crew members know this. Furthermore, it is a financial sacrifice on our part when we make reports of this nature, as we may lose the 'turn.' The company's priorities are all wrong when it comes to safety."

* * * *

"The problem was primarily due to attitudes of captain on this trip. It was a two-day trip, same crew both days, two crew in cockpit and three in cabin. The captain made some decisions and took some actions that we (the rest of the crew) felt compromised safety. It was an adversarial situation and it was obvious this put undue strain on the first officer also, which could be a safety problem. The captain set this adversarial tone in his preflight briefing to the cabin crew. Most of it was to set up his rules for us, such as requiring us to knock on the door prior to entering the cockpit just in case they were reading the paper or something, so they could put it aside and passengers would not see them reading during the flight. ... Apparently this captain had got a passenger complaint about this at some time.

"When we were departing from LGA [New York (New York, U.S.) LaGuardia Airport], there was a long line of aircraft waiting to depart (had some bad weather in the area). During boarding, the captain had made a PA [public address] announcement that if folks needed to use the lavatories, now was a good time. This annoyed the cabin crew as we needed to complete boarding as soon as possible, we were already delayed due to our late arrival

was nonadherence to published procedure, representing 19 percent. Connell and Reynard said, "These incidents ... are an example of how even a professional, well-trained person can find [himself or herself] in a nonadherence type of situation. These type[s] of reports can be very instructive about the compatibility of a FAR or published procedure and the human's ability to comply"

In addition to other evaluations of the data, each report is categorized by the aviation environment in which it occurred: commercial air carriers, general aviation, air controllers, military and other. Reports involving commercial air carriers and general aviation comprise some 95 percent of the total. Reports from air controllers and the military are a small fraction; the "other" category, which includes cabin crew members, accounts for about four percent of the total reports submitted.

In addition to gathering and analyzing data, the ASRS is committed to distributing pertinent safety information to the aviation community. Information is provided in several formats, including two publications. "One of these products," Connell and Reynard said, "is the ... 'NASA blue sheet' titled *Callback*. This publication, produced monthly since 1979, provides a quick review of many timely issues that have been submitted through incident reporting.

"A more recent [quarterly] publication, *Directline*, is a now being produced for the aviation management and training audience. Its articles are longer papers usually involving the presentation of several incident reports on the same subject, with interpretative commentary by ASRS analysts and research consultants."

ASRS also has several options available to alert the aviation community to specific dangers, such as a defective navigation aid, an incorrect chart, a confusing procedure or other circumstance that could compromise safety.

When ASRS receives an incident report describing a hazardous situation, it can use any or all of three alerting media. An *Alert Bulletin* is issued when the incident is a well-documented safety problem involving a serious safety concern. To disseminate information about a less serious safety issue, a *For Your Information Notice* can be published. The third medium is FAA Telecons/Safety Communications, which comprise communications between ASRS and the FAA's Office of Aviation Safety (OAS). Telecons are biweekly telephone conversations with during which five or six high-priority safety items are discussed. Safety Communications deal with a single issue of high priority.

The medium used depends on the severity of the safety problem, which is determined by a team of ASRS analysts. These alert communications are deidentified and sent to persons in positions of authority so that they can investigate the problem and take needed corrective action.

at LGA. We were out on a taxiway in line, and out of the blue the captain made another PA that we'd be sitting there 20–25 minutes, and if passengers wished, they could use the lavatories. The cabin crew were surprised, as we had never seen this done. We would have thought that passengers are required to remain seated with seat belts on during this time. We were on a taxiway and we felt it doesn't matter if the plane was in motion right at the moment (i.e., not OK to get up if we hold short for traffic before we can cross a runway. We also felt this gives passengers the idea that it's OK to get up when we're not at the gate on future flights.) Believe me, we have enough trouble with that anyway ... !

"Also, several passengers went to the galley for a cup of water, etc. This forced us to get out of our jumpseats for non-safety-related tasks, and also necessitated an extra aisle check, and we already [were] in our seats prior to this. After about seven minutes, the captain notified us we had to move the plane, so we had to rush these people and try to get them seated. This took several minutes, and may have caused problems for ground control or planes behind us. The captain got very impatient and acted as though it was our fault for not rushing these passengers faster, but it was his idea to let them up in the first place! Had he discussed it with the FO [first officer] or told us before he did it, any of us would've felt comfortable telling him it was a bad idea. Accidents could happen on a taxiway, too!

"Also there was a disagreement in the cockpit, which came up in conversation during our layover, when the FO asked us to clarify the meaning of the signal we are taught to release us from our jumpseat. We all concurred that our training is that when we get that signal, it means that it is safe to get up from our jumpseats. The FO then told us [that] during a climbout checklist ... the captain was going to release us, but the FO refused to, due to upcoming turbulence. The FO had pointed out that the cabin crew would take it to mean it was safe to begin service, and the captain responded that the cabin crew should figure out whether it was safe on our own. The FO had countered that the cabin crew does not have access to detailed weather information, or even have a forward-facing window to look out of, and so we must rely on the pilots to determine if it's safe.

"This same captain will berate us for asking how much time we have to complete our cabin service, which he felt we should figure out based on departure time and proposed flight time. The FO felt that it is a legitimate question, and we need to know for safety reasons if we should modify our service. We ask because it is very common that we arrive earlier or later than scheduled. Fortunately this is the one glaring example of safety concerns and truly poor CRM [crew resource management] I have seen at my airline."

* * * *

"We were flying the ATR-42, a 46-seat aircraft manned by a crew of three. I had a new-hire flight attendant with me doing her initial operating experience. She was getting the cart set up to serve and I sat down in a passenger seat to get her paperwork done. We were approximately 10–15 minutes into our flight and I hear a chime that I assumed was the crew's signal that they were no longer in sterile cockpit. I was unaware that this was actually a call from the cockpit because this is the same chime you hear when the sterile cockpit light or seat belt sign is turned off.

"The training flight attendant [new hire] answered the call. About one minute later the training flight attendant came and whispered in my ear that the cockpit called and said that we are going back to ORD [Chicago (Illinois, U.S.) O'Hare International Airport]. We lost hydraulic pressure, but not to worry because the backup system was working and we did not have to prepare for an emergency. She told me that [the cockpit crew] was going to call back in five minutes with more information.

"The first thing that I started thinking was how I was going to put this to the passengers. I did not even consider what happens to the aircraft when you lose the hydraulics, the backup system would only provide the minimum control needed to get the aircraft on the ground. I was also unaware that once we got on the ground and stopped we could not go any further. I made a PA to the passengers stating the problem, that there was no need to be alarmed and gave them the prepare-to-land instructions.

"I told the training flight attendant to secure the cart and galley while I ensure the cabin is secure and the passengers are not panicking. While we were busy doing this, the captain made a PA to the passengers. He told them about the problem, it should be a normal landing and that once we stopped on the runway we could not move the aircraft any further. He told them that they would be sent by bus back to the terminal and then asked us to prepare for landing. I made one final check of the cabin and I sat down for landing. The training flight attendant took her seat in the back by me. When we landed the emergency equipment was waiting for us. I guess that the crew must have declared an emergency. This looks bad to the passengers when we tell them that everything is OK and it is not an emergency, but yet when we land all the emergency equipment is waiting for us. I also felt as though the crew was not being straight with us, however, I really can't say since the training flight attendant is the one who took the information from them. Granted, everything came off without a hitch.

"I saw some serious problems with this situation. I never knew that the cockpit was making an emergency or perhaps we should say urgent call, because there is no special signal or emergency call light. I should have never just assumed it was the sterile cockpit signal. I should have made a visual check of the cabin to distinguish the

source of the chime. The cockpit should have relayed the information about the problem to me, not the training flight attendant. She may not have relayed the information to me correctly. I feel that if they were talking to me I would have had a better idea about how to prepare. I was really unclear as to whether or not this was an emergency ... It has been my experience that oftentimes the crew will minimize the seriousness of a problem. They may be trying to save us the trouble of preparing for an emergency or whatever, I don't know. I do know that when you have a serious mechanical problem such as loss of hydraulic pressure, there is potential for a more serious problem to manifest. If we knew how serious it could become, at least we could be prepared for the worst. Holding back on the facts is not going to help us any if what appears to be a not-so-serious problem turns into an accident.

"I should have gotten my emergency checklist out because there was a possibility that the situation could have become more serious. I should have made the training flight attendant sit in the forward emergency-exit row. I also should have checked with the passengers who were seated there to make sure that they knew how to open the exits. I feel that a better understanding of the aircraft systems would have been a great benefit to me. I would have had a better idea about how serious the problem was and what to expect if something was to go wrong. For instance, one thing that could happen is once we got on the ground we might not have been able to stop." ♦

Source: U.S. National Aeronautics and Space Administration Aviation Safety Reporting System

For example, a recent Telecon was based on the standard instrument departure (SID) from a major airport in the U.S. northeast. This SID had been the subject of several ASRS reports from pilots, who considered it unsafe. After a discussion between the ASRS and the OAS, the departure procedure was changed.⁵

The ASRS database is in the public domain and may be searched at no cost via the World Wide Web at <http://www.afo.arc.nasa.gov/ASRS/ASRS.html>. The ASRS also responds quickly to requests from the FAA, the NTSB, the U.S. Department of Defense (DOD) and other agencies for an in-depth analysis of a particular aviation safety subject or problem based on ASRS's extensive safety database.

For example, ASRS drew on its database to fulfill a DOD request for information on runway excursions. The details provided by ASRS included such information as the type of aircraft involved, length of runway, nature of runway surface, experience of the flight crew, weather and runway conditions at the time of the excursion and other data.⁵

Connell and Reynard reported that, at the time of their presentation, Jan. 29, 1996, there were about 125 incidents in the NASA/ASRS database that had been submitted by cabin crew members. They said that the information provided by safety incident reporting "is crucial to support on-going airline, industry and government activities and research. Summaries, research projects, and data searches of these reports will be instructive for education, training, and accident-prevention efforts.

"The bottom line [of incident reporting] is saving lives. The aircraft cabin is where the majority of these lives reside, the passenger[s]."

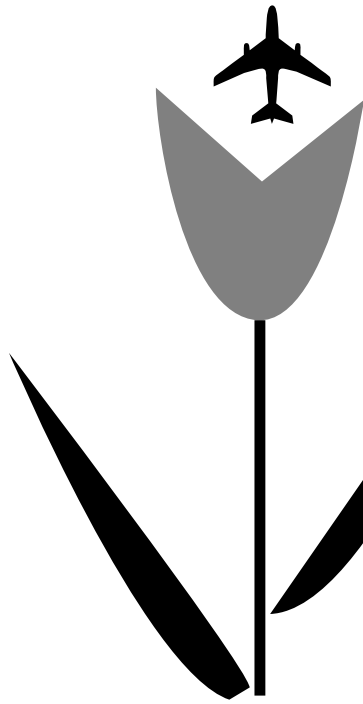
Increased reporting of safety incidents by cabin crew members is a vital means of enhancing the value of the ASRS database and improving aviation safety, and cabin crew members now have a form designed with their reporting needs in mind. ♦

References

1. Connell, L.J.; Reynard, D. "Aviation Safety Incident Reporting: the NASA Aviation Safety Reporting System." In *Proceedings of the 13th Annual International Aircraft Cabin Safety Symposium*. Torrance, California, U.S.: Southern California Safety Institute, 1996.
2. Chute, R.D.; Wiener, E.L. "Cockpit/Cabin Communication: a Tale of Two Cultures." In *Proceedings of the 11th Annual International Aircraft Cabin Safety Symposium and Technical Conference*. Torrance, California, U.S.: Southern California Safety Institute, 1994.
3. *Aviation Safety Reporting Program*, U.S. Federal Aviation Administration (FAA) Advisory Circular No. 00-46D. Feb. 26, 1997.
4. Memorandum from Linda J. Connell, acting director, U.S. National Aeronautics and Space Administration (NASA) Aviation Safety Reporting System. No date.
5. Lofton, Todd. Telephone interview with Vincent Mallone, NASA Ames Research Center. Oct. 23, 1997.

Further Reading from FSF Publications

U.S. National Academy of Public Administration. "A Review of the Aviation Safety Reporting System." *Flight Safety Digest* Volume 13 (November 1994).



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CABIN CREW SAFETY

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