

## **Right Word Is Crucial in Air Control**

LEAD January 29, 1990: The investigation into the crash of Avianca Airlines Flight 52 points up the critical role played by communications between airline crews and air-traffic controllers, as well as among the controllers themselves, in guiding jetliners to safe landings.

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In the harried world of air-traffic control, protocol takes on life- and-death significance and even a word or two can mean the difference between a safe landing and disaster.

For example, the captain of Avianca Airlines Flight 52 told controllers that he was concerned about his dwindling fuel supply as the jetliner circled in holding patterns that totaled nearly 90 minutes. But he never uttered the words "fuel emergency" - words that would have obligated controllers to direct the jet ahead of other planes and clear it to land as soon as possible.

Investigators are also examining whether controllers at the New York regional air-traffic center had reported the Avianca jet's critical situation to controllers who guide planes to landing at New York area airports. Such transfers are normally made automatically through a computer network, but controllers can also pass information to one another over phone and radio links. 'Rules Go Out the Window'

Under United States aviation rules, unless the captain formally declares an emergency, controllers have few options.

"It's the captain's job to fly the airplane," said Fred Farrar, a spokesman for the Federal Aviation Administration. "It's not the controllers' job to make judgments for him." But pilots said that in many foreign countries and on American military flights, controllers play a more active role.

"The pilot has to tell us whether he's low on fuel or we'll hold him until the airport opens up," said Robert Giacomazzo, a controller at the air traffic control center at Islip, L.I., who was not on duty Thursday night. "If he declares an emergency, all rules go out the window and we get the guy to the airport as quickly as possible."

Mr. Giacomazzo said it is fairly common for pilots to advise controllers that they are running low on fuel but rare for a pilot to declare a formal fuel emergency. 'Everyone Has a Fuel Problem'

"The controller has to assume that everyone has a fuel problem, because everyone is delayed," said one pilot. With its large share of long-distance flights, Kennedy International Airport has more planes arriving with potential fuel problems than airports that handle mainly domestic flights.

A former controller, who is now an official with the F.A.A. and requested anonymity, said he was trained to pick up subtle tones in a pilot's voice in such situations. "Sometimes you can sense when a guy is in trouble even when he doesn't say it," he said.

Pilots may be reluctant to formally declare an emergency, both out of a sense of pride and because of the paperwork that follows. If the pilot is found to be negligent in calculating how much fuel was needed for the flight, the F.A.A. can suspend his license. Recently, pilots have complained that the agency has become too heavy handed. In July, it began to review how it enforces its rules. Planes Held on the Ground

Under a system called flow control, planes are held on the ground if delays are predicted rather than being forced to circle at their destination. But the system applies only to domestic flights; rarely would an international flight be held on the ground.

Thus, as Flight 52 neared the fog-covered Kennedy Airport on Thursday night, controllers were forced to put the 707 into several holding patterns, as delays along the East Coast mounted.

The Avianca crew could have advised controllers that they wished to divert to another airport. Although the pilots had chosen Boston as the alternative on their flight plan, they could have landed at Philadelphia, Washington or Hartford - all less than a half-hour from Kennedy. 'Stop Earlier, Tank Up'

"When you see there's big congestion ahead, you stop earlier, tank up and then get back on the stack," said Ray Salamanca, a pilot for United Airlines who often flies into Kennedy.

The airspace in the New York region is among the most congested in the nation, and delays can occur even in good weather. With low visibility and fog, delays are compounded.

The weather at Kennedy, La Guardia was so poor on Thursday that many other planes made unsuccessful attempts to land, their pilots unable to see the runway even as they descended to altitudes lower than 200 feet. Each time a plane calls off a landing, it has a ripple effect, and the number of planes circling the airport grows.

Pilots who fly 707's said monitoring fuel reserves is especially crucial, since the older jet burns much more fuel than today's models. The 707, they said, is especially thirsty at altitudes below 20,000 feet, where Flight 52 was most likely circling.

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