

The NTSB is pressing for action to reinforce professionalism in the wake of recent accident-related lapses.

# SHARPE UP



BY LINDA WERFELMAN

Citing a “disturbing number” of events involving nonadherence with standard operating procedures by pilots and air traffic controllers, the U.S. National Transportation Safety Board (NTSB) is complaining of “an erosion of ... professionalism” and urging action to improve on-the-job behavior.

The NTSB added “pilot and air traffic controller professionalism” to its new “Most Wanted List” of the top 10 changes needed to prevent accidents in aviation and other forms of transportation.

“Recent accidents and incidents have highlighted the hazards to aviation safety associated with departures by pilots and air traffic controllers from standard operating procedures and established best practices,” the NTSB said. “NTSB aviation accident reports describe the errors and catastrophic outcomes that can result from such lapses, and — though the NTSB has issued recommendations to reduce and mitigate such human failures — accidents and incidents continue.

“The costs of these events extend beyond fatalities, injuries and economic losses; they erode the public trust.”

In general, the NTSB said, the issue must be addressed by the aviation industry, including labor and management, as well as by aviation associations and government.

“An open and ongoing dialogue among these parties will raise awareness of the importance of reinforcing professionalism,” the NTSB said.

“The industry can provide better guidance on expected standards of performance and professional behavior. Pilots, controllers and managers can reinforce these standards through their day-to-day actions on the job. And, though there is no way to guarantee that every pilot and controller will make the right choice in every situation, monitoring performance and holding them accountable will reinforce the absolute importance of maintaining the highest level of professionalism.”

### Major Accidents

The NTSB cited several recent major accident and incident investigations that have identified issues involving pilot or air traffic controller professionalism, and discussed recommendations that were issued as a result of those investigations.

The earliest of these accidents occurred July 13, 2003, when an Air Sunshine Cessna 402C was ditched in the Atlantic Ocean about 7 nm (13 km) west-northwest of Treasure Cay Airport on Great Abaco Island in the Bahamas, after the failure of the right engine. Two passengers were killed, five passengers and the pilot received minor injuries, and two passengers were uninjured in the crash, which the NTSB said resulted in substantial damage to the airplane (*Aviation Mechanics Bulletin*, 11-12/05).

The NTSB said that the probable causes of the accident were the engine failure and the pilot’s “failure to adequately manage the airplane’s performance after the engine failed.” The agency added that a factor contributing to the passenger fatalities was the failure of the pilot to conduct an emergency briefing.

The NTSB also noted that its review of U.S. Federal Aviation Administration (FAA) records showed that the pilot had failed nine flight

checks between April 1983 and February 1998. The agency’s safety recommendations — issued in January 2005 — included one calling on the FAA to require all Federal Aviation Regulations Part 121 and Part 135 air carriers to evaluate notices of disapproval from a pilot’s previous flight checks for certificates and ratings before deciding whether to hire the pilot.<sup>1</sup>

The NTSB issued a related recommendation in May 2005 as a result of its investigation of the Dec. 18, 2003, crash of a FedEx Boeing McDonnell Douglas MD-10 while landing in Memphis, Tennessee, U.S.<sup>2</sup> Two of the seven people in the airplane received minor injuries, and the airplane’s right wing and parts of the right side of the fuselage were destroyed, the NTSB said (*Accident Prevention*, 10/05).

The NTSB cited as probable causes “the first officer’s failure to properly apply cross-wind landing techniques to align the airplane with the runway centerline and to properly arrest the airplane’s descent rate (flare) before the airplane touched down” and “the captain’s failure to adequately monitor the first officer’s performance and [to] command or initiate corrective action during the final approach and landing.”

In a letter to then-FAA Administrator Marion Blakey, the NTSB expressed concern that post-accident interviews and a review of the first officer’s training history “suggested a pattern of below-standard performance.” Nevertheless, before the accident, his “repeated substandard performances on check rides” had been addressed as “singular events” and he had received no additional oversight.

The NTSB said that FedEx pilot training procedures — like those of other operators at the time of the accident — emphasized a pilot’s check ride performance, “with little or no review of that pilot’s performance on check rides months or years earlier.”

As a result, the NTSB recommended that the FAA require Part 121 air carrier operators to “establish programs for flight crewmembers who have demonstrated performance deficiencies or experienced failures in the training environment that

**NTSB Chairman  
Deborah A.P.  
Hersman has called  
the Most Wanted  
List “the most  
powerful tool we  
have to highlight  
our priorities.”**

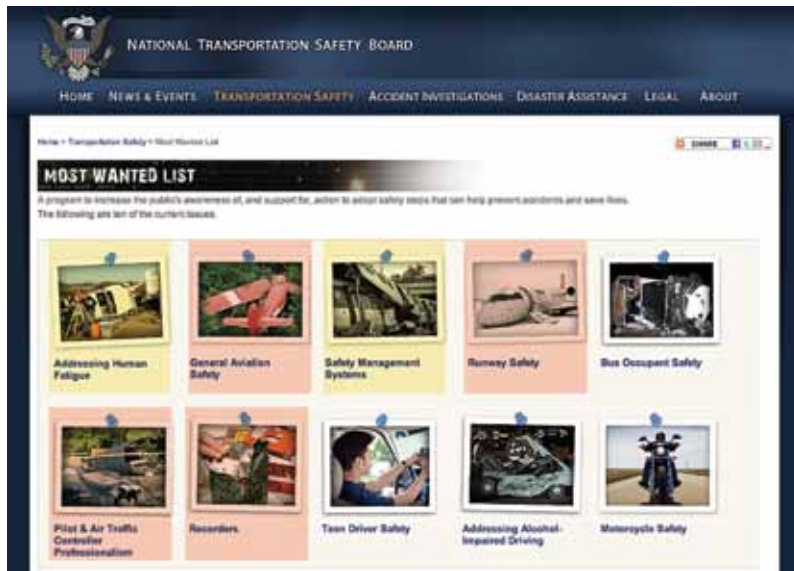


U.S. National Transportation Safety Board

would require a review of their whole performance history at the company and administer additional oversight and training to ensure that performance deficiencies are addressed and corrected.”

### ‘Inappropriate Response’

Both recommendations were reiterated in the NTSB’s safety recommendation letter that followed the most recent accident cited in the



The NTSB’s Most Wanted List of transportation safety improvements includes four areas — including enhanced professionalism — that focus on aviation. Two other areas affect several forms of transportation, including aviation.

board’s discussion of professionalism — the Feb. 12, 2009, crash of a Colgan Air Bombardier Q400 during approach to Buffalo Niagara (New York, U.S.) International Airport (ASW, 3/10, p.20). All 49 people in the airplane and one person on the ground were killed, and the airplane was destroyed in the accident. The NTSB said the probable cause was the captain’s “inappropriate response to the activation of the stick shaker, which led to an aerodynamic stall from which the airplane did not recover.”

The NTSB’s list of contributing factors included the flight crew’s failure to monitor airspeed and failure to adhere to sterile cockpit procedures, as well as the captain’s “failure to effectively manage the flight.”

The board also cited the captain’s “several disapprovals” in seeking pilot ratings and certificates and “training problems throughout his flying career,” both before and after he was hired by Colgan.

In a discussion of pilot professionalism contained in the safety recommendation letter, the NTSB said that, “on the basis of his actions during the flight, including the late performance of checklists and callouts because of an ongoing conversation, the captain showed inadequate leadership.”<sup>3</sup>

The NTSB noted that, especially because the captain had held that position for more than two years, “his failure to establish the appropriate cockpit tone during the initial stages of the operation and show strong command authority during the flight is disconcerting.”

The FAA does not require Part 121 operators to provide training to help new captains make the transition to pilot-in-command (PIC), but at the time of the accident captain’s 2007 upgrade, Colgan offered upgrading captains a one-day course on their new duties and responsibilities. However, the NTSB said that the course concentrated on a captain’s administrative duties and paid little attention to leadership skills, management oversight and command authority.

“For many new captains, including the accident captain, the initial upgrade represents the first time in which they are held responsible for leading and managing multiple crewmembers during air carrier operations,” the NTSB said. “Because of the PIC’s critical role in establishing and maintaining safe operating conditions, upgrading captains would greatly benefit from specific training on command and leadership skills.”

As a result, the NTSB recommended that the FAA issue an advisory circular to provide guidance to Part 121, Part 135 and Part 91K fractional ownership operators on leadership training for their upgrading captains, “including methods and techniques for effective leadership; professional standards of conduct; strategies for briefing and debriefing; reinforcement and correction skills; and other knowledge, skills and abilities that are critical for air carrier operations.”

Also included among the 25 recommendations was a call for the FAA to require Part 121,

Part 135 and Part 91K operators to provide specific leadership training for upgrading captains. Another recommendation said that the FAA should “develop, and distribute to all pilots, multimedia guidance materials on professionalism in aircraft operations that contain standards of performance for professionalism; best practices for sterile cockpit adherence; techniques for assessing and correcting pilot deviations; ... and a detailed review of accidents involving breakdowns in sterile cockpit and other procedures.”

### ‘Poor Airmanship’

The Oct. 14, 2004, crash of a Pinnacle Airlines Bombardier CRJ200 prompted another recommendation calling on the FAA to work with pilot associations in developing an air carrier pilots’ program “that addresses professional standards and their role in ensuring safety of flight.”<sup>4</sup>

The captain and the first officer — the only people in the airplane for the repositioning flight — were killed and the airplane was destroyed in the crash, about 2.5 mi (4.0 km) south of Jefferson City Memorial Airport in Missouri, U.S. (ASW, 7/06, p. 44). The crash followed an aerodynamic stall, loss of control of the airplane and flameouts of both engines following a climb to 41,000 ft and subsequent flight below the minimum required airspeed for engine restart, the NTSB said.

The NTSB said that the absence of passengers or other crewmembers “presented the pilots with an opportunity to aggressively maneuver the airplane and operate it at the CRJ maximum operating altitude.” The pilots’ behavior was an example of “optimizing violations, which occur when someone disregards defined procedures intentionally to make a job more interesting or

engaging, to push limits or to impress another,” the NTSB said.

The NTSB said the probable causes of the accident were “the pilots’ unprofessional behavior, deviation from standard operating procedures and poor airmanship, which resulted in an in-flight emergency from which they were unable to recover, in part because of the pilots’ inadequate training”; “the pilots’ failure to prepare for an emergency landing in a timely manner, including communicating with air traffic controllers immediately after the emergency about the loss of both engines and the availability of landing sites”; and “the pilots’ improper management of the double engine failure checklist, which allowed the engine cores to stop rotating and resulted in the core lock engine condition.”<sup>5</sup>

### Controller Judgment

The Aug. 27, 2006, crash of a Comair Bombardier CRJ100 during takeoff

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from Blue Grass Airport in Lexington, Kentucky, U.S., resulted in issuance of a recommendation dealing with job performance by air traffic controllers (ASW, 11/07, p. 38).

The crash followed the flight crew’s attempt to take off from 3,500-ft (1,068-m) Runway 26, which they had mistaken for their assigned Runway 22, which was twice as long. All but one

of the 50 people in the airplane were killed, and the survivor suffered serious injuries in the crash, which destroyed the airplane.

The NTSB said the probable cause was the crewmembers’ “failure to use available cues and aids to identify the airplane’s location on the airport surface during taxi and their failure to cross-check and verify that the airplane was on the correct runway before takeoff.”

In the safety recommendation, the NTSB noted that the lone controller in the airport traffic control tower had issued a takeoff clearance and then, instead of monitoring the takeoff and departure, turned to an administrative task.

The NTSB said that its investigations of several events involving air traffic controllers “highlight a safety issue related to controller vigilance, judgment and safety awareness that should be addressed.”

The accompanying safety recommendation called on the FAA to “require all air traffic controllers to complete instructor-led initial and recurrent training in resource management skills that will improve controller judgment, vigilance and safety awareness.”

### Notes

1. NTSB. Safety Recommendations A-05-01 and A-05-02. Jan. 27, 2005.
2. NTSB. Safety Recommendations A-05-014 through A-05-018. May 31, 2005.
3. NTSB. Safety Recommendations A-10-10 through A-10-34. Feb. 23, 2010.
4. NTSB. Safety Recommendations A-07-1 through A-07-11. Jan. 23, 2007.
5. “Core lock” is a rare condition in which an engine core freezes after an in-flight flameout and could prevent a windmill restart.
6. NTSB. Safety Recommendation A-07-34. April 10, 2007.