

Roller Coaster Ride

Ice buildup on pitot probes caused erroneous airspeed indications.

BY MARK LACAGNINA

The following information provides an awareness of problems in the hope that they can be avoided in the future. The information is based on final reports by official investigative authorities on aircraft accidents and incidents.

JETS

Flight Crew's Response Was Uncoordinated

Boeing 717-200. No damage. No injuries.

While departing from Kansas City, Missouri, U.S., for a scheduled flight to Washington the night of May 12, 2005, the 717 encountered weather conditions “favorable for the accumulation of structural icing,” said the report by the U.S. National Transportation Safety Board (NTSB). “At some point, the pitot-static system began accumulating ice because the air data heat system had not been activated.”

The captain, who was flying the airplane on autopilot, maintained airspeed between 280 and 300 kt during the climb to cruise altitude. “The crew felt they did not need to utilize airplane anti-icing because the outside temperature was still too warm to require it,” the report said. “The first indication of something abnormal was when the captain noticed the master caution light was illuminated.”

The “RUDDER LIMIT FAULT” warning light also illuminated because ice had accumulated on the pitot probe for the rudder limiting system, which reduces maximum allowable rudder deflection as airspeed increases. “The icing continued to accumulate on the other probes of

the air data system, degrading its ability to reliably determine the airplane’s airspeed,” the report said. The captain was about to ask the first officer to retrieve the quick reference handbook when the autopilot disengaged and the airplane, which had been climbing through 19,300 ft, pitched down and entered a steep dive.

During the recovery, the first officer assisted the captain on the flight controls. Both pilots told investigators that the controls felt heavy and that the airplane did not respond to their control inputs. “The flight crew initially applied uncoordinated control inputs, in the process reaching nearly 100 lb [45 kg] of differential force on the pitch-control column, while attempting to recover the airplane,” the report said. “During this period ... pitch continued to oscillate through five cycles, for a duration of eight minutes, reaching altitudes as low as 10,600 ft and as high as 23,300 ft.”

The pilots observed erroneous airspeed indications that varied between 54 kt and 460 kt. “The captain stated that while he was trying to recover the airplane, he attempted to maintain a level pitch attitude by placing the pitch of the airplane in a fixed position and tried to level the wings of the airplane,” the report said. “The first officer stated that, during the recovery, he was trying to keep the airspeed away from the stall speed and away from the overspeed red zone.”

The crew eventually regained control of the airplane, declared an emergency and landed without further incident at Kirksville (Missouri) Regional Airport. None of the 80 people aboard the 717 was injured.



“Post-incident testing of the airplane’s mechanical and electronic systems revealed no abnormalities that would have accounted for the unreliable airspeed indications or the loss of control reported by the flight crew,” the report said. “Post-incident computer modeling also confirmed that the airplane performed in a manner consistent with all deviations from normal flight having been initiated or exacerbated by the control inputs of the flight crew.”

Commander Overrides Go-Around Call

Cessna Citation 550. No damage. No injuries.

Onbound from Nice, France, the commander was flying an autopilot-coupled instrument landing system (ILS) approach to Runway 21 at Biggin Hill Airport in Kent, England, the evening of Feb. 5, 2008. Night visual meteorological conditions (VMC) prevailed, and surface winds were from 230 degrees at 15 kt. The pilots observed a wind velocity indication of 54 kt on the electronic flight instrument system (EFIS) as the Citation descended through 2,000 ft, said the report by the U.K. Air Accidents Investigation Branch (AAIB).

After the autopilot captured the glideslope, the commander reduced airspeed to 115 kt, which he described as the “minimum approach speed” — reference landing speed (V_{REF}) plus 10 kt. “At two miles from the runway threshold, [the Citation] encountered severe wind shear, and the EFIS speed tape showed the speed trending to below 100 kt,” the report said. “The autopilot pitched up to maintain the glideslope, and the aircraft appeared to stall with a right-wing drop. The [commander] recovered from the stall by lowering the nose and increasing power, and decided to continue the approach.”

The pitch attitude was described as “flat” on touchdown, and the aircraft began to “porpoise,” bouncing off the runway an unspecified number of times. After the second bounce, the first officer called for a go-around. The commander responded, “Why?”

The Citation was brought to a stop on the runway and taxied to its parking position. There was no damage, and none of the four people aboard was injured. Nevertheless, the commander filed

an AAIB accident report, in which he “acknowledged that the aircraft bounced on landing but stated that at all times he had control of the aircraft and maintained the runway centerline,” the incident report said. The first officer filed a mandatory occurrence report with the U.K. Civil Aviation Authority, saying that the aircraft had reached heights of 10 to 15 ft during the bounces.

Noting that the difference between the indicated wind velocity at 2,000 ft and the reported surface wind velocity provided warning that the pilots could expect significant wind shear, the report said, “The selection of a speed greater than minimum approach speed may have provided a greater margin for wind shear.” The report also said that a go-around conducted after the stall recovery “may have prevented the subsequent bounced landing.”

Reversed Anti-Skid Wiring Leads to Excursion

Airbus A320-200. Minor damage. Two minor injuries.

Surface winds were from 330 degrees at 17 kt, gusting to 23 kt, when the A320 was landed on Runway 22R at Chicago O’Hare International Airport the night of Oct. 9, 2007. Perceiving no deceleration by the autobrakes, the captain applied manual wheel braking when airspeed decreased below 100 kt.

“The aircraft immediately swerved hard right,” the captain told NTSB investigators. “I corrected with full left rudder and brake, but the aircraft continued to the right. I then used nosewheel steering to attempt to straighten the aircraft, but it was ineffective.”

The nosewheel and right main landing gear ran off the right side of the runway. The captain was able to steer the aircraft back onto the runway and bring it to a stop. A flight attendant and a passenger received minor injuries during the excursion; the other 125 occupants were not injured.

“Although I knew there was some aircraft damage, there was no indication of fire,” the captain said. “Since the aircraft taxied normally, I taxied ... and parked at the gate.” After shutting down the engines, the captain observed that the indicated temperature of the brakes on the left main landing gear was about 60° C (140° F), and

After the second bounce, the first officer called for a go-around. The commander responded, “Why?”

that the indicated temperature of the brakes on the right main gear was about 375° C (707° F). He then was informed by maintenance personnel that the left inboard tire had burst and that the engine nacelles had been damaged.

Examination of the A320 revealed that the wiring for the anti-skid braking system tachometers on the inboard and outboard wheels on the left main landing gear had been misrouted and reversed during replacement of the tachometers by a maintenance contractor the day before the accident. This resulted in a high level of braking on the inboard wheel but no braking of the outboard wheel.

“The operator reported that the reference documentation associated with the scheduled maintenance involving both of the left main landing gear tachometers was unclear and that the procedure for that maintenance was revised,” the report said.

Turbulence Warning Not Passed to Crew

McDonnell Douglas DC-9-83. No damage. Two serious injuries.

The DC-9 was descending through 8,300 ft during an approach in VMC to Ontario (California, U.S.) International Airport when it encountered severe turbulence the morning of Dec. 25, 2007. Two flight attendants who were completing final cabin duties in preparation for landing were thrown to the floor. “One of the flight attendants sustained multiple fractures to one ankle, and the other flight attendant suffered a head injury with loss of consciousness and concussion,” the NTSB report said. The other 112 people aboard the airplane were not hurt.

“The turbulence was likely the result of strong easterly winds interacting with the rough terrain in the area (mechanical turbulence),” the report said. The U.S. National Weather Service had issued a significant meteorological advisory (SIGMET) for occasional severe turbulence below 12,000 ft in the area. “The content of [the SIGMET] was available to the flight’s dispatcher,” the report said. “However, this information was not provided to the flight crew.”

The report said the company that supplies weather information to the operator had not

forecast severe turbulence in the area. Nevertheless, wind shear data included in the preflight paperwork had caused the captain to anticipate turbulence. Although the ride had been smooth during descent, the captain said that the DC-9 was descending through 13,000 ft when he “chimed the flight attendants early,” indicating that they were to prepare the cabin for landing and then be seated. The captain described the turbulence encounter as a “violent jolt” that occurred with no warning.

Pallet Loader Catches Fire

Airbus A320-200. No damage. No injuries.

The A320 was being readied for departure from Melbourne (Australia) Airport on Dec. 31, 2007. “The flight crew was in the cockpit preparing the aircraft for the flight, the passengers were boarding the aircraft through the left-forward door via the airbridge, and the ground handlers were loading and unloading baggage and other items,” said the report by the Australian Transport Safety Bureau (ATSB).

The operator of a pallet loader on the right side of the aircraft detected the odor of an electrical fire while restarting the engine, which had stalled. About the same time, the loading supervisor noticed a fire in the pallet loader’s engine compartment and warned the operator, who used a fire extinguisher attached to the pallet loader to put out the fire. The pallet loader was about 10 m (33 ft) from a fueler who was refueling the aircraft under the left wing.

“The ignition source for the fire was most probably intense electrical arcing within the pallet loader engine’s starter motor solenoid,” the report said, noting that after a similar incident on May 27, 2008, the operator retrofitted all of its pallet loaders with “a replacement starter motor that significantly reduces the risk of electrical arcing.”

Roll Excursions Spoil Landing

Learjet 35A. Substantial damage. No injuries.

Weather conditions at Goodland (Kansas, U.S.) Municipal Airport the morning of Oct. 17, 2007, included winds from

The captain described the turbulence encounter as a “violent jolt” that occurred with no warning.

330 degrees at 9 kt, 1 1/4 mi (2,000 m) visibility in mist and a 200-ft overcast ceiling. During the briefing for the ILS approach to Runway 30, the pilot told the copilot to fly the approach and that he (the pilot) would take the controls for landing if he acquired visual contact with the runway.

The copilot told investigators that the approach was stabilized. As the Learjet neared decision height, he was preparing to go around when the pilot announced that he had the runway environment in sight and took control of the airplane.

The pilot said that the airplane was slightly left of the extended runway centerline when it exited instrument meteorological conditions 250 ft above ground level (AGL). He said that when he made a “slight correction to the right,” the Learjet “rolled excessively to the right”; he then corrected to the left, at which time the airplane “rolled excessively to the left.”

The right wing tip fuel tank and then the left tip tank struck the runway before the airplane ran off the left side of the runway and came to a stop between the runway and a taxiway. Damage included separation of the left outboard wing about 3 ft (1 m) from the tip tank. The pilots, who were alone in the airplane, escaped injury.

The report said that maintenance had been initiated 15 days before the accident to correct a fault in the Learjet’s spoileron system, which uses the ground spoilers to augment the ailerons at low airspeeds; the system is armed when the flaps are extended beyond 25 degrees for approach. Maintenance records indicated that the system was “not working properly.”

Technicians at the maintenance facility were troubleshooting the problem when the operator recalled the airplane. “They deactivated the spoileron system in accordance with the Learjet minimum equipment list procedure,” the report said. “The [spoileron] circuit breaker was pulled and secured with a tie wrap, and a decal was installed indicating the system was deactivated.

“Neither the tie wrap nor decal were noted during the [post-accident] examination of the cabin of the airplane, and both the spoiler and

spoileron circuit breakers were in the closed position.”

The pilot said that he had closed the spoileron circuit breaker for a short time during cruise flight while attempting to reset the system. “He stated that the system would not reset, so he pulled the circuit breaker, and it remained in that position for the remainder of the flight,” the report said. “It was also stated that all cabin circuit breakers were reset [closed] following the accident.”

The report said that examination and testing of the yaw damper and spoileron computer revealed “anomalies,” but the manufacturer said that the anomalies would not prevent control of the airplane. “Greater control wheel displacement and force to achieve a desired roll rate when compared with an operative spoileron system would be required,” the report said. “The result would be a slightly higher workload for the pilot, particularly in turbulence or crosswind conditions.”

The report concluded that the probable cause of the accident was “the pilot’s failure to maintain aircraft control during the landing.”

TURBOPROPS

Snow Melts, Refreezes on Parked Airplane

Beech Super King Air 200. Destroyed. Two fatalities.

The pilot removed the King Air from a heated hangar and left it on the ramp at Salmon, Idaho, U.S., while having breakfast with a passenger and waiting for two more passengers to arrive the morning of Dec. 10, 2007. “The outside temperature was below freezing, and a steady light-to-moderate snow was falling,” the NTSB report said. “The airplane sat in the aforementioned ambient conditions for at least 45 minutes before the initiation of the takeoff roll.”

The pilot did not remove snow that had accumulated on the airplane or ice that had formed when snow melted on contact with the warm airframe and then refroze. Heavy snow was falling, with 2 in (5 cm) of wet snow on the runway, and the temperature was about 10° F (minus 12° C) when the takeoff was initiated.



After lifting off the runway, the King Air bounced once and banked steeply left and right several times. Passengers said that the airplane was shuddering. The pilot discontinued the climb and turned to a left downwind. “During this turn, the airplane reportedly again rolled to a steeper-than-normal bank angle, but the pilot successfully recovered,” the report said. “While on the downwind, the airplane reportedly stabilized in a wings-level [attitude] without any significant rolling or shuddering.”

However, when the pilot initiated a left turn toward the approach end of the runway, the airplane began to shudder, yaw and rapidly lose altitude, the report said. The pilot applied full power, but the King Air continued to descend and struck a hangar about 1,300 ft (396 m) from the runway threshold. The pilot and front-seat passenger were killed; the other two passengers escaped injury and were able to open the cabin door and exit the airplane before it was engulfed in flames.

No Cause Found for ‘Partial Incapacitation’

Dornier 228-200. No damage. No injuries.

After several route-familiarization and promotional flights, the pilots were conducting a positioning flight from Westport, New Zealand, to Christchurch the night of March 20, 2007, when they began to feel dizzy while cruising at 10,000 ft. “The pilot flying told the check captain that he ‘didn’t feel very well’ and thought he might ‘faint or pass out,’” said the report by the New Zealand Transport Accident Investigation Commission.

Soon after taking control, the check captain also began to feel faint. He told the pilot that he felt light-headed and perceived a blurring of his peripheral vision. “The check captain turned off the air conditioning bleed air supplying the [flight deck] heating, selected external ram air and instructed the pilot to open the storm window,” the report said. “The aircraft was not fitted with portable oxygen or side air vents [and did not have a cabin pressurization system].”

The pilot felt better after using a cupped hand to direct fresh air onto his face. “The check captain leaned across and breathed in some of the

fresh cold air,” the report said. “He also noticed an almost immediate improvement in his condition.”

The check captain transferred aircraft control back to the pilot, transmitted a “pan pan” urgency call to air traffic control and requested clearance to descend to the minimum safe altitude. The crew initially was cleared to descend to 9,000 ft. “The crew considered that continuing to Christchurch was preferable as they were about midway between [Westport and Christchurch] and the terrain allowed for an earlier descent,” the report said. VMC prevailed at Christchurch, which also had longer runways and full aircraft rescue and fire fighting service.

When the pilot removed his hand from the storm window, the check captain again said that he was becoming light-headed and that his vision was blurring. “The check captain alerted the pilot to again start directing fresh air into the cockpit and noted an immediate improvement in his condition,” the report said. “The pilot continued to fly with his right hand, keeping his left hand at the storm window, which required the check captain to manage the power levers and radio.”

The pilots acquired visual contact with the airport after descending to 6,500 ft and landed the Dornier without further incident. Although they felt better, the pilots went to a local hospital for a medical examination. “Blood samples were taken ... and the pilots put on oxygen,” the report said. “Displaying no ill effects, the pilots were released after about an hour.” Toxicological tests of the blood samples showed slightly elevated levels of carbon monoxide.

The operator had recently purchased the aircraft, which had been in open storage for seven years, but had not yet placed it into service after refurbishment. The investigation focused on the heating and air conditioning system. “An initial examination of the engines, associated bleed-air systems and aircraft air conditioning identified no unusual smells and nothing that might have caused contamination of the flight deck air,” the report said, noting that a subsequent examination and test flight also found “nothing untoward.”

The check captain again said that he was becoming light-headed and that his vision was blurring.

Concluding that the incident was an “isolated occurrence,” the report said, “The reason the pilots became partially incapacitated could not be determined but was most likely from some form of air contamination, because the symptoms disappeared when fresh air was introduced into the cockpit.” As of December 2008, the aircraft had been flown more than 500 hours since the incident “with no reported problems, unexplained fumes or cases of ill health,” the report said.

Pilots Did Not Notice Cargo Door Light

Raytheon 1900D. Minor damage. No injuries.

Cockpit voice recorder data indicated that, contrary to standard operating procedures (SOPs), the pilots discussed personal matters while the first officer conducted challenge-and-response checklist procedures by himself and taxied the airplane for departure from Page, Arizona, U.S., on March 26, 2008.

“Due to the flight crew’s lack of professionalism and deviation from [SOPs], they most likely did not see that the [aft cargo door warning light] was illuminated prior to departure,” the NTSB report said. The cargo door opened soon after liftoff. The captain took control, turned back to the airport and landed the 1900 without further incident. None of the 13 people aboard the airplane was injured.

The pilots told investigators that the aft cargo door light, which warns that the door is not closed and locked, was not illuminated before takeoff. The captain said that he saw the light shortly before the door opened. “Following the accident, operation of the door and functionality of the cockpit indicator light were verified,” the report said. “No anomalies were noted.”

PISTON AIRPLANES

Fuel Selector Set on Empty Tank

Beech C55 Baron. Destroyed. One fatality.

Witnesses heard the left engine sputter and surge, and saw the Baron yaw left on takeoff from Port Orange, Florida, U.S., on March 4, 2007. The airplane climbed no

higher than 75 ft AGL and was in a nose-high attitude with the landing gear extended when it stalled, rolled left and descended to the ground, the NTSB report said.

Investigators found both fuel selectors positioned to the auxiliary tanks, a configuration that is prohibited for takeoff. There was 1/4 gal (1 L) of fuel remaining in the left auxiliary tank and 9 gal (34 L) in the right auxiliary tank.

NTSB said that the probable cause of the accident was “the pilot’s failure to maintain airspeed during initial climb” and a contributing factor was “the pilot’s improper positioning of the left fuel selector, which resulted in fuel starvation to the left engine.”

Spatial Disorientation Leads to Crash at Sea

Cessna C337G Skymaster. Destroyed. Four fatalities.

Before departing from Moorabbin, Victoria, Australia, the pilot indicated that he would follow the coastline during the visual flight rules flight to Merimbula, New South Wales, on Nov. 17, 2007. Witnesses on a beach near Venus Bay, Victoria, saw the Skymaster emerge from fog, flying low over the water.

“Within seconds, it turned right to head out to sea,” said the ATSB report. “It turned through about 90 degrees at a steep angle of bank while maintaining height before disappearing from sight into the fog.” The witnesses then heard a bang.

Aircraft wreckage and the bodies of the three passengers were found washed up on the beach two days later. The pilot’s body was not found. The report said that the pilot, who was not instrument-rated, likely had become spatially disoriented and had inadvertently descended into the water.

Improper Gear Adjustment Causes Collapse

Cessna 402B. Substantial damage. No injuries.

While preparing to land at Fort Lauderdale (Florida, U.S.) Executive Airport on March 15, 2008, the pilot observed indications that the right main gear was not down and locked. He recycled the landing gear



and used the backup extension system, but saw green lights only for the left main gear and nose gear, the NTSB report said.

The pilot flew the 402 near the airport traffic control tower, and a controller radioed that all three gear appeared to be extended. However, on landing, the right main gear collapsed. The pilot and the three passengers escaped injury.

Investigators found that several days before the accident, the right main landing gear down lock had been improperly adjusted by maintenance technicians. The report concluded that the improper maintenance likely caused the accident.



HELICOPTERS

Windshield Shattered by Eagle

Eurocopter EC 130B4. Substantial damage. Three minor injuries.

The air tour helicopter was cruising at 100 to 120 kt at 500 ft AGL near Meadview, Arizona, U.S., the afternoon of Sept. 27, 2007, when the pilot saw a bird pass below and to the left. “Another large bird, tentatively believed to be a golden eagle with an 8-ft [2-m] wingspan, suddenly appeared directly ahead of the helicopter,” the NTSB report said.

The bird shattered the left windshield. The pilot and two passengers were struck by debris; the other five passengers escaped injury. The helicopter was landed without further incident at a local airport.

No Room to Recover

Bell 206B JetRanger. Destroyed. Five serious injuries.

The pilot had rented the JetRanger to provide short flights at a friend’s party near Hornsby, New South Wales, Australia, on March 1, 2008. Witnesses saw the helicopter making low passes over the party area at about 100 ft AGL. After one pass, it entered a steep left bank, rolled out and then descended into trees.

The pilot told investigators that the front-seat passenger might have pushed the collective control forward. The passenger, however, could not recall what happened before the crash.

“Examination of the wreckage did not indicate any mechanical defects that would have affected the safe operation of the helicopter,” the ATSB report said.

The report noted that flight below 500 ft AGL is prohibited in Australia. It said that during the steep turn, main rotor blade inertia and rotor rpm would have decreased. “If the pilot did not react rapidly to this condition, or if the front-seat passenger had pushed the collective control down, the result would be a loss of altitude,” the report said. “Regardless, in either circumstance, the helicopter was being operated at a height from which recovery was not possible.”

Loose Fastener Causes Control Disconnect

Aerospatiale AS 350BA. Substantial damage. Four fatalities, three serious injuries.

The helicopter was returning from a sightseeing flight on March 8, 2007, when the pilot reported hydraulic system problems (ASW, 11/08, p. 30) and that he would perform a run-on landing at the Princeville (Hawaii, U.S.) Airport. As the helicopter neared the runway, the pilot radioed, “Okay, we’re done.” The sound of the rotors changed, and the helicopter descended into a grassy area next to the runway. The pilot and three passengers were killed, and three other passengers sustained serious injuries.

“Postaccident examination of the helicopter revealed that the left lateral flight control servo became disconnected in flight at the transmission,” the report said. The disconnection was traced to maintenance personnel who, while replacing the servo about a month before the accident, had installed a “severely worn” lock washer and had tightened the jam nut on the lower clevis — a U-shaped attachment fitting — to the lower torque value specified for the upper clevis.

“Examination of the company’s maintenance program revealed that none of the mechanics at the helicopter’s base had received factory training and that the maintenance manuals they used were three revisions out of date,” the report said. ➤

Preliminary Reports				
Date	Location	Aircraft Type	Aircraft Damage	Injuries
Jan. 3, 2009	Telluride, Colorado, U.S.	Learjet 45	substantial	2 minor
Light snow was falling when the Learjet overran the runway on landing.				
Jan. 4, 2009	Morgan City, Louisiana, U.S.	Sikorsky S-76C	destroyed	8 fatal, 1 serious
The helicopter crashed in a marsh shortly after departing from Amelia, Louisiana, in visual meteorological conditions to transport workers to an offshore oil rig.				
Jan. 5, 2009	Antarctica	Basler BT-67	destroyed	4 NA
The turboprop-converted Douglas DC-3 struck a mountain in an area of reduced visibility during a cargo flight. All four occupants reportedly survived.				
Jan. 11, 2009	Caticlan, Philippines	Xian MA60	substantial	25 NA
The twin-turboprop touched down short of the runway while landing in strong winds and struck a concrete fence. Three airport workers and at least two passengers reportedly were seriously injured.				
Jan. 11, 2009	Hayden, Colorado, U.S.	Pilatus PC-12/45	destroyed	2 fatal
Heavy snow was falling, and two line service workers saw wet snow on the airplane's wings before it crashed shortly after takeoff in a steep nose-down and inverted attitude.				
Jan. 12, 2009	East Anglia, England	Boeing 737-700	none	4 none
The 737 was on a positioning flight when it pitched down violently and exceeded maximum operating airspeed by 100 kt while losing 10,000 ft of altitude before the flight crew recovered control.				
Jan. 15, 2009	Makhachkala, Russia	Ilyushin 76MD	destroyed	3 fatal, 4 NA
The military transport was being taxied onto the runway when its forward fuselage was struck by the wing of another Il-76MD that was landing. The landing airplane was substantially damaged, but none of the 31 occupants was injured. The collision occurred at night and with visibility reduced by fog.				
Jan. 15, 2009	Wray, Colorado, U.S.	Gulfstream Commander 690C	destroyed	3 fatal
Witness reports indicate that the airplane stalled and spun to the ground during an instrument approach in night instrument meteorological conditions (IMC).				
Jan. 15, 2009	New York	Airbus A320	destroyed	1 serious, 154 none
The A320 was ditched in the Hudson River after it struck a flock of birds and lost power from both engines while departing from La Guardia Airport.				
Jan. 16, 2009	Oradea, Romania	Gulfstream G200	substantial	12 none
The airplane overran the runway while landing in adverse weather conditions.				
Jan. 19, 2009	Falkenstein, Germany	Piper Cheyenne IIIA	destroyed	1 fatal
The Cheyenne crashed in mountainous terrain shortly after departing from Frankfurt Main Airport in IMC.				
Jan. 19, 2009	Tehran, Iran	Fokker 100	substantial	114 NA
The Fokker veered off the runway after the right main gear collapsed on landing. No fatalities were reported.				
Jan. 20, 2009	Wichita, Kansas, U.S.	Bombardier Global 5000	substantial	none
Static engine tests were being conducted when the airplane struck a blast fence.				
Jan. 22, 2009	Midway Islands	Airbus A330-300	none	1 serious, 3 minor, 281 none
A flight attendant suffered head and neck injuries, and three passengers received minor injuries when the A330 encountered severe turbulence during a flight from Tokyo to Honolulu.				
Jan. 22, 2009	Naples, Florida, U.S.	Cessna 402C	none	7 none
The pilot landed the 402 at the Naples airport after both engines lost power during a charter flight from Key West to Fort Myers, both in Florida.				
Jan. 27, 2009	Lubbock, Texas, U.S.	ATR 42-320	substantial	1 serious, 1 minor
Night IMC prevailed, with light freezing drizzle and surface winds from 350 degrees at 10 kt, when the cargo airplane touched down short of Runway 17R and struck approach lights.				
Jan. 30, 2009	Huntington, West Virginia, U.S.	Piper Seneca II	destroyed	6 fatal
The pilot reported a low fuel state before the Seneca crashed in a wooded area while being vectored for an airport surveillance radar approach in IMC.				
Jan. 31, 2009	Mudurnu, Turkey	Eurocopter EC 135PC	destroyed	2 fatal
The helicopter crashed after the pilots reported adverse weather conditions during a ferry flight from Warsaw, Poland, to Ankara, Turkey.				

NA = not available
 This information, gathered from various government and media sources, is subject to change as the investigations of the accidents and incidents are completed.