Controller Averts Taxiway Takeoff

Warned, pilot rejects takeoff at 80 kt.

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 on aircraft accidents and incidents by official investigative authorities.

JETS

Commander Misidentified Taxiway Markings

Boeing 737-800. No damage. No injuries.

Nighttime visual meteorological conditions prevailed as the Pegasus Airlines flight crew prepared to depart from Oslo Airport in Gardermoen, Norway, for a scheduled flight to Antalya, Turkey, on Oct. 23, 2005. Traffic was light, and Runway 01L was being used for departures. A notice to airmen (NOTAM) indicated that a portion of the approach end of the runway and two stub taxiways, A1 and A2, were closed and that 3,200 m (10,499 ft) were available for takeoff after back-taxiing on Runway 01L from Taxiway A3.

However, the crew planned to take off from the intersection of A3, from which 2,696 m (8,846 ft) of runway were available, said the report by the Accident Investigation Board of Norway (AIBN). There are two parallel taxiways east of Runway 01L: Taxiway M is adjacent to the runway; Taxiway N is adjacent to the terminal. The crew was instructed to taxi south on Taxiway N to A3, which crosses Taxiway M and leads to Runway 01L. While proceeding south on Taxiway N, the crew was cleared for takeoff on Runway 01L from the A3 intersection.

The commander, the pilot flying, told investigators that as she made a right turn from Taxiway N onto A3, she turned on the landing lights and saw a dashed yellow line to her left, which she believed marked the closed part of the runway. The line actually was across Taxiway N and marked the intersection with A3.

"The commander has flown to many different airports in many countries and claims to be used to ground conditions not always being in accordance with ICAO [International Civil Aviation Organization] standards," the report said. "An airport operator marking a closed part of the runway in this way was considered absolutely possible by the commander."

She made a left turn to back-taxi on what she believed was the runway to position the aircraft at the dashed yellow line for takeoff. Observing the aircraft's movement, the air traffic controller said, "Confirm you are entering runway now; seems like you are turning onto Mike. Continue right turn and then left again to enter the runway." The first officer replied, "Turning right."

"When the right turn had been completed, and the nose of the aircraft pointed towards the north on Taxiway M, the commander pressed

the TO/GA [takeoff/go-around] button, and the aircraft accelerated," the report said. Taxiway M is significantly shorter than Runway 01L; 1,601 m (5,253 ft) of the taxiway remained from where the takeoff was begun.

The report noted that the edges of the taxiway were not marked with blue lights, as recommended by ICAO. However, Taxiway N had the recommended green centerline lights; white is recommended for runway centerline lights. "The type of lighting and the color of the lights were evidently not sufficient to make the commander doubt her own decision," the report said.

The edges of the taxiway were not marked with blue lights, as recommended by ICAO.

The controller heard the noise from the aircraft's engines increase substantially and told the crew, "Hold position. You are on Taxiway Mike." The commander said that indicated airspeed was almost 80 kt when she disengaged the autothrottles, closed the thrust levers and applied the wheel brakes.

After the aircraft was slowed, the controller told the crew to make a right turn on A4 to Taxiway N. The first officer replied, "Alpha 4."

"Instead of a right turn, the crew turned left towards Runway 01L," the report said. "[The 737] was the only aircraft in the immediate area, so the controller gave clearance to enter the runway via A4 and taxi southwards. This was performed, and the crew took off to the north after having received new clearance for takeoff."

The commander and first officer had not flown together before the incident occurred. Both pilots had received crew resource management (CRM) training by the company. AIBN said, however, that their CRM during the incident was inadequate.

Investigators were unable to obtain data on the number of passengers aboard the aircraft or its gross weight, and therefore could not calculate the aircraft's takeoff performance. Noting that air temperature was 0 degrees C (32 degrees F), the report said, "If the aircraft was not fully loaded, the crew would probably have been able to complete a takeoff [from Taxiway M], but it would not have been a safe operation. The risk of rolling off the end of the taxiway at almost takeoff speed was definitely present."

AIBN said that the incident might have been prevented if the crew had been instructed to taxi to the holding point on A3 or to line up and wait on the runway. The report cited a practice that has been adopted by controllers at Auckland (New Zealand) International Airport: "There, clearance for takeoff is not given before the air traffic controller can visually confirm that the aircraft is in a correct takeoff position on the runway. When visibility is poor, a person is positioned on the field to watch the aircraft, communicating a visual confirmation to the air traffic controller. This arrangement was established after repeated incidents where aircraft crew confused the runway and a parallel taxiway."

Brake Failure Causes Ground Accident

Airbus A320. Minor damage. No injuries.

Soon after the flight crew began to taxi the aircraft for departure from London Heathrow Airport the morning of April 4, 2006, a hydraulic connection in the braking system fractured, causing a leak in the Yellow hydraulic system. The departure was canceled, and the crew taxied the aircraft back to the terminal.

"After stopping at the allocated stand, the parking brake was selected 'ON,' but the brakes failed to apply, as the parking brake is operated by the Yellow hydraulic system," the U.K. Air Accidents Investigation Branch (AAIB) report said. "The aircraft then began to move forward under idle engine power. Attempts by the crew to stop, using the brake pedals, proved unsuccessful, as the other modes of braking are deactivated when the parking brake is selected 'ON.'"

The crew shut down the engines before the aircraft struck the unoccupied airbridge, causing damage to the aircraft's left engine inlet cowling and the airbridge's protective railings. None of the 116 occupants of the aircraft was injured.

Directional Control Lost in Crosswind

Bombardier CRJ200. Substantial damage. No injuries.

The Pinnacle Airlines airplane was climbing through Flight Level 200 (approximately 20,000 ft) after departing from La Guardia Airport, New York, the night of March 11, 2005,

when a warning light indicated low pressure in the no. 1 hydraulic system. The flight crew conducted the quick reference handbook checklist, which advises, in part, that the outboard ground spoilers would not be available for landing and that the crew should land at the nearest suitable airport.

The crew elected to continue the flight to Milwaukee (MKE), the scheduled destination. "The captain reported that he decided to continue the flight to MKE after considering MKE's weather and runway length," said the report by the U.S. National Transportation Safety Board (NTSB).

A snow squall passed over the airport about 15 minutes before the airplane arrived. Reported weather conditions included winds from 290 degrees at 10 kt, gusting to 16 kt, 3/4 mi (1,200 m) visibility, light snow and broken ceilings at 500 ft and 2,000 ft. The instrument landing system (ILS) approach to Runway 01L was in use.

Air traffic control (ATC) did not provide, and the crew did not request, a braking-action report for Runway 01L. The report said that airport operations personnel had not conducted a friction measurement or issued a NOTAM on runway condition in more than 24 hours.

The airplane was crabbed 5 degrees left and banked 1 degree left when it touched down 2,400 ft (732 m) beyond the approach threshold of the 9,690-ft (2,955-m) snow-covered runway. The airplane veered left, ran off the left side of the runway about 4,200 ft (1,281 m) from the approach threshold and came to a stop on a taxiway intersection near the terminal.

"The captain reported that nothing appeared to be wrong with the airplane, so the decision was made to taxi to [the] gate … where the [nine] passengers were deplaned via the airstairs instead of the jet bridge," the report said. "An examination of the airplane revealed that the forward pressure bulkhead … was compromised. The flaps, the main landing gear doors, the nose landing gear and various skin panels also were damaged."

The report said that Runway 01L had not been closed, as required by the airport's snow and ice control plan, after a Raytheon Beechjet pilot reported braking action as nil about three hours before the accident. Between that report and the accident, 59 airplanes had been landed on the runway.

NTSB said that the probable causes of the accident were "the captain's failure to adequately compensate for the crosswind conditions and his failure to maintain directional control during landing." Among contributing factors listed by NTSB were "the captain's failure to land at the nearest suitable airport" and the failure of airport operations personnel to "conduct runway friction tests and to issue NOTAMs in accordance with existing regulations."

Low Flight Alarms Residents

Boeing 737-800. No damage. No injuries.

Weather was clear as the aircraft, with 134 people aboard, neared the destination — Cork (Ireland) Airport — the afternoon of June 4, 2006. The flight crew had briefed for the ILS approach to Runway 17 but requested and received clearance from ATC for a visual approach.

The aircraft arrived on final approach too high and too close to the runway to land, and the first officer suggested a standard go-around. Instead, the commander told the first officer to request clearance to conduct a 360-degree right turn, said the Irish Air Accident Investigation Unit (AAIU) report. ATC approved the request.

The aircraft was in landing configuration when the commander began the turn about 1,050 ft above ground level (AGL). From the left seat, the commander's "awareness of the position of his aircraft relative to the ground in a steep right-hand turn was considerably less than that of the [first officer], who had a direct view of the ground," the report said. The first officer repeatedly warned that the aircraft was descending but was disregarded by the commander. During the turn, the aircraft descended to 425 ft AGL over a populated area and "alarmed many of its residents, both because of its unexpectedly low height above the ground and the engine noise levels," the report said.

The first officer repeatedly warned that the aircraft was descending but was disregarded by the commander.

The first officer said that he heard two terrain awareness and warning system (TAWS) "TOO LOW, GLIDESLOPE" warnings, which were silenced by the commander. He also saw four red lights on the precision approach path indicator (PAPI). "Visual contact with the ground and PAPIs (four reds) showed them to be too low and flat on the approach, so a climb was initiated to a height from which a safe landing was effected," the report said.

AAIU classified the event as a serious incident that was caused by the commander's nonadherence to standard operating procedures (SOPs) and nonconformance with established CRM principles.

TURBOPROPS

Ice on Wing Triggers Stall on Takeoff

Cessna 208B Caravan. Destroyed. One minor injury.

The pilot had flown the cargo aircraft from Sweden to the Helsinki–Vantaa (Finland) Airport early on the morning of Jan. 31, 2005, and the aircraft was parked outside in snow and freezing temperatures. When the pilot returned to the airport that evening, he used a brush to remove a substantial amount of snow and ice that had accumulated on the aircraft. "He did not, however, manage to brush all of the impurities off of the surfaces of the aircraft," said the report by the Accident Investigation Board of Finland (AIB).

Aircraft deicing was available from two ground-service providers at the airport, but the pilot did not have the Caravan deiced. "A contributing factor to the neglect of the deicing may have been a sense of hurry that the pilot had developed as he was trying to make it to his primary destination on time," the report said.

The aircraft operator, Nord-Flyg, usually assigns two pilots to cargo flights in the Caravan, but the copilot who was scheduled for the flight had become ill. "The company could not find a replacement … therefore, contrary to company practice, the flight was flown with a one-person crew," the report said.

After cargo was loaded for the return flight to Sweden, the pilot took off from Runway 22L with flaps extended 10 degrees. When he retracted the flaps between 800 ft to 1,000 ft AGL, the right wing stalled, and the aircraft turned right and descended. The pilot lowered the nose to decrease angle-of-attack, but the aircraft remained stalled. He was able to level the wings before the aircraft struck a snow-covered mound of sand off the right side of the runway.

Examination of the wreckage revealed 0.5- to 1.5-cm (0.2- to 0.6-in) accumulations of snow, frozen slush and ice on the upper surfaces of the wings, fuselage and horizontal stabilizers. "These kinds of impurities are detrimental to airfoil aerodynamics and may reduce the coefficient of lift of the wing as much as 20–30 percent," the report said.

AIB said, "The primary cause of the accident was that the pilot executed a takeoff with an aircraft whose aerodynamic properties were fundamentally degraded due to the accumulated ice and snow on the upper surface of the wing. During the initial climb and immediately after flap retraction, airflow separated from the surface of the wing, and the pilot did not manage to regain control of the aircraft. The pilot did not recognize the stall and did not act in the manner required to recover from one, or it might be that he had not received sufficient training for such situations."

The report said that the pilot did not extend the flaps or increase power during his attempt to recover from the stall. "[Flap extension] might have returned the separated airflow back to the surface of the wing," the report said. "Approximately 30 percent more propeller power could have been gained by exceeding the engine manufacturer's limitations for normal operations."

Skydiver Struck by Horizontal Stabilizer

Beech 99. Substantial damage. One serious injury.

During a skydiving flight near Lodi, California, U.S., on Aug. 22, 2006, "a skydiver jumped up and out of the airplane instead of dropping out of the exit and keeping a low trajectory," the NTSB report said. "He then impacted the horizontal stabilizer and fell away from the leading edge. The skydiver's automatic

deployment system activated and opened the parachute." The pilot and 12 other skydivers were not injured.

The injured skydiver had made about 200 jumps, most of which were from the accident airplane. He had exited the airplane the same way the day before the accident and was told by other skydivers that he had barely missed the horizontal stabilizer. "In addition, he was instructed to stay low and not to jump up just prior to exiting the airplane" during the accident flight, the report said.

"According to statements from the operator and three other skydivers, the skydiver jumped up when he exited the airplane, exposing himself to the propeller blast, which drove him aft to the horizontal stabilizer," the report said.

Elevator Partially Detaches on Takeoff

Aerospatiale/Aeritalia ATR 42. Minor damage. No injuries.

While preparing to depart from Bergen (Norway) Airport the afternoon of Jan. 31, 2005, the Danish Air Transport flight crew conducted a flight-control check. Following company SOPs, the commander checked the rudder while the first officer checked the elevator and ailerons. The first officer told the commander that the elevator required more force than normal and that he thought the "stiffness" was due to the wind. The commander accepted the first officer's explanation and did not check the elevator himself.

"Correct elevator function is a condition for safe flight, and, in the light of hindsight, it is easy to see that the commander should have been more careful and investigated whether he could register any anomaly with the elevator," the AIBN report said.

The airplane accelerated normally during takeoff, but the commander had to apply excess elevator-control force for rotation. "At first, he thought that the elevator trim was incorrect," the report said. "However, immediately after liftoff, it became clear that the elevator was not working as it should. Full elevator deflection was necessary to maintain normal pitch [attitude]. For a period, the first officer assisted the commander physically with the controls, and both have explained that it was extremely demanding to maintain control of the aircraft."

The crew declared an emergency and returned to the airport. "The landing was accomplished without further incident seven minutes after takeoff," the report said. None of the 25 occupants was injured.

Examination of the aircraft revealed that the outboard end of the right elevator was hanging 30 cm (12 in) below the horizontal stabilizer and remained attached to the aircraft only by the inboard hinge. "A bolt was missing from both the center and outer hinges," the report said. "Both of the bolts and one of the nuts that normally should connect the hinge assemblies together were found. One of the bolts was found on the runway, the other inside the elevator."

AIBN concluded that inadequate torque had been applied to the self-locking nuts on the hinge bolts during reinstallation of the elevator after the aircraft was repainted in 1999; the nuts had progressively loosened and eventually detached from the bolts on the center and outboard hinges.

"Investigation indicates that the bolt belonging to the outer hinge assembly fell out during the takeoff in question, while the bolt in the center hinge assembly had fallen out at an earlier point in time, without being discovered," the report said, noting that a double inspection had been performed after reinstallation of the elevator and that maintenance and various inspections had subsequently been conducted.

PISTON AIRPLANES

'Extremely Slippery When Wet'

Beech 58 Baron. Substantial damage. No injuries.

Winds were from 40 degrees at 11 kt, gusting to 29 kt, when the pilot attempted to land the airplane on Runway 12 at Lee Airport in Annapolis, Maryland, U.S., on Oct. 6, 2006. A witness said that heavy rain was falling and that he observed the airplane hydroplane after touchdown, the NTSB report said.

The pilot said that the airplane touched down with 2,000 ft (610 m) of the 2,500-ft (763-m) runway remaining. He was unable to stop the airplane on the wet, asphalt runway. The Baron overran the runway and struck a pole. The two occupants were not injured.

The report said that the U.S. Federal Aviation Administration *Airport/Facility Directory* notes that Runway 12 is "extremely slippery when wet."

Oil Contamination Causes Engine Failure

Piper PA-23-250 Aztec. Substantial damage. No injuries.

The left engine failed while the airplane was in cruise flight at 2,000 ft after departing from Land's End (England) Airfield on July 4, 2006. "The pilot feathered the propeller and carried out the engine failure checks," the AAIB report said. "He secured the engine and decided to divert to St. Mawgan."

The hydraulic pump that supplies pressure to operate the landing gear and flaps is on the left engine's accessory drive and therefore was inoperative. "Consequently, the pilot performed an orbit on final approach in order to manually lower the landing gear," the report said. "He then carried out a successful flapless landing without further damage or injury."

Initial examination of the engine revealed that the no. 4 connecting rod had been forced through the crankcase but had been retained within the cowling. During a teardown inspection of the engine, "pieces comprising the complete connecting rod assembly were found, but not the no. 4 crankshaft bearing shell," the report said. All the crankshaft bearings showed wear caused by metallic particles in the engine oil. A large amount of metallic debris consistent with crankshaft bearing shell material was found in the oil. The AAIB concluded that failure of the no. 4 connecting rod was caused by the break-up of the no. 4 bearing.

Both engines had been operated about 130 hours following an overhaul in 2002. "The most recent maintenance was a 50-hour check carried out on 23 January 2003, 30 hours prior to the engine failure," the report said. "At that time, a note in the left engine logbook stated, 'Very small amount of alloy particles found in oil filter, considered fit to continue and to be reinspected at next 50-hour inspection.'" Investigators were unable to determine the source of the initial oil contamination.

Flat Light Foils Water Landing

De Havilland DHC-3 Otter. Substantial damage. One serious injury, three minor injuries.

The float-equipped airplane departed from Juneau, Alaska, U.S., for a charter flight to Berner's Bay, about 60 nm (111 km) north-northwest of Juneau, the afternoon of July 31, 2006. The pilot said that weather conditions at the bay included a 2,500-ft overcast and 5 sm (8 km) visibility in rain. He also said that flat lighting conditions existed and that the rain had turned the glassy water a milky color in the cove where he intended to land.

"A witness who watched the accident from the ground said there were fog and low clouds in the area, and that surface visibility was about 1 mi [1,600 m]," the NTSB report said.

The pilot told investigators that he was conducting a descending right turn and was looking for a dock on the shoreline that would provide a landing reference when the airplane struck the water.

"[A passenger] indicated the fuselage filled with water from the front, and passengers had to scramble over cargo piled at the aft doorway to escape," the report said. The passenger, who was seriously injured in the accident, said he believed that his leg and hand were broken when struck by unrestrained cargo. Two passengers received minor injuries; the pilot and two other passengers escaped injury.

HELICOPTERS

Rotor Blades Strike Fuel Bowser

Agusta A109C. Substantial damage. No injuries.

As the helicopter approached a private landing site in High Legh, Cheshire, England, the evening of June 21, 2006, the pilot saw another helicopter parked near the mobile fuel bowser. "He wanted to land as close as possible to the bowser, to facilitate refueling, and as far

away as practicable from the other helicopter," the AAIB report said.

After landing the helicopter and letting the engines spool down for two minutes, the pilot shut down the engines. As main rotor speed decreased below 50 percent rpm, the rotor blades began to droop and struck the side of the bowser. "The pilot immediately applied the rotor brake, but the blades continued to strike the bowser," the report said. "One blade then became lodged in the bowser; this caused the rotors to stop suddenly. As a result, the main rotor blades were extensively damaged, one main rotor damper sheared off the rotor head, and both engines required an inspection. The fuel bowser suffered only minor damage."

Power Line Inspection Gets 'Boxed-In'

Bell 206B JetRanger. Substantial damage.
One serious injury, three minor injuries.

The helicopter was being operated on a power-line-inspection flight near St. Albans, New South Wales, Australia, on April 4, 2006. Aboard were the pilot, two power-supply company inspectors and a photographer. The inspection flight is conducted annually in accordance with the company's bush fire risk management plan, said the Australian Transport Safety Bureau report.

The pilot said that he normally maintained an airspeed of 25–30 kt and flew the helicopter 5–10 m (16–33 ft) left of the power lines and 3–5 ft above the highest line to give the inspectors an optimum view of the lines.

During the accident flight, the pilot saw a previously unnoticed wire rubbing against the left side of the helicopter. "The single-strand wire was unused and had previously supported a telephone cable, but was not marked on the relevant telephone company's network charts," the report said. "The telephone company had not removed that support wire after the telephone cable had been taken down, nor was there a statutory requirement for the company to have done so."

The pilot told investigators that the helicopter became "boxed-in" by the wire and the power lines. "In response, he attempted to clear the single-strand wire," the report said. "However, the tail rotor came into contact with the wire, and the helicopter began rotating. … The pilot climbed the helicopter clear of both sets of wires before attempting to land the helicopter in an upright position in an adjacent paddock. However, on contact with the ground, the helicopter rolled onto its right side, resulting in severe damage to the helicopter's skid landing gear, main and tail rotors, and cabin structure."

One inspector received serious head injuries; the other inspector, the pilot and the photographer received minor injuries. "The pilot was the only occupant wearing a helmet, and he reported that the helmet was damaged during the accident sequence," the report said.

Engine Fails During Surveillance Flight

Eurocopter France AS350-B2. Substantial damage. No injuries.

A loss of engine power occurred as the helicopter was being flown about 600 ft over a residential area during a law-enforcement aerial surveillance flight in Hayward, California, U.S., the night of March 17, 2001.

"The pilot entered an autorotation and attempted to make an emergency landing on a lawn located within the dimly lit residential area," the NTSB report said. "The helicopter struck a small-gauge residential power-supply line that was stretched across the emergency glide path." The helicopter landed hard on the lawn, and the main rotor hub assembly, tail boom and fuselage were substantially damaged. The three occupants escaped injury.

The report said that a bevel gear in the engine accessory gearbox had fractured due to high-cycle fatigue, resulting in failure of the fuel pump and fuel control unit. ●

Preliminary Reports

Date	Location	Aircraft Type	Aircraft Damage	Injuries
Feb. 2, 2007	Dartmouth, Massachusetts, U.S.	Socata TBM 700	destroyed	3 fatal
The ceiling was overcast at 200 ft and visibility was 1 mi (1,600 m) when the airplane struck terrain during a missed instrument landing system (ILS) approach to Runway 05 at New Bedford Regional Airport at 1940 local time. A notice to airmen advised that the approach lights were out of service.				
Feb. 6, 2007	Belgrade, Montana, U.S.	Beech Super King Air 200	destroyed	3 fatal
The air ambulance crashed 100 ft below a mountain peak during a visual approach to Gallatin Field at 2104.				
Feb. 6, 2007	East Bay Cay, North Caicos	Beech Super King Air B200C	destroyed	1 fatal, 7 NA
The airplane struck terrain during approach. The pilot was killed; seven passengers received unspecified injuries.				
Feb. 8, 2007	Alliance, Nebraska, U.S.	Cessna 208B Caravan	substantial	1 serious
The ceiling was overcast at 200 ft and visibility was 1 mi when the cargo airplane struck a building, a telephone pole and terrain during a nonprecision approach at 0225. Ice was found on the deicing boots and unprotected surfaces of the airplane.				
Feb. 9, 2007	Great Bend, Kansas, U.S.	Beech H18	destroyed	1 fatal
The ceiling was overcast at 500 ft and visibility was 2 mi (3,200 m) when the cargo airplane crashed out of control during an ILS approach at 0850.				
Feb. 9, 2007	Rocksprings, Texas, U.S.	Cessna 414	destroyed	2 fatal
The ceiling was overcast at 300 ft and visibility was 3/4 mi (1,200 m) when the airplane struck terrain during an instrument approach at 1715.				
Feb. 10, 2007	Gresse-en-Verco, France	Piper PA-34-200T Seneca	destroyed	3 fatal
Daytime visual meteorological conditions (VMC) prevailed when the airplane struck terrain under unknown circumstances.				
Feb. 12, 2007	Gulf of Mexico	Eurocopter France EC120B	substantial	2 fatal
Daytime VMC prevailed when the helicopter struck a boom on an offshore platform during approach to the platform's helipad.				
Feb. 12, 2007	Rieschweiler, Germany	Piper PA-31T Cheyenne	destroyed	1 fatal
The airplane crashed in a field soon after departing from Zweibrucken in VMC at 1020.				
Feb. 13, 2007	Moscow, Russia	Canadair Regional Jet	destroyed	3 NA
Visibility was 1,000 m (5/8 mi) in snow showers when the airplane crashed on takeoff for a maintenance flight to Berlin.				
Feb. 16, 2007	Natal, Brazil	Piper PA-34-200T Seneca	destroyed	1 fatal
The airplane crashed into the Atlantic Ocean about 50 nm (93 km) from Natal after departing from Natal in VMC for a flight to Dakar, Senegal.				
Feb. 16, 2007	Council Bluffs, Iowa, U.S.	Cessna 340A	destroyed	4 fatal
The airplane struck trees and terrain 3 nm (6 km) from the airport during approach in nighttime instrument meteorological conditions.				
Feb. 18, 2007	Cleveland, Ohio, U.S.	Embraer ERJ-140	substantial	74 none
The airplane overran the runway while landing in a heavy snowfall.				
Feb. 20, 2007	Phenix City, Alabama, U.S.	Piper PA-31-350 Chieftain	substantial	1 serious
The airplane crashed in a ravine near a road during a forced landing following loss of power from both engines.				
Feb. 21, 2007	Surabaya, Indonesia	Boeing 737	destroyed	148 none
The fuselage buckled and broke near the wings during a hard landing at Juanda Airport. The airplane then overran the runway, collapsing the landing gear.				
Feb. 24, 2007	Dallas, Texas, U.S.	Embraer EMB-145LR	minor	26 none
Winds were from 250 degrees at 26 kt, gusting to 36 kt, when the airplane ran off the right side of Runway 31R while landing.				
Feb. 25, 2007	New York, New York, U.S.	Canadair CRJ200	NA	NA none
The flight crew heard a loud noise soon after departing from Norfolk, Virginia. Examination of the airplane after arrival at La Guardia Airport revealed an engine cowling missing and unspecified damage to the horizontal stabilizer.				

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.