

Controller Faulted for Near Collision

An airliner on go-around passed 100 ft above a regional jet holding on the runway.

BY MARK LACAGNINA

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

JETS

Workload Incorrectly Prioritized

Boeing 737-400, Canadair Regional Jet. No damage. No injuries.

U S Airways Flight 1251, a 737-400, was about 10 nm (19 km) from the runway at Fort Lauderdale-Hollywood (Florida, U.S.) International Airport when the local controller cleared the flight crew to land on Runway 09L at 2342 local time Nov. 9, 2005. The controller also advised the crew that several aircraft would be departing from the runway, said the report by the U.S. National Transportation Safety Board (NTSB).

The controller then cleared an airliner for takeoff from Runway 09L and instructed the crew of a regional aircraft to taxi into position on the runway and hold for takeoff. About one minute later, the controller cleared the regional aircraft for takeoff and instructed the crew of Comair Flight 5026, a Canadair Regional Jet, to taxi into position and hold. He advised the

Comair crew that arriving traffic, the 737, was on a four-nm (seven-km) final approach.

“At 2345:15, the controller began a series of exchanges with a helicopter that was 38 miles [70 km] from [the airport] and trying to contact Miami Approach Control,” the report said. “The controller stated that he spent some time working with the helicopter pilot, trying to establish his altitude and position in order to give the pilot the correct [radio] frequency. At that point, the controller said he mistakenly believed that he had already cleared [the Regional Jet] for takeoff.”

At 2345:48, the 737 crew asked the controller if they had been cleared to land. “When [the crew] questioned his landing clearance, the controller stated that he scanned the runway and the radar display and didn’t see anything, so he repeated the landing clearance,” the report said. “Immediately, an unidentified voice on the frequency stated, ‘Traffic on nine left.’”

The controller said that he did not hear the radio transmission. “He realized that he had lost track of [the Regional Jet], so he scanned the radar display, looking for a ‘tag up’ or for a primary return and didn’t see either one,” the report said. “He looked at the runway again and saw [the Regional Jet] still holding in position. He immediately radioed, ‘USAir, go around. USAir, go around. USAir 1251, go around.’”



Recorded air traffic control radar data indicated that the 737 passed about 100 ft above the Regional Jet during the go-around. The report did not say how many people were aboard the aircraft.

The controller notified the tower supervisor of the incident, and the supervisor conducted a quality assurance review (QAR). The QAR summary report concluded that no loss of required separation between the aircraft had occurred because the 737 crew had been instructed to go around when the aircraft was about one nm (two km) from the runway.

The day after the incident, the Regional Jet captain filed a near midair collision report with the control tower.

The control tower is located between Runway 09L and Runway 09R, which is used primarily for smaller general aviation aircraft. When the incident occurred, the controller was handling arrivals and departures on both runways, requiring him to divide his attention in opposite directions, the report said.

“While [the 737] was on approach, there were multiple departures and arrivals operating on Runway 09L and a [Piper] Seneca waiting to depart on Runway 09R,” the report said. The controller described his workload as moderate. Weather conditions included 10 mi (16 km) visibility, scattered clouds at 3,500 ft and surface winds from 060 degrees at 12 kt.

Investigators asked the controller, a 22-year veteran, how he kept track of aircraft cleared to taxi into position and hold on a runway. “The controller stated that his personal practice used to be to slide the departure [data] strip to the left when clearing an aircraft into position on the runway and then cock the strip holder to the left when clearing the aircraft for takeoff,” the report said. “Starting in September, the tower adopted a standard procedure requiring that the strip [holder] be cocked to the left when an aircraft is cleared into position and hold, and that the paper strip be slid left, out of the holder, when the takeoff clearance is issued.” The controller said that he was using the new procedure but that it had not yet become “second nature” to him.

The controller also told investigators that when vehicle traffic on a nearby highway is heavy at night, vehicle lights can make it difficult to see aircraft at the approach end of Runway 09L.

NTSB said that the probable cause of the incident was “the local controller’s failure to monitor the operation and recognize a developing traffic conflict, which resulted in a loss of separation between [the 737 and the Regional Jet].” The board said that a contributing factor was “the controller’s incorrect prioritization of his workload.”

Neglected Throttle Plays Role in Overrun

Airbus A320-200. Substantial damage. No injuries.

The Airbus A320 was en route on a scheduled TransAsia Airways flight with 106 people aboard from Tainan, Taiwan, to Taipei Sungshan Airport on Oct. 18, 2004. Weather conditions at the airport included winds from 297 degrees at 11 kt, 4,500 m (three mi) visibility in light rain, scattered clouds at 800 ft, a broken ceiling at 1,800 ft and an overcast ceiling at 3,500 ft.

The report by the Aviation Safety Council of Taiwan said that the crew conducted an instrument landing system (ILS) approach to Runway 10 and was cleared to land at 1958 local time. The captain, 51, had 12,918 flight hours, including 8,729 flight hours in A320s. The first officer, the pilot flying, 45, had 10,431 flight hours, including 7,048 flight hours in type.

After encountering moderate turbulence on final approach, the first officer disengaged the autopilot at 282 ft radio altitude (RA) but did not disengage the autothrottles. The cockpit voice recorder recorded a central warning system warning, “retard,” four times when the aircraft was below 20 ft RA. Groundspeed was 146 kt and airspeed was 138 kt, one kt higher than the crew’s calculated landing reference speed, when the main landing gear touched down 1,750 ft (534 m) from the approach end of the wet runway, which was 8,550 ft (2,608 m) long and had a 524-ft (160-m) stopway. Landing

The controller was handling arrivals and departures on both runways.

weight was 121,454 lb (55,092 kg); maximum landing weight is 142,196 lb (64,500 kg).

Five seconds after touchdown, the autothrottles disconnected and the no. 1 engine thrust reverser deployed. The no. 2 engine thrust reverser did not deploy. The report said that the no. 2 engine thrust reverser had malfunctioned on a previous flight and the airline had deferred maintenance in accordance with provisions of the aircraft's minimum equipment list.

The crew had armed the speed brakes and selected a medium autobraking deceleration rate. However, the first officer did not retard the no. 2 throttle to the idle position, which corresponds to a throttle lever angle of 20 degrees or less. The no. 2 throttle lever angle was 22.5 degrees on touchdown; the no. 1 throttle lever angle was 19.7 degrees and was reduced to zero degrees after touchdown — and later to minus 22.5 degrees to select reverse thrust. The ground spoilers did not deploy automatically after touchdown because the no. 2 throttle lever angle remained at 22.5 degrees. Moreover, the auto-brakes did not activate automatically because the ground spoilers had not deployed.

The A320 flight crew operating manual says that the pilot flying “should pull the thrust levers back at 20 feet, and the landing should occur without a long flare. ... An audible ‘retard’ callout reminds the pilot if he has not pulled back the thrust levers when the aircraft has reached 20 feet.”

The captain called out “no brake” several times after touchdown. The first officer said, “What’s going on, sir?” The captain replied, “I have no idea.”

The first officer applied the wheel brakes 13 seconds after touchdown, when the aircraft was about 3,750 ft (1,144 m) from the departure end of the runway, but he perceived that the aircraft was not decelerating adequately. The first officer applied maximum reverse thrust on the no. 1 engine. The captain also applied the wheel brakes.

Groundspeed was 66 kt when the aircraft entered the stopway. It then veered off the left side of the stopway. Both engine nacelles struck the ground when the aircraft came to a stop with its nose landing gear collapsed in a drainage

ditch at 1959. The crew shut down the engines and started the auxiliary power unit. No smoke or fire was detected. The captain recommended that the purser evacuate the passengers from the rear exits via service stairs transported to the aircraft by ground service personnel. The purser told the captain that the rear exits were too high to use the service stairs and that the passengers would be evacuated using the slides. No one was injured during the evacuation.

Engine Ingests Deicing Boot Debris

Israel Aircraft Industries Westwind 2. Minor damage. No injuries.

The aircraft departed from Shannon, Ireland, at 1303 local time June 8, 2005, for an air-ambulance flight to St. Johns, Newfoundland, Canada, with seven people aboard. While climbing through 16,000 ft, the flight crew heard a loud bang and observed an increase in the left engine's interstage turbine temperature. The crew throttled the engine to flight idle, returned to Shannon and landed without further incident.

The report by the Irish Air Accident Investigation Unit (AAIU) said that a six-ft (two-m) section of the deicing boot on the left wing had separated and had been ingested by the left engine. “As a consequence, a number of engine fan blades were damaged by boot material,” the report said.

AAIU said that the separation was caused by “insufficient/poor bonding between the boot material and the surface of the wing leading edge.” The report said that the aircraft's deicing boots had been inadequately maintained.

“There is a storage/shelf life for the boots, but there is no definite service life when boots are installed on the aircraft,” the report said. “The boots should be inspected every 200 flying hours and all damage repaired promptly. The deicing boot condition should be checked during each preflight inspection.”

The crew said that nothing of concern had been found during their preflight inspection of the aircraft. Investigators inspected the aircraft the day after the incident. “Both port and starboard wing boots were in poor condition,” the

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report said. “The length of boot which tore away revealed that very little of the adhesive cement had adhered to the wing surface. In addition, silver ‘high-speed’ adhesive tape was used to fill the skin contours. The aircraft manufacturer recommends the use of an aircraft structure filler for this purpose.”

Smoking Door Lock Prompts Diversion

McDonnell Douglas MD-11. Minor damage. No injuries.

The aircraft, operated by World Airways, was en route from Osan Air Base, South Korea, to Seattle with 201 people aboard on April 28, 2005. It was about 950 nm (1,759 km) southwest of Anchorage, Alaska, U.S., when the flight crew smelled and saw smoke in the cockpit. They declared an emergency and diverted the flight to Anchorage, where the aircraft was landed without further incident.

The NTSB report said that a crew change had occurred just before the smoke was detected. During the crew change, the cockpit security door was opened and closed. “An examination of the security door by maintenance personnel and the [NTSB] investigator-in-charge revealed an excess length of wiring, which provides power to the electrically locking security door, was lying atop the door’s metal-encased, unshielded locking solenoid inside the door frame,” the report said. “Several of the wires were encased in a plastic anti-chafe mesh. A portion of the mesh was melted and had the smell of burnt plastic.”

The report said that the door manufacturer’s installation instructions do not include information about securing excess wiring above the locking solenoid.

NTSB said that the probable cause of the incident was “the inadequate installation of the cockpit security door locking device” and that a contributing factor was “the [door] manufacturer’s insufficiently defined installation instructions.”

Long Touchdown Results in Overrun

Cessna Citation Ultra. Destroyed. No injuries.

The captain, who had 5,600 flight hours, said that the visual approach to the 3,975-ft (1,212-m) runway at the Leakey, Texas, U.S.,

airport was normal until he reduced power to idle on short-final approach. He noticed that airspeed was 16 kt above the reference speed but continued the approach “because the aircraft was close to the runway” and there was “extra landing distance to work with beyond what was required.”

The captain said that the aircraft floated beyond the desired touchdown point. The NTSB report said that the aircraft touched down about 2,100 ft (641 m) beyond the approach end of the runway, overran the departure end and struck trees about 200 ft (61 m) beyond the threshold. The aircraft, which was operated by NetJets, was destroyed by the impact and a post-impact fire. None of the six occupants was injured.

The report said that the aircraft flight manual showed that, under the existing conditions, required landing distance was 2,955 ft (901 m). NTSB said that the probable cause of the accident was “the pilot’s failure to land the aircraft at the proper touchdown point on the runway to allow adequate stopping distance.”

TURBOPROPS

Trees Block Rejected Landing

Short Brothers SD3-60. Substantial damage. Two serious injuries.

The aircraft, operated by Air Cargo Carriers, was on a cargo flight from Toledo, Ohio, U.S., to Oshawa (Ontario, Canada) Municipal Airport on the night of Dec. 16, 2004. The Oshawa tower controller told the flight crew that there was a cloud layer at about 100 ft, visibility was 0.5 mi (0.8 km) and the runway was covered by snow, said the report by the Transportation Safety Board of Canada (TSB).

The captain had more than 5,300 flight hours, including 1,000 flight hours in type. The first officer, the pilot flying, had 800 flight hours, including 400 flight hours in type. While conducting the localizer back-course approach to Runway 30, the first officer had difficulty maintaining course, and the captain took control about three nm (six km) from the runway.



The aircraft touched down about one-third of the way down the 4,000-ft (1,220-m) runway. “The captain selected full reverse [thrust],” the report said. “He noted that the rate of deceleration was slower than expected and observed the end of the runway approaching. After five to eight seconds of full-reverse application, he called for a go-around, and the power levers were advanced to maximum takeoff power. With little runway remaining and without referencing the airspeed indicator, the captain rotated to a takeoff attitude.”

The aircraft struck the airport boundary fence, rising terrain and trees. “The cockpit area was wedged between two cedar trees,” the report said. “However, the flight crew evacuation was not hampered.”

The crew had used 15 degrees of flap for the approach and landing. The report said the flight manual showed that at the aircraft’s landing weight, landing distance was more than 4,100 ft (1,251 m) on a dry runway and about 7,400 ft (2,257 m) on a slippery runway.

The report said that Short Brothers had issued an all operator message (AOM) in March 2004 that said there was a remote possibility of flap asymmetry caused by fatigue failure of a flap actuator and that an airworthiness directive prohibiting flap extension to 30 degrees was pending. Based on the AOM, the aircraft operator limited flap extension to 15 degrees. The manufacturer subsequently conducted tests that “cleared” the flap actuators and issued another AOM in October 2004, stating that the airworthiness directive would not be adopted. The report said that the accident flight crew had not been told that the prohibition against using 30 degrees of flaps had been rescinded.

Loose Attachment Binds Elevator

Beech 1900D. No damage. No injuries.

During takeoff from Rockland, Maine, U.S., on Aug. 2, 2005, the Colgan Air captain pulled the control wheel with both hands to rotate the airplane, but the control wheel did not move. “The captain then pulled significantly

harder, and the yoke moved quickly aft,” the NTSB report said. “The airplane jumped into the air, but the captain was able to maintain controlled flight and continue to the destination airport.” None of the nine occupants was injured.

During cruise, however, the captain had to adjust trim every one or two minutes to correct the airplane’s tendency to slowly pitch nose-up. After the airplane was landed in Augusta, Maine, seven rivets on the elevator hinge-point attach brackets were found loose, and one rivet was missing. Loose rivets also were found in other 1900s, and the U.S. Federal Aviation Administration (FAA) issued an airworthiness directive, AD 2005-18-21, to correct the problem.

Crew Loses Control During Restart Attempts

Fairchild Metro III. No damage. No injuries.

A flight instructor with 8,230 flight hours, including 5,388 flight hours in type, was conducting an endorsement training flight on Nov. 21, 2004, with a pilot who had 1,649 flight hours, including 4.5 flight hours in type. The report by the Australian Transport Safety Bureau (ATSB) said that the aircraft was at 4,500 ft near Lake George, New South Wales, when the instructor shut down the left engine.

“During the engine restart preparation, the instructor departed from the published procedure by moving the power lever for the left engine into the beta range and directing the pilot to select the unfeather test switch,” the report said. “These actions were appropriate to prepare an engine for start on the ground with a feathered propeller but not during an airstart. As a result, the propeller on the left engine became fixed in the start-locks position.”

The crew lost control, and the airplane descended 1,000 ft to about 450 ft above ground level (AGL) before the crew regained control and apparently climbed back to 4,500 ft. “The crew could not diagnose the source of the loss of control and proceeded to start the left engine

The captain pulled the control wheel with both hands to rotate the airplane, but the control wheel did not move.

while the propeller was fixed on the start locks,” the report said. “As a result, the crew lost control of the aircraft for a second time, and it descended 1,300 ft, to about 300 ft AGL, before they regained control.”

“After the propeller was fixed in the start-locks position, there would have been significantly high drag on the left side of the aircraft, resulting in it being extremely difficult to maintain the aircraft’s altitude and direction,” the report said. “The instructor displayed exceptional aircraft-handling skill to be able to regain control of the aircraft and to return to Canberra for an uneventful landing.”

The report said that the instructor was administering his first Metro endorsement when the incident occurred and had not practiced an airstart in eight years.



PISTON AIRPLANES

Rejected Takeoff Results in Overrun

Piper Chieftain. Substantial damage. One serious injury, three minor injuries.

During a night takeoff for a charter flight from Nhill, Victoria, Australia, on July 25, 2005, the pilot encountered resistance to rearward movement of the control column when he attempted rotation at about 90 kt. He reduced power to idle and applied maximum wheel braking. The aircraft overran the 1,000-m (3,281-ft) runway and passed through the airport boundary fence, over a public road and through another fence before coming to a stop 162 m (532 ft) from the end of the runway. The pilot received serious injuries, and three passengers received minor injuries.

The ATSB report said that the investigation did not determine why the pilot encountered control resistance when he attempted rotation. The aircraft flight manual indicated that under the existing conditions, accelerate-stop distance was about 845 m (2,772 ft). The report said that the accelerate-stop distance is predicated on setting maximum power before releasing the brakes and rejecting the takeoff at 88 kt. The pilot had conducted a rolling takeoff, gradually

increasing power to maximum and had rejected the takeoff above 90 kt.

“This occurrence also highlights the critical importance of pilots checking that the flight controls are capable of full and free operation prior to commencing the takeoff roll,” the report said.

Wrong Truck, Wrong Fuel

Aero Commander 500S. Destroyed. Two serious injuries.

The pilot said that before departing from Mount Pleasant, South Carolina, U.S., for a public-use flight on April 14, 2003, he had asked the fueler to top off the fuel tanks with 100-octane aviation gasoline.

The fueler later told NTSB investigators that he mistakenly used the Jet A-1 fuel truck instead of the avgas truck and pumped 58 gal (220 l) of Jet A-1 into the airplane.

“The pilot performed a preflight including taking fuel samples from under the wings,” the report said. The pilot said that engine start, run-up and taxi were uneventful. After takeoff, the airplane was about 200 ft AGL when power was lost from both engines. The two occupants were seriously injured, and the airplane’s left wing separated and the aft portion of the cabin was crushed during the forced landing.

NTSB said that the probable cause of the accident was “improper refueling of the airplane by airport personnel” and that a factor was “the inadequate preflight inspection by the pilot-in-command.”

‘Violent Shaking’ Traced to Flutter

De Havilland Beaver. Substantial. No injuries.

The pilot said that the airplane began to shake violently and became uncontrollable during a charter sightseeing flight at 11,000 ft near Mount McKinley, Alaska, U.S., on March 7, 2005. He shut down the engine, believing it to be the problem, but the vibration continued. He then reduced airspeed, and the vibration ceased at about 80 mph.

The pilot restarted the engine, flew the airplane back to Talkeetna at a slow airspeed with the flaps extended and landed without further

incident, the NTSB report said. The pilot and the three passengers were not injured.

An examination of the airplane by FAA aerospace engineers found that the ailerons and rudder were “severely under-balanced,” the report said.

NTSB said that the probable cause of the accident was “aerodynamic flutter of the ailerons during normal cruise flight due to their improper maintenance/balancing, which resulted in structural damage to the airplane’s wings.”



HELICOPTERS

Freewheel Slippage Causes Structural Failure

Eurocopter AS355F1. Destroyed. Three fatalities.

The pilot was conducting a test flight near Andover, Hampshire, England, on Dec. 2, 2003, following installation of an overhauled main rotor gearbox and combining gearbox. The two engineers who had performed the installation were aboard the helicopter.

“Eyewitnesses heard unusual noises coming from the helicopter before the tail boom apparently folded forward around the cabin,” said the U.K. Air Accidents Investigation Branch report. “The helicopter then fell to the ground, catching fire on impact.”

Examination of the wreckage showed that the two gearboxes and the main rotor had detached before impact, and that the freewheels in the combining gearbox had slipped under load. “It is concluded that a series of freewheel

slippages followed by aggressive re-engagements led to the structural failure,” the report said.

The investigation did not determine conclusively why the slippage had occurred but found that the freewheel rollers had come from a batch of rollers that had been coated improperly. “The helicopter manufacturer recorded five incidents of slippage under load coinciding with the introduction of rollers from this batch,” the report said. “Satisfactory performance of the freewheels resumed following the removal from service of the incorrectly coated batch of rollers.”

Flight Continued Into Adverse Weather

Bell 206-L1. Destroyed. Three fatalities.

The helicopter struck the water at a high speed and in a nose-down attitude about two nm (four km) from the destination, Intracoastal City, Louisiana, U.S., during a charter flight from a platform 114 nm (211 km) offshore in the Gulf of Mexico on June 24, 2004. The pilot and the two passengers were killed.

The accident site was in an area affected by a convective SIGMET warning of embedded thunderstorms, the NTSB report said. There was no record that the pilot, who had 6,562 flight hours, including 5,309 flight hours in type, had obtained a formal preflight or in-flight weather briefing.

NTSB said that the probable cause of the accident was “the pilot’s continued flight into adverse weather conditions, resulting in a loss of control.” ●

Preliminary Reports

Date	Location	Aircraft Type	Aircraft Damage	Injuries
July 6, 2006	Patroklos Island, Greece	Canadair CL-215	destroyed	2 none
Engaged in a firefighting operation, the airplane was scooping up seawater in the Argosaronic Gulf when it struck a wave and sank. Both pilots escaped from the airplane and were rescued by a helicopter crew.				
July 7, 2006	Goma, Congo	Antonov An-12	destroyed	6 fatal
An engine problem occurred after the Mango Airlines airplane departed from Goma for a cargo flight to Kisangi. The flight crew was returning to Goma when the airplane struck a hill.				
July 8, 2006	Irkutsk, Russia	Airbus A310-300	destroyed	124 fatal, 59 serious, 17 none
The airplane, operated by S7 Airlines, overran Runway 30, which is 3,165 m (10,384 ft) long, and struck a concrete barrier while landing at about 0750 local time. Weather conditions included an overcast at 600 ft, 3,500 m (two mi) visibility and winds from 280 degrees at 10 kt with thunderstorms in the area.				

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Preliminary Reports				
Date	Location	Aircraft Type	Aircraft Damage	Injuries
July 8, 2006	Tenerife, Spain	Sikorsky S-61N	NA	6 fatal
The helicopter was being operated by Helicsa on a repositioning flight from Santa Cruz de la Palma to Gran Canaria in visual meteorological conditions when it struck the sea near Tenerife.				
July 10, 2006	Multan, Pakistan	Fokker F-27	destroyed	45 fatal
The Pakistan International Airlines airplane reportedly had engine problems soon after takeoff for a flight to Lahore. The airplane struck a powerline, crashed in a field and burned.				
July 10, 2006	Hamilton, Montana, U.S.	Cessna Citation Ultra	substantial	2 none
The airplane overran the 4,200-ft (1,281-m) runway and came to a stop in a creek 328 ft (100 m) beyond the runway.				
July 10, 2006	Easton, Washington, U.S.	Piper Chieftain	destroyed	1 fatal
The airplane was at 8,000 ft on a cargo flight from Spokane to Seattle when the pilot told air traffic control (ATC) that the airplane did not have enough power to maintain the assigned altitude. Soon thereafter, he told ATC that the airplane did not have enough power to cross the Cascade Mountains and that he was diverting to Easton. The airplane struck a tree on final approach to the Easton airport.				
July 12, 2006	Kigoma, Tanzania	Lockheed C-130	destroyed	5 serious
The airplane reportedly was chartered by the United Nations for a flight to Kigoma from Manono, Congo. The flight crew conducted a go-around on the first landing attempt. A tire reportedly burst on the second landing attempt, and the airplane veered off the left side of the runway..				
July 12, 2006	Taos, New Mexico, U.S.	Bell 206B	substantial	2 minor
The pilot conducted a forced landing in mountainous terrain after a tail-rotor problem occurred.				
July 15, 2006	Madrid, Spain	Embraer RJ135ER	substantial	none
The airplane, operated by Regional Compagnie Aérienne Européenne, was parked at the Madrid-Barajas Airport when it was struck by the right wing tip of a taxiing Thai Airways 747-400. The RJ's entire tail section reportedly was ripped off.				
July 18, 2006	Jeanerette, Louisiana, U.S.	Beech 58P Baron	destroyed	3 fatal
Witnesses said that a thunderstorm was near the airport and that visibility was less than one mi (two km) in heavy rain when the airplane, which was on a business flight from Corpus Christi, Texas, touched down about midway down the 3,000-ft (915-m) runway. The witnesses heard sounds consistent with a rejected landing and saw the airplane become airborne near the departure end of the runway. The airplane struck the airport fence, a building, several trees, the roof of a house, several powerlines and a mobile home. The pilot, the passenger and a resident of the mobile home were killed.				
July 19, 2006	Cresco, Iowa, U.S.	Cessna Citation Ultra	destroyed	2 fatal, 2 serious
A severe thunderstorm warning was in effect for the area when the airplane — en route from Oxford, Mississippi, to Rochester, Minnesota — crashed in a corn field. The pilots were killed, and the two passengers received serious injuries.				
July 19, 2006	Saint Thomas, Virgin Islands	Douglas DC-3	destroyed	4 none
The airplane, operated on a cargo flight by Tol Air Services, was ditched in the ocean after one engine failed on initial climb.				
July 23, 2006	Fort Lauderdale, Florida, U.S.	Cessna 402	substantial	1 none
The airplane, operated by Bimini Island Air, struck a runway sign after the nose landing gear collapsed on landing.				
July 25, 2006	Spanish Fork, Utah, U.S.	Spectrum 33	destroyed	2 fatal
Witnesses said that the experimental very light jet rolled right and the right wing tip struck the ground immediately after takeoff. The airplane, which had accumulated 44 flight hours since its first flight in January 2006, was being operated on a maintenance test flight. The preliminary report said that initial examination of the wreckage indicated that the flight control linkage was connected in a manner that would have caused the ailerons to deflect in reverse of sidestick control input.				
July 28, 2006	Memphis, Tennessee, U.S.	McDonnell Douglas MD-10F	substantial	3 none
The nose landing gear collapsed during landing, and the left engine on the FedEx Express airplane was damaged by a postaccident fire.				
July 29, 2006	Sullivan, Missouri, U.S.	de Havilland Twin Otter	destroyed	6 fatal, 2 serious
Witnesses heard a popping sound soon after the airplane took off with seven parachutists aboard. The airplane descended and struck a utility pole and a tree before crashing near a house.				
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.				