

High Speed + Tail Wind + Wet Runway = Overrun

Both pilots had doubts about the landing, but neither called for a go-around.

BY MARK LACAGNINA

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



JETS

'It's Up to You'

Cessna Citation 550. Substantial damage. Seven minor injuries.

As the Citation II neared Manteo, North Carolina, U.S., during a business flight from Tampa, Florida, the morning of Oct. 1, 2010, the flight crew obtained weather reports indicating that the conditions at Manteo's Dare County Regional Airport were deteriorating.

The last report, obtained from the airport's automated weather observing system, said that the surface winds were from 350 degrees at 4 kt, visibility was 1.5 mi (2,400 m) in heavy rain and that there were broken ceilings at 400 ft and 1,000 ft, and an overcast at 1,300 ft.

The pilot-in-command (PIC), the pilot flying, told the copilot that they would conduct one approach and, "if the airport conditions did not look good," they would divert to another airport, said the report by the U.S. National Transportation Safety Board (NTSB).

Both pilots held Citation type ratings. The PIC, 67, had 9,527 flight hours, including 2,025 hours in type. The copilot, 43, had 3,193 flight hours, including 150 hours in type.

Because of the reported wind conditions at the airport, the crew requested clearance to conduct the global positioning system (GPS) approach to Runway 05. However, restricted areas along that approach path were active, and the crew was cleared instead to conduct the GPS approach to Runway 23 and to circle to land on Runway 05. The minimum descent altitudes were 440 ft for the straight-in approach and 600 ft for the circling approach.

According to the pilots, "the airplane crossed the final approach fix on speed (V_{REF} was 104 kt) and at the appropriate altitude, with the flaps and landing gear extended," the report said. "The copilot completed the approach and landing checklist items but did not call out the items because the PIC preferred that copilots complete checklists quietly."

The Citation was on final approach when the PIC told the copilot that they would not circle to land on Runway 05, as planned, because of the low ceiling. "He added that a landing on Runway 23 would be suitable because the wind was at a 90-degree angle to the runway and there was no tail wind factor," the report said. "Based on the reported weather, a tail wind component of approximately 2 kt existed at the time of the accident; and, in a subsequent statement to the Federal Aviation Administration, the pilot acknowledged that there was a tail wind about 20 degrees behind the right wing."

The copilot established visual contact with the runway when the Citation was about 200 ft above the minimum descent altitude for the straight-in approach. “The copilot reported that he mentally prepared for a go-around when the PIC stated that the airplane was high about 300 ft above the runway, but neither pilot called for [a go-around],” the report said.

Data obtained from the airplane’s enhanced ground-proximity warning system indicated that groundspeed was 127 kt when the Citation touched down about 1,205 ft (367 m) beyond the approach end of the 4,305-ft (1,312-m) runway. Thus, about 3,100 ft (945 m) of runway remained to complete the landing.

“Data from the airplane manufacturer indicated that, for the estimated landing weight, the airplane required a landing distance of approximately 2,290 ft [698 m] on a dry runway, 3,550 ft [1,082 m] on a wet runway or 5,625 ft [1,715 m] for a runway with 0.125 in [3.180 mm] of standing water,” the report said.

Moreover, the landing-performance chart in the Citation 550 airplane flight manual “contained a note that the published limiting maximum tail wind component for the airplane is 10 kt but that landings on precipitation-covered runways with any tail wind component are not recommended,” the report said.

Cockpit voice recorder data indicated that as the airplane touched down on the runway, the PIC said, “I don’t think we’re going to do this.”

The copilot replied, “It’s up to you. Your call.”

Both pilots recalled that the speed brakes, thrust reversers and wheel brakes appeared to function normally. However, the copilot perceived that the Citation hydroplaned on the wet runway.

Groundspeed was about 40 kt when the airplane slid off the end of the runway and plunged into Croatan Sound, which is about 50 ft (15 m) from the departure threshold. “As witnesses arrived at the accident site, all of the occupants had exited the airplane and were climbing up the embankment,” the report said.

NTSB concluded that the probable causes of the accident were the PIC’s “failure to maintain proper airspeed and his failure to initiate a

go-around,” and that contributing factors were “the copilot’s failure to adequately monitor the approach and call for a go-around, and the flight crew’s lack of proper crew resource management.”

‘Excessive’ TCAS Maneuver

Boeing 717-200. No damage. One serious injury, one minor injury.

En route from Orlando, Florida, U.S., to White Plains, New York, with 116 passengers and four crewmembers the afternoon of Oct. 26, 2009, the flight crew had begun a descent from Flight Level (FL) 350 (approximately 35,000 ft) over North Carolina when the airplane encountered turbulence.

The captain transferred control of the airplane to the first officer and made a public-address announcement “apologizing to the passengers for the rough ride and assuring them that they were working with ATC [air traffic control] to get a smoother ride at a lower altitude,” the NTSB report said.

As the captain turned on the fasten-seat-belt signs, the traffic-alert and collision avoidance system (TCAS) generated an aural “traffic” warning and displayed a red square on the primary flight displays indicating another aircraft at the one o’clock position and slightly lower. Shortly thereafter, the TCAS generated a resolution advisory (RA) to “monitor vertical speed.”

The captain reassumed control of the airplane, disengaged the autopilot and “initiated a series of excessive control inputs” while leveling the airplane at FL 330, the NTSB report said.

The control inputs resulted in vertical accelerations of +1.6 g, -0.2 g and +1.4 g within about three seconds. The report said that a flight attendant was seriously injured when she was “thrown into a counter” in the forward galley and that a 10-year-old passenger exiting an aft lavatory sustained minor injuries when he was “tossed to the ceiling and then back down to the floor.”

The injured flight attendant and passenger were assisted by flight attendants and by an eye doctor and a retired paramedic who were among the passengers. They were transported by paramedics to a hospital after the airplane landed in White Plains.

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“According to the TCAS manufacturer’s published guidance, a flight crew should ‘promptly but smoothly’ follow a TCAS RA,” the report said. “The advisories are always based on the ‘least amount of deviation from the flight path’ while providing safe vertical separation. Typical RAs ... require crew response within five seconds and g forces of [not more than] 0.25 g.”

Investigators found that this information was not included in the training program and guidance materials provided by the airline for its 717 flight crews.

Unprotected CAT III Approach

Airbus A330-202. No damage. No injuries.

Weather conditions at the destination — Melbourne, Victoria, Australia — had decreased to the minimums required for the instrument landing system (ILS) approach to Runway 16 the night of Sept. 21, 2010. As the A330 descended from cruise altitude with 268 passengers and 11 crewmembers aboard, the flight crew requested a Category (CAT) III (automatic landing system) approach.

“The en route air traffic controller advised that they could expect the approach but that the ILS critical areas would not be protected,” said the report by the Australian Transport Safety Bureau. Protecting areas that are critical to the transmission of localizer and glideslope signals during a CAT III approach involves various methods of ensuring that aircraft, ground vehicles and equipment remain clear of the areas, according to the report.

In view of the deteriorating weather conditions, the airport actually had begun the actions necessary to protect the critical areas, or “secure the airport” against ILS signal interference, about 30 minutes before the A330 reached Melbourne, but the actions had not been completed. The aircraft was 11 nm (20 km) from the airport when the airport traffic controller cleared the crew to land and advised them that the airport was not yet secured.

“The crew did not report any interference with the ILS signals” during the CAT III

approach, the report said. After landing, they advised the aerodrome controller that the cloud base was at about 160 ft and runway visual range was between 300 and 400 m (1,000 and 1,300 ft). Shortly thereafter, the airport implemented low-visibility procedures.

The report noted that protection of ILS critical areas at Australian airports is not required until low-visibility procedures are implemented officially. In this case, however, the airside safety officer at Melbourne had begun the procedures about 40 minutes before low-visibility procedures were implemented.

“This highlights that the time required to physically secure the airport as part of the low-visibility procedures can be lengthy,” the report said. “ATC and aircraft operators need to be aware of and give appropriate consideration to the time required for the airport operator to secure the airport.”

Uncommanded Crossfeed

Cessna Citation 680. No damage. No injuries.

The Citation Sovereign was climbing to cruise altitude during a charter flight with five passengers and three crewmembers from London Luton Airport to Turkey the morning of Sept. 30, 2010, when the flight crew received a crew-alerting system message indicating a fault in the left main electrical bus.

The pilots completed the appropriate checklist actions, which included disengaging the left generator, and turned back toward London Luton, which was 20 minutes away and had favorable weather, said the report by the U.K. Air Accidents Investigation Branch (AAIB).

“When the left generator was selected ‘OFF,’ a number of systems lost power, including the flaps, the left fuel quantity indication and the commander’s primary flight display,” the report said.

The commander transferred control to the copilot, who found as the flight progressed that an increasing amount of right aileron control input was required to maintain a wings-level attitude. Nevertheless, the crew was able to land the Citation at London Luton without further incident.

‘The time required to physically secure the airport as part of the low-visibility procedures can be lengthy.’

The crew had received a false indication of a left main electrical bus fault.

Investigators found that the crew had received a false indication of a left main electrical bus fault because of a malfunctioning circuit board in the aircraft's power-distribution system. Moreover, disengaging the left main electrical bus in compliance with the checklist had caused an uncommanded activation of the fuel-crossfeed system.

The aircraft had departed with a full fuel load of 11,000 lb (4,990 kg). "When the aircraft was powered up again [after landing], all systems appeared to operate normally, including the left fuel quantity indication," the report said. "The left tank fuel quantity indication was approximately 5,500 lb [2,495 kg] (corresponding to full), and the right tank indication was approximately 3,300 lb [1,497 kg]."

The resulting fuel imbalance was 2,200 lb (998 kg). "The maximum permissible lateral fuel imbalance is 400 lb [181 kg], but this can be increased to a maximum of 800 lb [363 kg] in an emergency," the report said.

Tests conducted on the incident aircraft and a similar aircraft showed that isolation of the left main electrical bus caused the crossfeed valve to open and the right fuel boost pump to engage even with the crossfeed switch in the "OFF" position. The result was an uncommanded transfer of fuel from the right tank to the left tank, with "FUEL CROSSFEED" and "R BOOST PUMP" messages displayed by the crew-alerting system.

The report noted that Cessna Aircraft developed modifications to the fuel-control circuit boards in Citation 680s to prevent uncommanded fuel transfer when the left main electrical bus is not powered. The modifications were published in Service Bulletin SB680-24-11 in December 2010 and subsequently mandated by an airworthiness directive issued by the U.S. Federal Aviation Administration.

False Fire Alarm Spurs Evacuation

Boeing 737-800. No damage. Four serious injuries, 21 minor injuries.

The 737 was being taxied for takeoff from Mumbai (India) Airport the night of Aug. 27, 2010, when two standby cabin crewmembers seated on the left side of the aircraft

observed what they thought was fire emanating from the left engine. One of the crewmembers went to the rear galley and used the interphone to inform the captain.

The captain saw no cockpit indications of a fire, said the report by India's Directorate General of Civil Aviation (DGCA). He looked out his side window, which offered only a limited view of the left wing, and saw no indication of a fire. He then stopped the 737 on the taxiway and asked the ground traffic controller if he saw fire on the left side of the aircraft. The controller replied that he saw no fire.

The captain phoned the cabin crewmember-in-charge (CCIC) and asked her if she saw a fire. After looking through a window near the rear of the cabin, the CCIC told the captain that there was a fire under the left wing. He told her to conduct a precautionary evacuation from the right side of the aircraft.

The pilots shut down the engines and the auxiliary power unit, informed ATC that they were evacuating the aircraft because of a fire in the left engine and conducted the evacuation checklist.

The report described the evacuation as chaotic. Several passengers did not heed instructions to remove their shoes and to leave their baggage behind. The CCIC instructed the cabin crew to use only the two right cabin doors, but the left rear door, one of the left overwing emergency exits and both right overwing exits were opened as well. Investigators were unable to determine who opened the exits, which were used by several passengers.

Twenty-one of the 139 passengers sustained minor injuries, and four passengers suffered multiple bone fractures during the evacuation. Most of the minor injuries and all of the serious injuries were sustained while using the overwing exits.

Aircraft rescue and fire fighting personnel found no sign of a fire. Subsequent detailed examinations of the aircraft that included a bore-scope inspection of the left engine also disproved the cabin crew's reports of a fire. Investigators determined that none of the crewmembers had detected smoke or abnormal odors in the cabin before the evacuation was begun.

The report said that the observations of fire emanating from the left engine or from the bottom of the left wing were “imaginative” and based on an illusion created by the wet taxiway’s reflection of flickering red light from the belly-mounted anti-collision beacon.

The DGCA concluded that the captain lacked situational awareness and, based on the “illusionary information” that he received, made a “wrong decision” to evacuate the aircraft.

TURBOPROPS

False Assumption About Fuel

De Havilland DHC-8. No damage. No injuries.

As the Dash 8 neared Winnipeg, Manitoba, Canada, the morning of June 29, 2010, the flight crew calculated that 4,200 lb (1,905 kg) of fuel would be required to complete the next leg, a round-trip between Winnipeg and Island Lake. They radioed the fixed-base operator’s customer service representative (CSR), provided an estimated time of arrival, placed a fuel order and requested that a fuel truck meet the aircraft to facilitate a quick turnaround.

The CSR then became distracted by other tasks and did not pass the fuel order to the line service foreman, said the report by the Transportation Safety Board of Canada (TSB). After the aircraft landed and the engines were shut down, a fuel truck operator moved the truck into position and connected a hose to the aircraft.

Although the pilots were required by company procedure to monitor refuelings, the captain walked away from the aircraft, as did the first officer after conducting a post-flight inspection. “Both pilots saw the fuel truck and assumed the fuel truck operator knew the desired fuel load,” the report said. “They did not reiterate or otherwise communicate their fuel requirements.”

Meanwhile, the fuel truck operator was informed that another aircraft required refueling. He attempted unsuccessfully to locate the Dash 8 pilots before refueling the other aircraft. When he returned to the Dash 8, he made another unsuccessful attempt to locate the pilots. He radioed the

foreman for instructions and was told to attend to yet another aircraft awaiting refueling.

When the pilots returned to the Dash 8, “the fuel truck and operator were gone, and both pilots assumed the aircraft had been fueled,” the report said. “Neither pilot checked the fuel quantity.”

After departing with 22 passengers and a flight attendant, the pilots realized while conducting the 10,000-ft climb check that they did not have enough fuel aboard to safely complete the flight. They returned to Winnipeg and landed with 900 lb (408 kg) of fuel remaining.

Lightning Damages Elevator

Beech 1900C. Substantial damage. No injuries.

The flight crew used the airplane’s weather radar system to circumvent thunderstorms during a cargo flight from Juneau, Alaska, U.S., to Sitka the morning of Oct. 18, 2010. “Once clear of the thunderstorms, they flew direct to the initial instrument approach fix” for the GPS approach to Runway 11, the NTSB report said.

The 1900 was about 2 nm (4 km) from the final approach fix when the pilots and an observer occupying the jump seat saw a buildup of static electricity, or St. Elmo’s fire, near the airplane’s nose. “The first officer [the pilot flying] reported that the light from the static electricity was very bright, and he decided to keep his eyes focused on the instruments,” the report said.

Shortly thereafter, lightning struck the nose of the airplane. “The lightning flash blinded the captain and the observer for about 30 seconds,” the report said. “The first officer was looking at the instrument panel when the lightning flash occurred, so he did not lose his sight.”

The approach and landing were completed without further incident. A subsequent examination of the 1900 revealed that the lightning strike had caused substantial damage to the right elevator.

Faulty Gauge Prompts RTO

De Havilland DHC-6-300. Substantial damage. No injuries.

The Twin Otter was departing from the 650-m (2,133-ft) runway at Bituni Airport in West Papua, Indonesia, the morning of July



18, 2010. Shortly after calling “rotate,” the PIC, the pilot monitoring, saw the torque indication for the right engine drop to zero and called “fail, fail.”

The copilot rejected the takeoff, applying maximum wheel braking and reverse thrust. The tire on the right main landing gear burst, and the aircraft veered off the right side of the runway, where the nose landing gear collapsed. The seven passengers and the pilots were not injured.

The report by the Indonesian National Transportation Safety Committee noted that the calculated rotation speed for the takeoff was the same as V_1 , the maximum speed at which a rejected takeoff (RTO) should be initiated. “An aborted takeoff should not be performed after passing the V_1 speed,” the report said.

Investigators found that the torque indication seen by the PIC was false, caused by a melted fuse in the electrical circuit for the right torque meter. The same problem apparently had been experienced by another flight crew two weeks earlier; the report provided no details about that incident.



PISTON AIRPLANES

Frost Blamed for Stall

Gippsland GA8 Airvan. Substantial damage. One serious injury, one minor injury.

The AAIB report said that the aircraft had been parked outside overnight, and there had been a heavy frost. However, the pilot said that he noticed no ice or frost on the wings when he prepared the aircraft for a parachuting flight from Swindon, Wiltshire, England, the morning of Nov. 28, 2010.

Shortly after lifting off about 90 m (295 ft) from the end of the 650-m (2,133-ft) wet grass strip, the pilot began a left turn to comply with the airport’s noise-abatement policy. “During the turn, he realized the aircraft was descending and checked the engine instruments, observing that the MAP [manifold pressure], fuel pressure and rpm were indicating correctly,” the report said.

The pilot called “brace” three times to prepare his passengers for impact. The aircraft hit the ground immediately afterward in a left-wing-low attitude. The pilot received a serious leg injury; a parachutist sustained whiplash injury; the other seven passengers escaped injury.

Examination of the Airvan revealed a layer of frost on the upper surface of the wing. “The layer, which was difficult to discern against the white paint on the wing, was approximately 1 mm [0.04 in] thick and had a texture similar to medium-grade sandpaper,” the report said.

The AAIB concluded that the frost likely had caused the aircraft to stall at an airspeed corresponding to an angle-of-attack that was too low to trigger a stall warning and at a height that was too low to allow a recovery.

The report cited U.K. Civil Aviation Authority *Safety Sense Leaflet 3*, which states: “Tests have shown that frost, ice or snow with the thickness and surface roughness of medium or coarse sandpaper reduces lift by as much as 30 percent and increases drag by 40 percent.”

Control Lost During Night Approach

Cessna 414A. Destroyed. Two fatalities.

The pilot, who had a multiengine rating but no experience as a PIC in twins, was required by his insurance company to fly his newly purchased 414 for the first 20 hours with “a more experienced pilot,” the TSB report said. Therefore, the pilot had arranged for another pilot to serve as PIC for the first flight, from Toronto to Sydney, Nova Scotia, on Aug. 5, 2010.

The PIC had 530 flight hours and owned a Cessna 340, but he had no experience in a 414. Before departing from Toronto with the owner, he received 1.5 hours of ground instruction and one hour of flight instruction in the aircraft with a check pilot who was experienced in type. “The training consisted of steep turns, slow flight and autopilot work,” the report said. “Aerodynamic stalls were not practiced due to turbulence.”

Night had fallen when the PIC and the owner departed from Toronto. Investigators were unable to determine who was the pilot flying, but the report noted that the PIC made all radio transmissions.

The flight to Sydney was uneventful, and the pilots were cleared to conduct the global navigation satellite system (GNSS) approach to Runway 25. Weather conditions at the airport included winds from 200 degrees at 8 kt, 12 mi (19 km) visibility and a broken ceiling at 700 ft.

The initial portion of the approach was over water. The report said that the pilots did not comply with several ATC instructions to reduce speed due to another aircraft ahead on the approach. The 414 was nearing the final approach waypoint when the pilots were instructed to turn right and return to the initial approach waypoint.

The 414 was turned left instead and flew an erratic flight path for about four minutes. “The aircraft changed heading numerous times, with altitude deviations of up to 500 ft, which was consistent with the aircraft being flown manually, possibly while the GPS was being reprogrammed,” the report said.

ATC told the pilots twice to descend to 3,000 ft. Although the PIC acknowledged the instructions, the aircraft did not descend. The controller then cleared the pilots to conduct the GNSS approach to Runway 25, but there was no response. After the controller repeated the clearance, the PIC responded with the call sign of his 340.

The controller offered radar vectors, but the PIC declined, saying that they were re-established on a heading direct to the initial approach waypoint. Shortly thereafter, the 414 was observed on ATC radar to enter a right turn and descend rapidly in what the report described as a spiral dive. The aircraft struck the water in a near-vertical attitude.

“It is likely that the PIC and the owner were both suffering some degree of spatial disorientation during the final portion of the flight,” the report said. “This resulted in loss of control of the aircraft.”

HELICOPTERS

Snow Suffocates Engine

Bell 407. Substantial damage. Two serious injuries, one minor injury.

The helicopter had been parked outside on a helipad in Decatur, Texas, U.S., for about five hours in blowing snow before engine inlet plugs and exhaust covers were installed. The 407 then remained outside for about 19 hours in temperatures ranging from well below to slightly above freezing.

Film from a surveillance camera showed that no one inspected the engine inlets and exhaust stacks or opened any access panels before the helicopter departed for an emergency medical services positioning flight the afternoon of Dec. 25, 2009.

The helicopter was about 60 ft above ground level when it yawed 90 degrees left. The pilot heard two warning horns and attempted to return to the helipad. However, he was unable to recover rotor rpm before the helicopter struck the ground hard, collapsing the skids but remaining upright. The pilot and the flight medic were seriously injured, and the flight nurse sustained minor injuries.

Investigators determined that the engine had flamed out momentarily after ingesting snow or ice that had accumulated in the intakes.

Runaway Golf Cart Hits Tail Rotor

Eurocopter AS 355-F1. Substantial damage. No injuries.

The pilot said that he confirmed the area was clear before starting the helicopter’s engines in preparation to depart from a golf course in Essex, England, for a positioning flight the afternoon of Oct. 23, 2010.

“Shortly after starting the second engine, he noticed a golf cart on his right side that was ‘traveling at some speed, clearly out of control,’” said the AAIB report. The roof of the golf cart struck the tail rotor, causing damage to the rotor blades, gearbox, drive train and vertical stabilizer.

The pilot, who was not injured in the accident, said he was told that a young child who was climbing into the golf cart with an adult had inadvertently stepped on the accelerator pedal. “The pilot estimated that the cart had traveled 80 m [262 ft] before hitting the tail rotor,” the report said. “The occupants of the cart were unhurt.” ➤



Preliminary Reports, September 2011				
Date	Location	Aircraft Type	Loss Type	Injuries
Sept. 2	Robinson Crusoe Island, Chile	CASA 212	total	21 fatal
Witnesses lost sight of the aircraft as it turned after making two visual approaches to the island airport. Debris subsequently was found floating on the Pacific Ocean.				
Sept. 2	Mumbai, India	Airbus A340	major	104 minor/none
The A340 was entering a high-speed taxiway during a night landing when it veered off the wet runway onto soft ground.				
Sept. 2	Herceg-Novi, Montenegro	Aerospatiale Gazelle	total	3 fatal
The helicopter crashed out of control after striking a wall during an attempted landing.				
Sept. 2	Nightmute, Alaska, U.S.	Cessna 208 Caravan	total	1 fatal
The Caravan crashed out of control after a midair collision with a Cessna 207. The 207 was substantially damaged, but the pilot was not injured.				
Sept. 4	Ottawa, Ontario, Canada	Embraer 145	major	47 minor/none
The 145 veered off the left side of Runway 32 while landing in heavy rain and surface winds from 270 degrees at 13 kt, gusting to 25 kt.				
Sept. 4	Mashhad, Iran	Airbus A300	major	3 serious, 227 minor/none
The A300 veered off the runway after a nose landing gear tire burst during a hard night landing. Three passengers were injured during the emergency evacuation.				
Sept. 6	Trinidad, Bolivia	Fairchild Metro	total	8 fatal, 1 serious
Visibility was 1,500 m (5,000 ft) in smoke when the Metro crashed during a night instrument approach.				
Sept. 7	Yaroslavl, Russia	Yakovlev 42	total	44 fatal, 1 serious
The Yak-42 overran the runway on takeoff and crashed on the banks of the Volga River.				
Sept. 7	Johannesburg, South Africa	Cessna 208 Caravan	major	1 minor/none
The pilot rejected the takeoff when the engine lost power shortly after liftoff. The Caravan overran the runway, and the nose landing gear collapsed.				
Sept. 9	Pasema District, Indonesia	Cessna 208 Caravan	total	2 fatal
Both pilots were killed when the Caravan struck mountainous terrain during a cargo flight.				
Sept. 13	Groblersdal, South Africa	Bell 230	total	6 minor/none
The pilot lost visual contact with the ground in a brownout while landing on a soccer field. The helicopter struck a post, crashed and burned.				
Sept. 14	Huambo, Angola	Embraer Brasilia	total	17 fatal, 1 serious, 6 minor/none
The Brasilia crashed on takeoff in day visual meteorological conditions (VMC).				
Sept. 14	Vallorcine, France	Eurocopter AS 350	total	4 fatal
The helicopter crashed after the tail rotor struck cables during an approach to a landing site at a dam in the Alps.				
Sept. 16	Quito, Ecuador	Embraer 190	total	105 minor/none
Thunderstorm activity was reported when the 190 overran the runway during a night landing and struck a localizer antenna and the airport perimeter wall.				
Sept. 18	El Puerto de Santa María, Spain	Bell 206	total	3 serious
The helicopter was filming various locations near the center of the city when it struck buildings and crashed on a narrow street.				
Sept. 19	Granada, Spain	Bell 412	total	3 fatal
The helicopter struck mountainous terrain during a ferry flight to a fire-fighting base.				
Sept. 20	Milot, Haiti	Beech 99	total	3 fatal
The aircraft crashed in heavy rain about 10 mi (16 km) from the destination, Cap-Haïtien.				
Sept. 22	Yellowknife, Northwest Territories, Canada	de Havilland Twin Otter	total	2 fatal, 3 serious, 4 minor/none
The float-equipped aircraft struck buildings after the pilots rejected a landing on a seaplane base in strong, gusting winds.				
Sept. 25	Kathmandu, Nepal	Beech 1900	total	19 fatal
The 1900 was on a downwind leg to land when it struck a fog-shrouded hill about 1,000 ft above airport elevation.				
Sept. 26	Puerto Ordaz, Venezuela	Douglas DC-9	total	130 minor/none
Day VMC prevailed when the DC-9 landed very hard, separating both engine pylons from their fuselage attachment points.				
Sept. 29	Kutacane, Sumatra, Indonesia	Indonesian Aerospace 212	total	18 fatal
The ceiling was 1,700 ft when the aircraft crashed in mountainous terrain about 15 mi (24 km) southeast of Kutacane, the destination.				

This information is subject to change as the investigations of the accidents and incidents are completed.

Source: Ascend