Faulty Altimeter Spurs Near Collision

An Airbus nearly overran a wayward Pilatus.

BY MARK LACAGNINA

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

JETS

Leak Affected Altitude Indication

Airbus A318, Pilatus PC-12. No damage. No injuries.

The A318 pilots apparently were head down, preparing for their arrival at Bordeaux, France, the morning of June 2, 2010, when they felt a strange motion — similar to slow roll oscillations of about five degrees — that lasted for about 5 seconds. "Seeing nothing abnormal on their primary flight displays, they carried on with the preparation for the arrival," said the report by the French Bureau d'Enquêtes et d'Analyses.

When the oscillations began again, the copilot suspected wake turbulence and looked through the windshield. "He was then in visual contact with an airplane that was very close, slightly above and to the right," the report said. "He disconnected the autopilot and made a pitch-down input to the left, keeping in constant visual contact with the other airplane while passing."

The Airbus descended about 200 ft during the avoidance maneuver, and the copilot checked his traffic-alert and collision avoidance system (TCAS) display to ensure that there were no other aircraft below. "He saw a white diamond symbol on the TCAS, indicating an airplane [was] 2,000 feet below, without realizing at that time that it was in fact the airplane that he had just passed," the report said.

The A318 had overtaken and had passed slightly below a Pilatus PC-12, which also was on a southwesterly heading. The minimum separation between the two airplanes could not be determined from recorded air traffic control (ATC) radar data, but "the crews estimated that the separation was between 15 and 30 m [49 and 98 ft] horizontally and about 100 ft vertically," the report said.

The near collision occurred at Flight Level (FL) 290 (approximately 29,000 ft) in day visual meteorological conditions (VMC) near Aurillac, France. The airspeed difference between the two airplanes was about 170 kt.

The Pilatus was on a ferry flight to San Sebastian, Spain, from Buochs, Switzerland, where an annual maintenance check had been performed. Although the airplane was certified for single-pilot operation, it had two sets of flight instruments. The pilot was flying from the left seat and was accompanied by a passenger who held a commercial pilot license.

They had noticed during departure from Buochs that there was a slight variation in the indications on the two altimeters. "A return to

the departure aerodrome was considered, but the meteorological conditions at that field were mediocre," the report said. "In addition, the aerodrome was in a mountainous region … and a return to the field was risky since the crew didn't know which altimeter to depend on. It was also decided to continue the flight because the forecast meteorological conditions in cruise and at the destination were very good."

The difference between the altimeter indications increased as the airplane climbed to the assigned cruise altitude, FL 270. The pilot and the passenger-pilot also noticed an increasing difference in the readings on the two airspeed indicators. The pilot leveled the airplane when the no. 1 altimeter, on his side of the panel, indicated FL 270; the no. 2 altimeter indicated FL 290. The airspeed indications were 90 kt and 160 kt, respectively.

The pilot reported the altimeter discrepancy to ATC and asked the controller to confirm the PC-12's altitude. The controller replied that the altitude indicated on his radar display — as well as on the display being used by a military ATC specialist at the same facility — was FL 270.

However, the altitudes shown on the controllers' displays corresponded with the Mode C data transmitted by the airplane's transponder, which unknowingly was receiving the erroneous air data that also were being provided to the no. 1 altimeter.

The near collision occurred about 10 minutes after the controller advised the PC-12 pilot of the altitude readout. The incident was reported to ATC by the pilots of both airplanes. The conflict had not been detected by the A318's TCAS or by the controller's short term conflict alert system because of the PC-12's erroneous Mode C data, which showed the airplane at FL 270 while the A318 was shown, correctly, at FL 290.

Realizing that the no. 1 altimeter was reading 2,000 ft low, the PC-12 pilot requested a descent to a lower altitude with less traffic and used the no. 2 altimeter and the no. 2 airspeed indicator for the remainder of the flight.

The fault was traced to a leak in a connector between the cabin differential pressure indicator and a static pressure line for the altimeter, airspeed indicator and vertical speed indicator on the left side of the panel. The leak was caused by a slightly deformed tube that flexed in flight, allowing pressurized cabin air to enter the static line. "Due to this, as soon as the cabin was pressurized, the instruments on the pilot's side indicated an altitude and a speed that were lower than they were in reality," the report said.

The static line had been disconnected and reconnected for a transponder test during the annual maintenance check. "This manipulation is made tricky due to the limited space and the presence of an electrical plug near the pipes," the report said. "At the end of this test, the static circuit is subjected to an impermeability test. In this case, the test did not reveal a leak. … No other failure of this type has been reported to the manufacturer on a fleet of more than 1,000 PC-12s in service in the world, with over 3 million flight hours."

'Severe Shake' Hurts Flight Attendants

Boeing 777-200. No damage. Two serious injuries.

Inbound from Paris, the 777 was descending through 30,600 ft, to land in Narita, Japan, when it encountered jetstream winds the morning of March 5, 2009. The rapid and substantial changes in wind direction and velocity caused the aircraft to pitch nose-down. Indicated airspeed was nearing the operating limit and the descent rate had reached 4,900 fpm when the first officer, the pilot flying, reacted by moving the thrust levers to idle and abruptly pulling back on the control column, said the report by the Japan Transport Safety Board.

The steward said that he 'strongly hit against the ceiling.'

The first officer's control input and the turbulence from the jetstream caused a "severe shake" of the aircraft, the report said. Four flight attendants in the aft galley were thrown into the air and fell on the floor. Two of the flight attendants — a purser and a steward — sustained compression fractures of vertebrae. The purser's injuries occurred when the chief purser fell on top of her. The steward said that he "strongly hit against the ceiling and then fell down on the

floor on my lower back." None of the other 275 people aboard the aircraft was hurt.

The report said that the accident occurred in clear air and that there had been no forecast or pilot reports of turbulence in the area. The pilot-in-command said that the turbulence was "like a mountain wave. It was a slow movement, and there was no large up thrust." The first officer recalled two movements: "The slow and deep movement increased the speed of the aircraft, and the other movement was that the aircraft was suddenly shaken. The shake, itself, was not a strong one, but the amplitude was large."

Flaps Fail on Approach

Raytheon Premier 1. Substantial damage. One minor injury.

The aircraft had been flown from Delhi, India, to Jodhpur for a maintenance inspection on March 18, 2008. The next morning, it departed from Jodhpur for a 20-minute charter flight with five passengers to Udaipur. The flight encountered turbulence but no anomalies until the flight crew attempted to extend the flaps 10 degrees during a visual approach to Runway 26 at the Udaipur airport, said the report by the Indian Directorate General of Civil Aviation.

The flaps did not respond, and the crew received a "FLAP FAIL" message. They conducted the checklist for a no-flap landing and received clearance to land from ATC. The controller noted that the prevailing wind was from 230 degrees at 10 kt.

'The pilot decided to continue instead of making a go-around.'

The checklist for a no-flap landing requires that 20 kt be added to the normal reference approach speed of 114 kt, and the pilot had told the copilot to set the airspeed bugs to 135 kt. "However, the pilot approached with a higher speed," the report said. The aircraft was on final approach when the copilot called out an airspeed of 149 kt and the terrain awareness and warning system (TAWS) issued two "GLIDESLOPE" warnings. "The pilot decided to continue landing with the speed higher than the assigned speed instead of making a go-around," the report said.

The Premier touched down hard just short of the touchdown zone on the dry, 7,500-ft (2,286-m) runway and bounced. Rubber deposits on the runway indicated that the wheel brakes were applied heavily after the second touchdown. After rolling about 150 ft (46 m), both main landing gear tires burst — the right tire, first. The aircraft then gradually veered off the right side of the runway, about 2,200 ft (671 m) from the threshold, rolled about 90 ft (27 m) and struck the airport boundary wall. "Airport fire services immediately reached the site and rescued all persons on board," the report said. The copilot sustained minor injuries; the passengers and the pilot were not hurt.

Liftoff Into Lapwings

Boeing 737-300. Substantial damage. No injuries.

The commander, the pilot monitoring, said that just as he called "V_1" during takeoff from Runway 09 at Ireland West Airport in County Mayo the afternoon of Oct. 19, 2009, a flock of birds rose from the edge of the runway. The 737 struck the birds when the commander called "rotate."

"The commander stated that there were a few bangs on the nose of the aircraft and that the flight crew saw numerous birds going down either side of the aircraft," said the report by the Irish Air Accident Investigation Unit. The left engine was substantially damaged and the right engine sustained minor damage when they ingested some of the birds.

The vibration indications for the left engine increased as the crew continued to climb straight ahead. "The cabin crew reported unusual smells in the cabin and significant vibrations on the left side of the aircraft," the report said.

The commander reported the bird strike to ATC and diverted the flight to Shannon Airport. "The aircraft climbed to FL 160 en route to [Shannon]," the report said. "The crew kept both engines operating and made a normal approach and landing." None of the 127 passengers and five crewmembers was injured.

Several fan blades in the left engine were found bent and distorted. Two fan blades in the right engine also were found distorted, and a portion of the nacelle fan duct acoustic panel

was missing. Five pieces of metal, identified as the missing acoustic panel, were found on the departure runway. The fire crew at Ireland West Airport estimated that 30 to 40 birds had been involved in the accident. The birds were identified as lapwings — wading birds that weigh 150–300 g (5–11 oz).

Four bird patrols had been conducted at Ireland West Airport the morning of the incident. No bird activity was observed during the patrols or during the departure of an A320 six minutes before the 737's departure. Thus, "a bird patrol was not deemed to be necessary prior to the incident flight," the report said. "The duty controller expressed surprise that the strike had occurred, as there had been no previous observed or reported bird activity on the aerodrome that day."

After the incident, the airport ATC manual, which had provided discretion in requesting bird patrols before the arrival or departure of scheduled or jet aircraft, was revised to require bird patrols before such operations.

Gear Damaged by Tire Chocks

Dassault Falcon 20C. Substantial damage. No injuries.

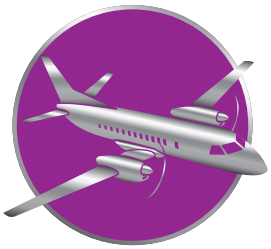
Witnesses saw one of the pilots remove a chock from the nose landing gear tire and place the chock on the ramp. The pilot, who was preparing the Falcon for a flight from Eagle, Colorado, U.S., to Chihuahua, Mexico, the afternoon of Jan. 8, 2010, did not remove the chock from the left main landing gear tire, however.

One witness heard the engines spool up to high power as the Falcon began to taxi and saw the left main tire roll over its chock and then the chock that had been removed from the nose gear tire, said the report by the U.S. National Transportation Safety Board (NTSB).

The airport manager told investigators that the left main landing gear tire burst during the takeoff roll. The captain said he thought that the right tire, not the left tire, had failed. "In addition, he stated that the malfunction occurred at the 120-kt mark, that there were no anomalies with the airplane's braking systems and that he simply could not stop on the remaining runway," the report said.

The Falcon overran the runway into deep snow, causing both main landing gear to collapse and the right wing to buckle. The five passengers and the pilots escaped injury. An examination of the airplane by a U.S. Federal Aviation Administration inspector revealed that both main tires had failed and that there was a "crease or shallow laceration that went across the tire tread on the left main landing gear tire," the report said.

TURBOPROPS



'In and Out of Some Clouds'

Rockwell 690B. Destroyed. Three fatalities.

The pilot was conducting a visual flight rules (VFR) charter flight from Tortola, British Virgin Islands, to San Juan, Puerto Rico, where his two passengers were to connect with an international airline flight the afternoon of Dec. 3, 2008. The NTSB report said that the airplane departed late from Tortola and the pilot "may have felt pressured" to expedite the flight to San Juan.

VMC, with 10 mi (16 km) visibility and a few clouds at 3,000 ft, prevailed in San Juan. As the Turbo Commander neared the airport, ATC stopped receiving its altitude readout. This likely was because the airplane was descending at a rate that the ATC radar data processing system assessed as excessive and possibly incorrect, the report said. The groundspeed readout was 250 kt.

The controller asked the pilot to report his altitude, and the pilot replied that he was descending through 3,200 ft. "Because aircraft operating in VFR flight are not required to comply with minimum instrument altitudes, aircraft receiving VFR radar services are not automatically afforded minimum safe altitude warning services except by pilot request," the report said.

The controller advised that the minimum vectoring altitude was 5,500 ft in the area and asked the pilot if he was maintaining VFR flight. The pilot replied, "We are in and out of some clouds right now." A few seconds later,

the airplane struck a mountain at 2,310 ft about 14 nm (26 km) southeast of the airport. Witnesses said that the mountain was obscured by fog and rain.

Problems Plague Positioning Flight

Dornier 328-100. Minor damage. No injuries.

The pilots had been hired to ferry the aircraft from a storage facility in Dundee, Scotland, to a maintenance base in Oberpfaffenhofen, Germany, the afternoon of Sept. 23, 2009.

Maintenance had been performed in Dundee to prepare the Dornier for the ferry flight, but the aircraft had been flown only once in the past 21 months, from a storage facility in Aberdeen to Dundee, said the report by the U.K. Air Accidents Investigation Branch.

"The preflight procedures included an extensive inspection of the aircraft documentation; an external inspection, during which the commander noted that both engines' oil levels were just below full; and a ground run," the report said.

The crew did not effectively communicate their intentions in English to ATC.

Shortly after takeoff, the "RH ALT" (right alternator) warning light illuminated. The pilots had begun to conduct the corresponding checklist when the commander noticed that oil pressure in the left engine was fluctuating. "While the crew were discussing the fluctuating oil pressure, the red left engine oil pressure warning illuminated," the report said.

The crew declared an emergency and notified ATC that they were returning to Dundee. The commander then decided to shut down the left engine. The copilot was about to retard the left power lever when the commander noticed that oil pressure in the right engine was fluctuating. "The crew stopped the left-engine shutdown drills, and the commander asked the copilot to request radar vectors to the nearest suitable airfield," the report said.

Noting that Russian was the native language of both pilots, the report said that the crew did not effectively communicate their intentions in English to ATC. The copilot apparently believed that he was requesting vectors to the nearest airport when he told the controller, "We are having problems with two engines, and it's the shortest way to the field." The controller believed that he was asking for vectors to Dundee.

The pilots then spotted an airport ahead and believed that it was the one to which they were being vectored. When they reported the field in sight, the controller advised that it was RAF Leuchars and that Dundee was 10 nm (18 km) farther ahead. The controller then asked if they needed to land at RAF Leuchars. Believing that the controller was offering an alternative to the airport they had in sight, the crew replied, "Negative." The controller again advised that they were flying toward RAF Leuchars, not Dundee, and the crew replied, "Roger."

However, the airport traffic controller at RAF Leuchars saw the Dornier approaching and cleared the runway. The pilots landed the aircraft without further incident.

Examination of the engines revealed that corrosion had prevented their air-switching valves from opening. The valves control the flow of bleed air that is used to provide a pressurized supply of oil to the engine bearings. The failure of the valves to open had caused the bearing cavities to become overpressurized and engine oil to be discharged from the engines through the breather and vent systems.

Unapproved Part Cited in Gear Collapse

Beech King Air A90. Substantial damage. No injuries.

Maintenance performed on the King Air to prepare it for sale included several servicings of the left main landing gear in an attempt to prevent the shock absorber, or strut, assembly from losing pressure. "The strut was then inflated to a 6-in [15-cm] extension, which was about twice the recommended extension," the NTSB report said. "After this last inflation, the strut did not lose pressure."

The report said that, in an attempt to compress the overextended strut, the left wing tanks were refueled and the right wing tanks were left nearly empty for a maintenance test flight at

DeKalb, Illinois, U.S., the afternoon of March 2, 2010. The primary purpose of the test flight was to check throttle adjustments and engine performance.

"Upon completion of the flight, the pilot returned to the departure airport, where he attempted a landing with a left quartering tail wind and with the airplane flaps fully retracted," the report said. The left main landing gear collapsed after touchdown, and the airplane veered off the left side of the runway. The pilot and the passenger, who held pilot and mechanic certificates, escaped injury.

Examination of the airplane revealed that the strut assembly was designed for use in a Beech Queen Air and was not approved for installation on the King Air. The report said that the probable causes of the accident were "the company's improper maintenance practices and the pilot's decision to take off with an overextended landing gear strut."

PISTON AIRPLANES

Ice Factors in a Hard Landing

Cessna 402B. Substantial damage. No injuries.

The 402 encountered moderate icing conditions shortly after departing from Sioux City, Iowa, U.S., for a cargo flight to Aberdeen, South Dakota, the morning of March 10, 2009. The pilot activated the airplane's ice-protection systems and received clearance from ATC to climb to 12,000 ft, which was above the cloud tops.

"The pilot noted that the unprotected areas of the wings and windshield were still contaminated with ice when he initiated the descent into [Aberdeen]," the NTSB report said. The airport was reporting winds from 360 degrees at 22 kt, gusting to 30 kt; 1 mi (1,600 m) visibility in light snow and mist; a few clouds at 600 ft; a broken ceiling at 1,400 ft; and a 2,300-ft overcast.

"The unprotected areas of the airplane continued to accrue ice while [the pilot was] being vectored to join the instrument landing system (ILS) approach to Runway 31," the report said. "The runway was partially obscured by blowing snow due to a strong crosswind."

The windshield was covered with ice, except for a narrow section protected by a heated plate, and the pilot had difficulty aligning the 402 with the runway. The airplane crossed the threshold at 120 kt, entered a high sink rate and landed hard, damaging the right wing and engine nacelle. The pilot was not hurt.

Examination of the airplane showed that there was no appreciable ice on the protected surfaces but that 1.0 to 1.5 in (2.5 to 3.8 cm) of ice had accumulated on the unprotected surfaces. The report said that the ice accumulation and the strong, gusting crosswind were factors in the accident.

Lights Out at Alternate Airport

Piper Chieftain. No damage. No injuries.

Before departing from Mackay, Queensland, Australia, for a charter flight with five passengers to Clermont, about 240 km (130 nm) southwest, the night of Feb. 25, 2010, the pilot-in-command (PIC) filed Mackay as an alternate airport because of forecast thunderstorm activity at Clermont.

The flight crew conducted a global positioning system (GPS) approach to Clermont but were unable to land. "Having insufficient fuel for a further approach, the flight crew advised [ATC] that they were conducting a weather diversion back to Mackay," said the report by the Australian Transport Safety Bureau (ATSB).

However, visibility at Mackay had decreased to 300 m (1,000 ft), and two airliners were holding over the airport, waiting for conditions to improve. The PIC decided to divert to Proserpine, about 90 km (49 nm) north of Mackay. He asked ATC to arrange for someone to be at the airport, to ensure that the runway lights were on. The controller replied, "There is no one on the ground at Proserpine," and told the crew that the radio frequency for the pilot-controlled light system at the airport was 120.6 MHz. This frequency, however, was no longer valid; it had been changed to 126.7 MHz 10 days earlier.

The crew, who were familiar with the airport, conducted an unspecified instrument approach but were unable to activate the runway lights. The Chieftain's fuel supply was critical, and the crew maneuvered to land with reference to lights on an airport parking lot and moonlight reflecting off the wet runway. The PIC "positioned the aircraft to align with what he thought was the approximate runway centerline [while] the copilot monitored and called the aircraft's altitude," the report said. "The runway threshold marking came into view, and the PIC landed the aircraft."

HELICOPTERS

Wrench Left on Rotor Head

Eurocopter AS 350-B3. Substantial damage. No injuries.

A pilot and two maintenance technicians boarded the helicopter to perform a functional check flight following balancing of the main rotor blades in Parker, Arizona, U.S., the morning of March 16, 2010. The occupants heard a bang when main rotor speed reached 100 percent and felt vibrations as the helicopter was lifted into a hover. Believing that further blade balancing was required, the pilot landed the helicopter, the NTSB report said.

While preparing to continue their work, the mechanics could not find the wrench that they had used to secure a bolt on top of the rotor head. Examination of the helicopter revealed that the wrench had been left on the rotor head and had become dislodged during the flight, damaging a main rotor blade, the tail boom and the lower vertical stabilizer.

Winch Cable Strikes Ship's Mast

Bell 412. No damage. Two serious injuries.

The helicopter was on an emergency medical services flight to evacuate an ill crewmember from a container ship 132 km (71 nm) from Horn Island, Queensland, Australia, the afternoon of Nov. 9, 2009. The flight crew had been told that there was no suitable landing area on the ship and that they would have to use the helicopter's winch to pick up the patient from the ship's forecastle.

The pilot established a hover about 10 m (33 ft) over the forecastle, and the winch operator began to lower a rescue crew officer and a paramedic to the deck. However, the pilot then lost sight of the ship, and the helicopter began to drift backward.

"Despite assistance from the winch operator to re-establish the hover, the pilot was unable to arrest the helicopter's movement," the ATSB report said. "The winch cable became fouled on the foremast while the helicopter continued to drift rearward." The winch cable snapped, and the two crewmembers fell about 6 m (20 ft) onto the ship's deck.

The paramedic was winched aboard another helicopter about two hours later, and the patient and the rescue crew officer were transported to a hospital by a boat.

Coke Obstructs Engine Oil Passages

Eurocopter AS 350-B2. Minor damage. No injuries.

The helicopter was descending into a canyon during an air tour flight with six passengers near Peach Springs, Arizona, U.S., on March 3, 2009, when the pilot heard a loud pop and noticed that main rotor speed was decreasing. He then conducted an autorotative landing in an open area.

The NTSB report said that a bearing in the Honeywell LTS101 engine had seized because of oil starvation. The oil passages had been blocked by coke, a solid residue that remains when oil is overheated and evaporates.

In January 2009, the engine manufacturer had published a bulletin recommending that the engine be run at idle for two minutes before shutdown and then motored for 10 seconds after shutdown to prevent coke buildup.

The operator had instructed its pilots to comply with the recommended pre-shutdown procedure but not the post-shutdown procedure "due to concerns about depletion of oil in the engine oil reservoir," the report said. Investigators were unable to determine if noncompliance with the recommended post-shutdown procedure contributed to the bearing failure.

Preliminary Reports, January 2011

Date	Location	Aircraft Type	Aircraft Damage	Injuries
Jan. 1	Surgut, Russia	Tupolev 154B-2	destroyed	3 fatal, 121 NA
During start-up, a fire erupted in the Tu-154's right engine and spread to a fuel tank. Three occupants died, and about 39 were injured.				
Jan. 1	Orange, Massachusetts, U.S.	Cessna 310F	substantial	1 fatal, 1 minor
Witnesses saw the 310 flying low before it struck trees and crashed, killing the passenger, during a visual approach in night VMC.				
Jan. 3	Maple Creek, Saskatchewan, Canada	Beech King Air B200	substantial	3 none
The King Air was on an air ambulance flight when it veered off the runway during landing.				
Jan. 3	New Stuyahok, Alaska, U.S.	Beech E18S	substantial	1 none
The cargo airplane struck rising terrain when the pilot attempted to go around after touching down on an ice-covered runway.				
Jan. 5	Birmingham, Alabama, U.S.	Beech 58P Baron	destroyed	1 fatal
The Baron crashed in a residential area during an attempted go-around from a night ILS approach with 2 mi (3,200 m) visibility and a 300-ft overcast.				
Jan. 5	Asheboro, North Carolina, U.S.	Cessna 340A	substantial	1 none
The owner was conducting a high-speed run to test the engines after maintenance when the 340 overran the runway.				
Jan. 6	Kipnuk, Alaska, U.S.	Cessna 208B	substantial	6 none
The captain said that he landed long to avoid a bump on the runway. The Caravan then overran the snow- and ice-covered runway, and struck a ditch.				
Jan. 6	Springfield, Illinois, U.S.	Learjet 35A	destroyed	2 minor, 4 none
The Learjet veered off the runway after the landing gear collapsed during a hard touchdown.				
Jan. 7	Montpellier, France	Beech King Air B200	substantial	4 minor
The flight crew returned to the airport after the electrical system failed during initial climb in IMC. The landing gear collapsed on touchdown.				
Jan. 7	Riyadh, Saudi Arabia	Aerospatiale AS 265N	destroyed	4 fatal
The Dauphin helicopter crashed shortly after departing from Riyadh for an emergency medical services flight.				
Jan. 7	Macapo, Venezuela	Partenavia 68C	destroyed	5 fatal, 1 serious
The airplane crashed during a forced landing after its fuel supply was exhausted.				
Jan. 9	Orumiyeh, Iran	Boeing 727-200	destroyed	79 fatal, 26 serious
Visibility was 800 m (1/2 mi) in snow when the 727 struck terrain 8 km (4 nm) from the runway during approach.				
Jan. 10	Kuching, Malaysia	Airbus A320-216	substantial	129 NA
No fatalities were reported when the A320 veered off the runway while landing in heavy rain.				
Jan. 14	Goiânia, Brazil	Beech King Air B200	destroyed	6 fatal
The King Air struck a hill during a night approach in low visibility and heavy rain.				
Jan. 16	Edmonton, Alberta, Canada	Beech King Air B200	substantial	1 NA, 4 none
One occupant was injured when the King Air slid off the runway while landing during an air ambulance flight.				
Jan. 17	St. Thomas, U.S. Virgin Islands	Convair 340-71	substantial	2 none
The crew shut down the left engine and returned to the airport after a fire erupted on departure for a cargo flight. The Convair veered off the runway during landing.				
Jan. 19	Chicago, Illinois, U.S.	Cessna Citation X	substantial	1 minor, 1 none
The Citation slid off the runway while landing at Waukegan Regional Airport.				
Jan. 20	Santa Clara, Ecuador	de Havilland DHC-6-300	destroyed	6 fatal
The Twin Otter struck terrain about 15 minutes after departing from Shell-Mera Airport for a relief supply flight to Tena.				
Jan. 28	Patrimônio Regina, Brazil	Beech 58 Baron	destroyed	3 fatal
The Baron crashed in a rural town shortly after departing from Londrina Airport for a charter flight.				
Jan. 31	Waterman's Peak, Arizona, U.S.	McDonnell Douglas 369FF	substantial	1 fatal, 2 serious, 1 minor
The pilot was killed when the survey helicopter crashed during an attempted pinnacle landing.				

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.