# **Runway Deficit**

# The pilots saw vehicles ahead and realized something was amiss.

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

# **Reduced Thrust Set for Takeoff**

Boeing 777-300ER. No damage. No injuries.

he flight crew began the takeoff from Runway 05R at Auckland (New Zealand) International Airport the afternoon of March 22, 2007, believing that the full length — 3,230 m (10,598 ft) — was available. Flaps and engine thrust had been set accordingly. "During the takeoff, they saw work vehicles in the distance on the runway and, realizing something was amiss, immediately applied full engine thrust and got airborne," said the report by the New Zealand Transport Accident Investigation Commission (TAIC). The 777 passed 92 ft over the vehicles.

The aircraft had arrived in Auckland about two hours earlier on a flight from Sydney, Australia. Before departing from Sydney, the crew read a notice to airmen (NOTAM) advising that available takeoff and landing distance on Runway 05R had been reduced to 2,320 m (7,612 ft) due to work in progress on the eastern portion of the runway. The crew therefore planned to conduct a reduced-length landing at Auckland.

The NOTAM also said that, with 45 minutes' prior notice, the full length of the runway would be made available temporarily for longhaul international aircraft. As the 777 neared Auckland, the full length of the runway was made available for the departure of an aircraft bound for Singapore. "For traffic sequencing, the aerodrome controller held the Singaporebound aircraft at the runway holding point and cleared the [777] pilots to land their aircraft first," the report said. "Because the full length of the runway was temporarily available, the aerodrome controller advised the pilots that the full length of the runway was available for their landing." The crew landed the 777 and taxied to the gate.

There were 357 passengers and 18 crewmembers aboard for the return flight to Sydney. The airport ground controller told the crew to taxi to Runway 05R and to hold on Taxiway A10 for departure. The crew did not request clearance to back-taxi on the western runway extension, which would have added 393 m (1,289 ft) to the available takeoff distance. To ensure that the crew knew about the reduced runway length, the controller said, "Confirm you will depart from alpha ten reduced length?" The crew confirmed that they would begin the takeoff from A10, believing that the full length of the runway was available and misunderstanding the controller's reference to "reduced length" as meaning the western runway extension that they were not planning to use.

"The first officer was the pilot flying, and the pilots set the thrust that they had determined was necessary for a reduced-thrust departure using the full length of the runway from intersection A10," the report said. An  $N_1$  — fan speed — setting of 86.4 percent and a flaps 5 setting were used. The proper settings for the reduced takeoff distance were 94.6 percent  $N_1$  and flaps 20.

The 777 was about halfway down the runway when the pilots saw the work vehicles, which included a rubber-removal truck and the airport safety officer's utility vehicle. The captain immediately applied takeoff/go-around thrust - 104.8 percent N<sub>1</sub>. "The recorded airspeed at the time was 149 knots," the report said. "Within 4 seconds, the aircraft accelerated to the pilots' predetermined takeoff decision speed  $(V_1)$  of 161 knots. The first officer later said that immediately after reaching V<sub>1</sub>, the captain called 'rotate' when the rotation speed  $(V_R)$  of 163 knots was achieved. The aircraft became airborne approximately 190 m [623 ft] before the end of the reduced runway and climbed away steeply." The crew landed the aircraft in Sydney about three hours later.

The pilots told investigators that because the full runway length was available for their landing, they believed that it also was available for takeoff. They said that this belief was reinforced by the words "active runway mode normal operations" at the beginning of the automatic terminal information service (ATIS) broadcasts they had received. The report said that these words meant only that the approach threshold of Runway 05R was not displaced. The pilots said that they had overlooked information provided later in the ATIS broadcasts about the reduced runway length.

The report noted that the ATIS broadcasts for Auckland were twice the length recommended by the International Civil Aviation Organization (ICAO) and were cluttered with noncritical "permanent" information. Among recommendations based on the findings of the incident investigation, TAIC said that the New Zealand Civil Aviation Authority should "ensure that ATIS broadcasts ... have clear word and sentence structures, are unambiguous, never imply that things are normal when they are not, contain no permanent information and conform as closely as possible to ICAO-recommended standards."

Undetected Damage Blamed for Rudder Loss

Airbus A310-300. Substantial damage. One minor injury.

Pre-existing damage within the rudder worsened after the aircraft departed from Varadero, Cuba, for a flight to Quebec City the morning of March 6, 2005, and eventually caused the rudder to separate in flight, said the Transportation Safety Board of Canada (TSB). There were 262 passengers and nine crewmembers aboard the aircraft.

The A310 was cruising at Flight Level (FL) 350 (approximately 35,000 ft) 90 nm (167 km) south of Miami when the flight crew heard a loud bang and felt a vibration. The aircraft then entered a Dutch roll. "Cabin crewmembers located in the back of the aircraft were thrown to the floor, and unsecured galley carts moved freely," the TSB report said. One cabin crewmember received a minor back injury.

The crew disengaged the no. 1 autopilot, believing that it was the source of the problem. However, when the no. 2 autopilot was engaged, the Dutch roll intensified. The autopilot was disengaged, and the captain hand-flew the aircraft. The crew requested and received clearance to descend, and they prepared to divert the flight to Fort Lauderdale, Florida, U.S.

"Throughout the event, there was no ECAM [electronic centralized aircraft monitor] message relating to the control problem ... and there were no warning lights or cockpit indications of an aircraft malfunction," the report said. "Even with limited clues as to the cause of the Dutch roll, the crew knew that descending to a lower altitude might lessen or stop the Dutch roll motion."

The Dutch roll motion decreased during the descent and stopped at FL 280. The A310 was abeam Miami when the crew decided to return to Varadero. Their first indication that the rudder was the cause of the control problem came when they were unable to correct a slightly crabbed attitude with rudder inputs during final approach. Nevertheless, they landed the aircraft without further incident. "After shutdown, it was discovered

The pilots told investigators that because the full runway length was available for their landing, they believed that it also was available for takeoff. that [only] small pieces of the rudder were still attached to the vertical stabilizer," the report said.

The accident aircraft first flew in 1991 and had accumulated 49,225 flight hours and 13,444 flight cycles. The rudder basically comprises carbon-fiber-reinforced plastic side panels bonded with resin to a composite honeycomb core. Investigators determined that some disbonding of a side panel or a core fracture likely existed when the A310 departed from Varadero and that the damage worsened to the point that it caused the rudder to flutter and fail during the flight.

"The manufacturer's recommended inspection program for the aircraft was not adequate to detect all rudder defects," the report said. "The damage may have been present for many flights before the occurrence flight." Based on this finding, the TSB recommended that the European Aviation Safety Agency work with the industry to "develop and implement an inspection program that will allow early and consistent detection of damage to [composite] rudder assemblies."

# Switch Movement Cited in Shutdown

Boeing 717-200. No damage. No injuries.

he flight crew was beginning the descent from FL 330 during a flight from Perth, Western Australia, to Karratha on Sept. 6, 2006, when the right engine lost power soon after the autothrottle system commanded a thrust reduction. "During the completion of the relevant non-normal checklist items, the crew noticed that the main fuel switch for the right engine was selected to 'OFF," said the report by the Australian Transport Safety Bureau (ATSB). The crew restarted the engine as the aircraft descended through FL 160 and landed without further incident in Karratha.

ATSB determined from recorded flight data that the main fuel switch had been moved to the "OFF" position when the descent was begun. "The means for that switch movement could not be determined," the report said. A possibility was that the switch had not been locked in the "ON" position and had moved to the "OFF" position due to vibration or unintentional contact. The 717's main fuel switches are on the center console, below the throttle levers. After the incident, the aircraft operator issued a safety alert to its 717 crews advising that the main fuel switches could be moved to the "ON" position without correctly engaging the locking detent. "That alert also warned flight crew of the possibility of inadvertent in-flight selection of the switches to 'OFF' by catching wristbands or long-sleeve shirt cuffs," the report said. "In addition, flight crew were advised to not pass technical manuals or other similar items across the throttle quadrant in the vicinity of the main fuel switches."

# **Ice Crystals Cause Dual Flameout**

Raytheon Beechjet 400A. No damage. No injuries.

Soon after beginning a descent from FL 410 in instrument meteorological conditions (IMC) on July 12, 2004, the flight crew felt a jolt, heard a bang and noticed that cabin pressure was decreasing. The airplane, with nine people aboard, was over the Gulf of Mexico, about 100 nm (185 km) west of Sarasota, Florida, U.S., en route from Duncan, Oklahoma, to Fort Myers, Florida. There was convective activity in the area.

"The [pilots] donned their oxygen masks, declared an emergency and went through the emergency descent checklist," said the report by the U.S. National Transportation Safety Board (NTSB). "They noticed that every warning light in the cockpit was illuminated and that the engines were not operating. After several unsuccessful attempts to restart the engines, the pilots were able to get the right engine restarted as the airplane descended through 10,000 feet."

The crew diverted the flight to Sarasota and landed without further incident. Tests of the engines revealed no discrepancies. The fuel remaining in the Beechjet met Jet-A specifications, but the concentration of icing inhibitor, a fuel additive, was only 0.02 percent; concentrations of 0.10 to 0.15 percent are specified by the airplane flight manual.

NTSB determined that the probable cause of the incident was "high-altitude ice crystals that

# **ONRECORD**

had accreted on the compressor vanes and were ingested into the high-pressure compressor when the pilots retarded the power levers [for the descent], causing compressor surges and flameouts of both engines." Contributing factors were "the lack of training on the hazards of high-altitude ice crystals to gas turbine engines and guidance to the pilots to activate the engine anti-ice system in conditions where highaltitude ice crystals may exist," the report said.

# **Trim Control Loss Traced to Condensation**

Bombardier Challenger 604. No damage. No injuries.

bout 4 1/2 hours after departing from Lagos, Nigeria, to fly to Farnborough, England, on Nov. 11, 2005, the autopilot pitch trim system failed. About 30 minutes later, both the primary and secondary manual pitch-trim systems failed. The manual systems are activated by switches on the control columns. The Challenger does not have a backup mechanical pitch-trim system, said the U.K. Air Accidents Investigation Branch (AAIB) report.

"The pilots elected to descend to a lower level, believing that 'cold soaking' of the aircraft in the very low temperatures at FL 400 could be a cause of the trim system faults," the report said. However, pitch trim ran to almost full nose-down despite manual application of noseup trim commands.

"Consequently, although the commander remained the handling pilot, it was necessary for the copilot to assist him by applying aft pressure to the control column," the report said. "There is no indication that the crew attempted to disconnect the system through the stabilizer trim disconnect switches."

Although the checklist for landing with a stabilizer trim failure called for use of 20 degrees of flap, the commander decided to keep the flaps retracted, to avoid increasing the nosedown pitch. The runway at Farnborough was not long enough for a no-flap landing, so the crew requested and received clearance to divert to London Stansted Airport. The air traffic controller advised the crew that the Challenger was 65 nm (120 km) from Stansted, 25 nm (46 km) from Luton and 20 nm (37 km) from Heathrow. "Concerned with the physical effort required to fly the aircraft manually, the commander decided to divert to Heathrow," the report said.

A passenger, an off-duty employee of the company who held a pilot's license, assisted the crew by manipulating the throttles. The approach and landing at Heathrow were conducted without further incident.

The incident aircraft was manufactured in 2004 and had accumulated 202 flight hours. Initial examination revealed no pre-existing defects. The report cited several previous pitchtrim incidents that involved moisture contamination of the horizontal stabilizer trim control unit motherboards in Challengers and their regional jet derivatives. These incidents were believed to have been caused by water entering the control unit, which is located beneath the floor near the cabin door and galley. The response was to require protective tape to be installed on portions of the motherboard.

However, AAIB determined that the November 2005 incident likely was caused by condensation on the Challenger's motherboard. Laboratory tests showed that moisture contamination occurred during prolonged exposure to a hot and humid environment, followed by exposure to a cold environment. "Faults appeared after about five hours due to the cold external wiring cooling the motherboard and allowing condensate to build up, due to the humid air," the report said. The faults caused by the moisture contamination included multiple intermittent short circuits.

### **TURBOPROPS**

# **Unfeathered Prop Causes Control Problems**

Bombardier DHC-8/Q400. No damage. No injuries.

he aircraft was on a scheduled flight with four crewmembers and 69 passengers from Stockholm to Kalmar, Sweden, on April 6, 2006. During descent for the initial approach in visual meteorological conditions (VMC), an overspeed of the right propeller occurred. "According to the emergency checklist, a number of actions are to be taken, ending with feathering the faulty



propeller and switching off the engine to reduce the air resistance (drag) of the propeller," said the report by the Swedish Accident Investigation Board.

The commander decided, however, not to feather the propeller and to keep the engine operating at flight idle. He increased power from the left engine from flight idle to 40 percent torque. The first officer asked whether she should secure the right engine. "The commander rejected this proposal, referring to the fact that the approach had now begun and that he understood that, in this situation, one should not start a shutdown sequence but continue the approach and land," the report said.

The commander increased left-engine power to 90 percent to level off at 2,000 ft. "The first officer once again asked the commander if she should secure the right engine but again received a negative answer," the report said. "At this stage, the autopilot automatically disconnected due to the increased asymmetric power, and the aircraft had to be flown manually. At the same time, the automatic 'up-trim' system in the engine increased the power from the left engine to 100 percent torque."

The Q400 began to sink rapidly. The terrain awareness and warning system (TAWS) generated a "TERRAIN, PULL UP" warning and several "SINK RATE" warnings when the aircraft was 1,200 ft above ground level (AGL), sinking at 3,700 fpm and in a right turn, away from the airport. The commander increased leftengine power to 125 percent, which is beyond the torque limit, and began a climbing left turn toward the final approach course.

The airport air traffic controller noticed on his radar screen that the aircraft was off course and 800 ft low. At the same time, the first officer reported that they had an engine problem. The controller asked if they needed assistance, and the first officer replied, "We don't need any assistance. It will be a normal landing."

"At this stage, the air traffic controller decided that the situation really was serious and set off the alarm," the report said. While calling emergency services, the controller saw the Q400 in level flight at a very low height — 200 to 300 ft AGL — about 1 nm (2 km) from the runway threshold. "The controller was convinced that there would be an accident and therefore said to the emergency services, 'Come out with all you've got. He's going to crash," the report said.

Recorded flight data showed that full rudder and aileron control were used during the approach. The aircraft passed 15–20 ft over the runway threshold and touched down about 20 m (66 ft) beyond the threshold. "Roll-out on the runway took place with no further problems," the report said. "The rescue vehicles followed the aircraft to its parking place on the apron."

The commander told investigators that he did not complete the propeller overspeed checklist, by feathering the propeller and shutting down the engine, because "he thought the Q400 had so much power that this was not necessary," the report said. "During the approach, he found that controlling the aircraft became more and more difficult ... and found it difficult to understand why."

The 125 percent torque setting had been maintained for 1 minute and 15 seconds, and did not cause any damage to the left engine. The propeller overspeed was traced to contact between a sensor and a bus bar on the propeller hub that produced sparks and electromagnetic interference with the propeller electronic control unit.

In the two-year period preceding the incident, six propeller overspeeds had occurred during the airline's operations. "The QRH [quick reference handbook] emergency checklist was not followed in any of these cases," the report said. "Instead, the crews had either carried out only part of the list or not followed it at all. ... Several explanations were given for not completing the checklist in these situations."

Among actions taken by the airline after the April 2006 incident were a revision of the emergency checklist to improve its clarity and implementation of propeller overspeed training during simulator checks. "At the same time, the automatic 'up-trim' system in the engine increased the power from the left engine to 100 percent torque."

# **ONRECORD**

# Airspeed, Turbulence Cited in Breakup

Aero Commander 690A. Destroyed. Four fatalities.

he airplane was about 1,038 lb (471 kg) over its maximum takeoff weight when it departed from Oklahoma City to fly to Orlando, Florida, U.S., the afternoon of Oct. 15, 2006. About 37 minutes later, while cruising at FL 230, the pilot was told by air traffic control (ATC) that radar showed the airplane entering an area of heavy precipitation, the NTSB report said. The pilot acknowledged the information.

The Aero Commander was being flown 15 to 20 kt above its turbulence-penetration speed when moderate turbulence was encountered. ATC radar indicated that the airplane made a 180-degree turn while descending at about 13,500 fpm. The wreckage was found the next day, scattered over a densely wooded area in Antlers, Oklahoma. "An examination of the airframe revealed that the airplane's design limits had been exceeded and that the examined fractures were due to overload failure," the report said.

# **Engine Fails During Flight Over Mountains**

Cessna 208B. Destroyed. Three fatalities, five serious injuries.

he Caravan was over a designated mountainous area at 9,000 ft, during a flight from Tofino, British Columbia, Canada, to Vancouver, on Jan. 21, 2006, when the engine failed. "A compressor turbine blade failed as a result of the overstress extension of a fatigue-generated crack," the TSB report said. "The subsequent internal damage to the engine was immediate and catastrophic."

The pilot turned toward Port Alberni Regional Airport, about 17 nm (31 km) away. "The pilot was in VMC, but he would have to enter cloud during the descent," the report said. "The pilot then requested navigational information to help keep the aircraft clear of the mountains. ... There is no capability for air traffic controllers to provide such navigational guidance." The aircraft did not have, and was not required to have, a TAWS.

ATC lost radio communication with the pilot when the aircraft descended through 7,000 ft. Pilots of other aircraft in the area heard the Caravan pilot declare an emergency and say that he was attempting a forced landing on a logging road. "The aircraft struck trees during a steep right-hand turn and crashed," the report said. The pilot and two passengers were killed.

# **PISTON AIRPLANES**

# **Aileron Rigging Error Missed on Preflight**

De Havilland DHC-2. Substantial damage. No injuries.

he pilot said that both he and the maintenance technician who had rebuilt the Beaver checked the engine and flight controls before attempting the first flight following the rebuild on April 17, 2007. Winds were from 150 degrees at 16 kt, gusting to 22 kt, when the airplane departed from Runway 14 at Ted Stevens Anchorage (Alaska, U.S.) International Airport. The Beaver was about 150 ft AGL on initial climb when it suddenly rolled right about 90 degrees, the NTSB report said.

"The pilot applied left aileron and left rudder control, but the airplane did not respond," the report said. "He retarded the engine power to idle and pushed forward on the control yoke to maintain airspeed." The right wing, then the left wing struck the runway, and the airplane touched down hard on the main landing gear, departed the runway and struck a ditch.

"A postaccident examination of the airplane and flight controls revealed that the chain control linkage within the control yoke was misrouted at the base of the control column, thereby reversing the aileron activation," the report said. NTSB said that the rigging error and the pilot's inadequate preflight inspection were the probable causes of the accident.

# **Fuel Injectors Blocked by Rust Particles**

Piper Aztec. Destroyed. One fatality.

The aircraft had been stored outside at Bagby Airfield near Thirkelby Hall, England, with no engine runs conducted, for nearly five years before the pilot bought it in February 2006, the AAIB report said. Water was found in the fuel system during maintenance and inspections conducted before the sale; the system was flushed, and the fuel filters were cleaned.



The pilot flew the Aztec a little more than three hours before returning it to Bagby Airfield for an annual maintenance inspection. A fuel injector in the left engine was found blocked; all the fuel injectors were cleaned, and the fuel system again was flushed.

Winds were from 250 degrees at 5–8 kt when the pilot arrived at the airfield to pick up the airplane on June 29, 2006. Bagby is an unlicensed airfield with two grass runways. The main runway, 06/24, is 710 m (2,330 ft) long, and Runway 24 has a nearly 3-degree downslope.

Witnesses saw smoke emerging from both engines as the Aztec departed from Runway 24. The pilot radioed that the aircraft was not climbing properly and then flew a tight pattern to return for a landing on Runway 24. The aircraft touched down hard and bounced several times before the pilot conducted a go-around. The aircraft was observed climbing slowly before it banked steeply left, stalled and spun to the ground.

"The examination of the engines revealed that two different types of corrosion debris had affected many of the fuel injector nozzles," the report said. One of the fuel injectors on the left engine was totally blocked, and those on the right engine had flow rates reduced by 55 to 91 percent. The report said this indicated "that despite the cleaning and flushing of the fuel system, not all of the corrosion debris had been removed from the system."



# **HELICOPTERS**

# Water Contact During Go-Around

Sikorsky S-61N. Minor damage. No injuries.

he helicopter was returning with 12 passengers to Den Helder (Netherlands) Airport from a North Sea platform on Nov. 30, 2004. IMC prevailed at the airport, and visibility was deteriorating in fog. The first officer, the pilot flying, told the pilot-in-command (PIC) that he would conduct the instrument landing system (ILS) approach at 70 kt, rather than the standard 100 kt, to provide "ample time to observe everything," said the report by the Dutch Safety Board. The PIC told the first officer to descend "and stay just a bit below" the glideslope. The report said that he likely expected that this would hasten their acquisition of the approach lights and reduce the possibility of a go-around.

The helicopter was about 250 ft over the Waddenzee when the PIC noticed that airspeed had decreased to 20 kt and the helicopter was descending rapidly. He applied full power and maximum aft collective. The descent was arrested, but the S-61 touched the water before it began to climb. It then was landed at the airport without further incident. The water contact had caused no damage, but the gearbox had been overloaded during the recovery and required replacement.

The report said that the failure of both pilots to promptly notice and correct the decreasing airspeed and increasing descent rate likely was caused by fatigue, neglect of standard operating procedures and checklists, preoccupation with an autopilot problem and lack of recent experience in the S-61.

# Tail Rotor Control Lost During Landing

Bell 206L-3. Substantial damage. Two minor injuries.

he news helicopter was engaged in filming a rescue operation at 12,500 ft in mountainous terrain near Taos, New Mexico, U.S., on July 12, 2006. After circling an open landing area three times, the pilot attempted a run-on landing. The LongRanger began to yaw right about 30 ft AGL, and the pilot was not able to correct the yaw, the NTSB report said. The helicopter struck the ground and rolled onto its left side.

"The pilot reported that the wind was calm and the temperature was approximately 70 degrees F [21 degrees C]," the report said. "The pilot stated that he did not complete any performance calculations prior to the flight." NTSB said that the probable cause of the accident was loss of tail rotor effectiveness during the attempted landing in the high-density-altitude conditions.

"When operating at high altitudes and high gross weight, tail rotor thrust may not be sufficient to maintain directional control," the report said. "In these conditions, gross weight needs to be reduced and/or operations need to be limited to lower density altitudes."•

# ON**RECORD**

DateLocationAircraft TypeAircraft DamageJan. 2, 2008Tehran, IranFokker 100destroyedSnow was falling when the Fokker skidded off the runway during takeoff.Jan. 2, 2008Masbate, PhilippinesNAMC YS-11AsubstantialWinds were reported from 040 degrees at 10 kt, gusting to 14 kt, when the airplane overran Runway 21 on landing	Injuries 59 none
Snow was falling when the Fokker skidded off the runway during takeoff.Jan. 2, 2008Masbate, PhilippinesNAMC YS-11Asubstantial	59 none
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whilds were reported norm 040 degrees at 10 kt, gusting to 14 kt, when the airplane overlain kurway 21 off and ing	and struck a concrete fence.
Jan. 3, 2008 Bahía Piña, Panama Britten-Norman Islander destroyed	2 serious
The flight crew reported an engine problem before the Islander stalled and crashed on approach.	
Jan. 3, 2008 Deauville, France Boeing 737-400 minor	174 none
The 737 ran off the runway during landing.	
Jan. 3, 2008 Oklahoma City Pilatus PC-12/45 none	1 fatal
The pilot was shutting down the engine after landing with seven passengers when a line technician walked into	o the propeller and was killed.
Jan. 4, 2008 Los Roques, Venezuela LET 410VP destroyed	14 fatal
During descent, the pilot reported that both engines had failed. The airplane crashed while being ditched.	
Jan. 5, 2008 Kodiak, Alaska, U.S. Piper Chieftain substantial	6 fatal, 3 serious, 1 minor
A passenger said that the baggage door opened during takeoff. The pilot lost control while attempting to return Chieftain crashed into the ocean.	n to the airport, and the
Jan. 7, 2008 Bangkok, Thailand Boeing 747-400 none	334 none
All four generator control units failed about 30 minutes after the 747 departed from Bangkok. The crew returner power and instruments.	d to the airport using standby
Jan. 9, 2008 Detroit Airbus A319-100 substantial	73 none
The no. 2 engine fan cowling separated during approach and struck the horizontal stabilizer. Engine maintenance had b	een performed before the flight.
Jan. 11, 2008 Windhoek, Namibia Cessna 210M destroyed	6 fatal
The airplane crashed in a residential area after losing power during takeoff for a charter flight.	
Jan. 14, 2008 Lihue, Hawaii, U.S. Beech 1900C destroyed	1 fatal
The airplane crashed in the ocean during a night cargo flight to Lihue from Honolulu.	
Jan. 15, 2008 Port Saïd, Egypt Beech King Air C90B destroyed	2 fatal
The King Air crashed on takeoff during a training flight.	
Jan. 16, 2008 Cleveland Beech 58 Baron substantial	1 fatal
The Baron crashed in Lake Erie during takeoff from Burke Lakefront Airport for a positioning flight.	
Jan. 16, 2008 Tulsa, Oklahoma, U.S. Aero Commander 500B substantial	1 fatal
The airplane was departing in night instrument meteorological conditions (IMC) for a cargo flight when the pilot pilot lost control while attempting to return to the airport.	ot reported gyro problems. The
Jan. 17, 2008 London Boeing 777-200ER substantial	2 minor, 191 none
Both engines lost power and did not respond to throttle inputs during final approach. The 777 touched down in a gra	assy area short of the runway.
Jan. 19, 2008Huambo, AngolaBeech Super King Air 200destroyed	13 fatal
The King Air crashed into a mountain during an approach in night IMC.	
Jan. 22, 2008 Ochopee, Florida, U.S. Robinson R44 substantial	2 fatal
The helicopter was seen maneuvering erratically before it crashed during a training flight.	
Jan. 23, 2008Miroslawiec, PolandCASA C-295MdestroyedThe Polish Air Force airplane crashed in a forest during final approach.	20 fatal
Jan. 25, 2008 Pointe Noire, Congo Antonov An-12 destroyed	2 serious
The Antonov struck a 727-200 after its brakes failed during taxi. Both airplanes reportedly were damaged beyor	
Jan. 26, 2008 Malinau, Borneo CASA 212-200 destroyed	3 fatal
The airplane crashed during a cargo flight from Tarakan to Long Apung, Indonesia.	
Jan. 26, 2008 Los Angeles Robinson R44 destroyed	1 fatal
The helicopter struck power lines and crashed on a highway.	
Jan. 30, 2008 Sugapa, Indonesia de Havilland Canada DHC-6 substantial	1 fatal, 2 serious, 18 none
The Twin Otter skidded off the runway while landing and struck several people, killing one and injuring two oth	
Jan. 31, 2008 West Palm Beach, Florida, U.S. Boeing 757 none	NA
The crew declared an emergency because of smoke in the cockpit and cabin. After landing, six occupants were unknown injuries.	
NA = not available This information, gathered from various government and media sources, is subject to change as the investigations of the accid	lents and incidents are completed.