

Throttle Trouble

Inadvertent thrust increase caused a fatal overrun.

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

'The Crew Failed to Perceive the Cause'

Airbus A310. Destroyed. 125 fatalities, 41 serious injuries.

The A310 overran the runway while landing at Irkutsk, Russia, the morning of July 8, 2006. The airplane struck the reinforced concrete airport perimeter fence and several brick garages before stopping, said the report by the Russian Interstate Aviation Committee. Both pilots, three cabin crewmembers and 120 passengers were killed. Three cabin crewmembers and 38 passengers were seriously injured. Twenty-two passengers sustained minor injuries, and 15 escaped injury. The A310 was destroyed by the impact and fire.

The airplane was on a scheduled flight from Moscow. The captain, 45, had 10,611 flight hours, including 1,056 flight hours in type. He had flown Antonov An-24s, Boeing 757s and Tupolev Tu-154s before transitioning to A310s in May 2005. The copilot, 48, had 9,771 flight hours, including 158 flight hours in type. He had flown An-26s as a captain and Tu-154s as a copilot before transitioning to A310s two months before the accident. The report noted that while transitioning from the three-pilot Tu-154 to the two-pilot A310, neither the

captain nor the copilot had received crew resource management training on two-pilot operations. The pilots had conducted 12 previous A310 flights together.

The flight crew that had conducted the previous flight in the accident airplane had reported a malfunction of the thrust reverser on the left engine, and it had been deactivated by maintenance personnel in accordance with the A310's minimum equipment list before the airplane departed from Moscow.

The flight to Irkutsk was uneventful. The report noted, however, that the copilot used an incorrect radio frequency to report to air traffic control (ATC) that they were beginning descent. After correcting the error, the copilot told the captain, "I didn't switch it over. ... It's night, and we're not getting enough sleep."

The Irkutsk airport was reporting surface winds from 270 degrees at 4 m/second (8 kt), 3,600 m (2 1/4 mi) visibility with weak rain showers and an overcast ceiling at 190 m (623 ft). The runway was wet, and braking action was reported as good.

The crew disengaged the autopilot and autothrottles while conducting a nondirectional beacon (NDB) approach to Runway 30. After the airplane touched down in the runway touchdown zone — about 200–300 m (656–984 ft) from the threshold, the spoilers deployed and the autobrakes activated in the "LOW" mode. "The captain moved the right engine (no. 2) thrust reverser [lever] forward," the report said. "However, simultaneously with the subsequent

reduction of the reverse mode of engine no. 2, engine no. 1 started to speed up (forward thrust), which led to an increase in airplane speed and the onset of torque that pulled the airplane to the right. The crew failed to perceive the cause of what was happening.”

In accordance with the engine manufacturer’s recommendation, the captain had not moved the lever for the deactivated left thrust reverser. Postaccident experiments indicated that he might have inadvertently moved the left throttle lever forward with the palm of his hand when he used his fingers to move the right thrust reverser lever aft. The report said that shaking and vibration of the airplane from contact with the rough runway likely contributed to the unintended movement of the left throttle lever, which caused engine power to increase to 60 percent of maximum takeoff thrust. The airplane’s groundspeed, which had decreased to 165 km/hour (89 kt), began to increase. The left throttle lever movement also caused the spoilers to retract and the auto-brakes to disengage.

The left throttle lever movement also caused the spoilers to retract and the autobrakes to disengage.

The pilots received aural and visual warnings that the airplane was not configured properly for takeoff. Because the warnings were not related to landing and were not expected by the pilots, they might have contributed to their inability to recognize the developing situation. “The unusual behavior of the airplane, especially the strong turn to the right, increased the mental and physiological load on the pilots and facilitated the distraction of attention from control over the engine rpm and speed,” the report said.

The copilot did not comply with a requirement to continuously monitor engine parameters and airspeed during the landing. The airplane was about 850 m (2,789 ft) from the end of the 2,425-m (7,956-ft) runway when the captain said, “What’s wrong?” The copilot replied, “Speed increasing.” The captain told the copilot, “Reverse once again.” The copilot moved the right thrust reverser lever, but, because of the position of the left throttle lever, the thrust reverser doors on the right engine did not unlock.

Maximum wheel braking was applied, but “because of the significant forward thrust of the left engine ... the braking force came to equal the total thrust of the engines, [and] speed stabilized [at] about 180 km/hour [97 kt],” the report said.

Aircraft rescue and fire fighting (ARFF) vehicles arrived about one minute after the airplane came to a stop. The report said that 67 occupants were evacuated by flight attendants and 11 were rescued by ARFF and municipal fire and rescue personnel before rescue efforts were halted six minutes later because of intense flames inside the cabin. The fire was extinguished about 2.5 hours later. Of the 120 fatalities, 119 were caused by acute carbon monoxide poisoning, and one was caused by severe trauma and burns.

Engine Separates During Departure

Boeing 747-100. Substantial damage. No injuries.

N ighttime visual meteorological conditions (VMC) prevailed when the airplane departed from Chicago for a cargo flight to New York on Oct. 20, 2004. The 747 was climbing through 15,000 ft over Lake Michigan when the flight crew heard a loud bang, detected a left yaw and observed indications that the no. 1 — left outboard — engine had failed, said the report by the U.S. National Transportation Safety Board (NTSB).

“A visual inspection by the crew of the no. 1 engine to check for damage revealed that the [mounting] pylon was still in place but the engine was missing,” the report said. The crew diverted to Detroit and landed without further incident.

Most of the no. 1 engine was recovered from the lake bottom, about 270 ft (82 m) below the surface, during the summer of 2005. Examination of the engine showed that an uncontained separation of about half of the second-stage turbine disk rim had occurred in flight, creating a severe imbalance that caused the turbine exhaust case to break up and release the engine.

The report said that an anti-seize compound that is not authorized for use because it causes corrosion had been used on second-stage

turbine bolts during maintenance of the engine and no preservation procedures had been performed before the engine subsequently was placed in storage for five years. Only a visual inspection of the high-pressure turbine and turbine exhaust case had been performed before the components were installed on the no. 1 engine of the accident airplane 94 operating hours before the separation occurred.

'All Clear' Signal Given Prematurely

Airbus A320-200. Substantial damage. No injuries.

Light rain was falling, but visibility was good when the aircraft was pushed back from its stand onto a taxiway at London Heathrow Airport the afternoon of June 26, 2006, for a scheduled flight to Munich, Germany. The A320 was given a long pushback to a relatively narrow part of the taxiway, to allow another aircraft to be taxied to the stand, said the report by the U.K. Air Accidents Investigation Branch (AAIB).

The pushback was conducted by a marshaller and the driver of a towbarless tractor. After the pushback was completed, the tractor was disconnected and parked near the A320's right engine. The marshaller did not signal the tractor driver to reposition the vehicle outside the aircraft movement area before disconnecting his headset and giving the flight crew the "all clear" hand signal.

The marshaller then got into the tractor and was told by the driver that the vehicle could not be driven forward because a warning light indicated that the nosegear cradle retracting mechanism had malfunctioned, causing the "drive inhibit" system to engage. Neither ground crewmember used the drive inhibit override button. "[They] heard the aircraft's engines start to increase power and saw the aircraft start to move," the report said. "They both got out of the tractor in an attempt to indicate, with hand signals, that they wanted the aircraft to stop. [When] it became apparent that the flight crew were not looking in their direction ... they both returned to the tractor to make another attempt to move it and also for their own protection."

The commander could not see the tractor, and the copilot's view of the tractor was

blocked by a windshield post. The pilots heard a "graunching" sound but felt no impact when the bottom of the right engine nacelle struck the rear of the tractor and pushed it out of the way. They observed no abnormal indications but decided to have the aircraft inspected after they were clear of the narrow portion of the taxiway. "Just as the commander was about to transmit a request for ATC to dispatch a vehicle to inspect the aircraft, he heard a transmission [by the tractor driver] advising ATC to stop an aircraft as it had hit a tractor," the report said. "Realizing that they were the aircraft involved, the crew stopped the aircraft and applied the parking brake. At the same time, ATC advised them to stop the aircraft."

The right engine was shut down, and ARFF personnel observed substantial damage but no fuel leaks. The pilots then taxied the aircraft on one engine to a stand, and the 83 passengers disembarked.

Taxiway Mistaken for Takeoff Runway

Cessna Citation CJ1. No damage. No injuries.

The pilot had been on duty nearly 13 hours when he was cleared to take off on Runway 36L at Memphis (Tennessee, U.S.) International Airport the night of Oct. 11, 2007. He turned onto parallel Taxiway M and began the takeoff, toward a Bombardier CRJ200 that was holding at an intersection, facing away from the Citation, about 5,320 ft (1,622 m) away.

"The tower controller made two transmissions to advise that the aircraft was departing on a taxiway," the NTSB report said. The Citation pilot did not acknowledge the warnings until the airplane lifted off the taxiway. "He did not realize the centerline lights were green until he was near flying speed, so he continued the takeoff and offset to the left of the taxiway immediately after liftoff," the report said, noting that runway centerline lights are white. The Citation passed 400–500 ft (122–152 m) over the regional jet.

"The Memphis air traffic quality assurance manager stated that there had been a number of previous attempts to commence takeoff from the 150-foot [46-m] wide taxiway but that the

The right engine nacelle struck the rear of the tractor and pushed it out of the way.

mistake had always been caught before takeoff,” the report said.

Stomach Bug Incapacitates PIC

Boeing 767-300. No damage. No injuries.

The 767 was en route from Nagoya, Japan, to Cairns, Queensland, Australia, with two flight crewmembers, seven cabin crewmembers and 162 passengers the night of July 9, 2007. The aircraft was about 1,390 km (751 nm) from Cairns when the pilot-in-command (PIC) collapsed on the cockpit floor after getting out of his seat to go to the lavatory, said the report by the Australian Transport Safety Bureau (ATSB).

“There was no response from the PIC to the copilot’s questioning,” the report said. “The copilot switched on the cockpit lights and saw that the PIC appeared to be staring into space and remained unresponsive.” The copilot summoned the cabin service manager, who administered oxygen to the PIC and then helped him to the lavatory. Medical assistance also was provided by MedAire, through a radio link, and by a medical practitioner who was a passenger aboard the flight.

The aircraft was midway between Guam and Cairns. The copilot decided to continue the flight to Cairns because of tropical storms on the route to Guam. About 50 minutes after he collapsed, the PIC returned to the cockpit. The copilot remained the pilot flying. When the 767 entered Australian airspace, the PIC transmitted a “PAN” call and requested that emergency services be on standby for the landing, which subsequently was conducted without further incident.

“The PIC was subsequently examined and cleared to return to flight duties by a designated aviation medical examiner (DAME),” the report said. “The DAME determined that the PIC probably had been affected by a gastrointestinal illness that had previously been experienced by members of the PIC’s family.”

Parking Brake Set During Pushback

Embraer 135LR. Substantial damage. No injuries.

The tug used to push the airplane from the gate at Newark, New Jersey, U.S., on July 24, 2006, was larger and more powerful than

the tug preferred for regional jet pushbacks but “was approved, with caution, at stations where a preferred tug was not available,” the NTSB report said.

“As the tug began to move, the landing gear tires skidded against the tarmac, and the pushback was aborted,” the report said. “Approximately 14 inches [36 cm] of skid marks were observed near the main landing gear tires. The airplane sustained damage to the forward pressure bulkhead, forward longerons and nose landing gear.”

NTSB said that the probable cause of the accident was “the captain’s failure to follow company procedures, which resulted in pushback with the parking brake set.” The report said that the captain and the ramp marshaller had not complied with aircraft operating manual requirements that the marshaller query, and the captain verbally confirm, that the parking brake is released before pushback is begun.

TURBOPROPS

Broken Turbine Blade Causes Engine Fire

Bombardier DHC-8-400. Substantial damage. No injuries.

The airplane was climbing through 13,500 ft, en route from Sandefjord, Norway, to Bergen with 27 passengers on May 19, 2004, when the flight crew heard a bang, felt a jolt and observed indications that the left engine had failed. “Shortly later, the fire alarm actuated,” said the report by the Accident Investigation Board of Norway.

The crew conducted the “Engine Failure/Fire/Shutdown” checklist, declared an emergency and turned back to Sandefjord. While conducting the checklist, the crew shut down the left engine and discharged a fire extinguisher bottle into it. The fire warning light remained illuminated, however, so the crew discharged the second fire extinguisher bottle into the engine. The warning light stayed on, but the approach and landing were conducted without further incident. The report said that the engine fire likely was extinguished by the extinguishing agent from one or both of the



bottles, or went out by itself about seven minutes before the landing.

After the Dash 8 came to a stop on the runway, the right engine was shut down and the passengers were evacuated. ARFF personnel sprayed foam into the left engine, which was not burning but was still very hot.

Examination of the Pratt & Whitney Canada (PWC) PW150A engine showed that one of the first-stage low-pressure compressor blades had fractured due to fatigue. The resulting compressor imbalance caused major internal damage and an oil leak from a crack in the fuel heater. “This oil flowed backward and was ignited by the hot exhaust gases at the rear of the engine,” the report said. “The fire caused major damage to the engine and caused the fire alarm to continue even after the engine had been cooled completely.”

After the accident, PWC issued several service bulletins, recommending engine inspections and installation of an improved first-stage compressor.

Inadequate Rotation Leads to Overrun

Fairchild Metro III. Minor damage. No injuries.

The center of gravity (CG) was at the forward limit when the Metro crew began the takeoff from Lasham Airfield in Hampshire, England, for a cargo flight on Oct. 10, 2006. The copilot, the pilot flying, said that he pulled the control column “a bit” after the commander called “rotate,” but the aircraft did not respond, the AAIB report said.

He pulled the column “a bit more,” but the aircraft still did not respond. “He reported that he then pulled the control column back half to three-quarters of its full travel,” the report said. “The nose of the aircraft pitched up a small amount but no further. He advised the commander of the problem. The commander took control and, after trying to rotate the aircraft himself without success, he rejected the takeoff by applying reverse thrust and maximum braking.”

The Metro overran the 1,797-m (5,896-ft) runway and came to a stop in a grassy area 34

m (112 ft) from the end of the runway. One tire was damaged, and the brakes on all four main wheels were replaced because of wear and suspected overheating.

“During the investigation, the manufacturer and another [Metro] operator were contacted regarding the handling characteristics of the aircraft during takeoff,” the report said. “They confirmed that, with a forward CG, the handling pilot would be required to pull the control column back a large amount in order to rotate the aircraft and complete the takeoff.”

The pitch trim had been set in the middle of the takeoff range, rather than in the nose-up position recommended for a forward CG. “This would have exaggerated the need for a large aft movement of the control column during rotation,” the report said.

The crew’s relative inexperience was a factor in the incident, the report said. The commander had 2,150 flight hours, including 1,915 flight hours in Metros, of which 250 flight hours were as commander in type. The copilot had 585 flight hours, including 295 flight hours in type.

Electrical Discharge Damages Engine

Cessna 208. Substantial damage. No injuries.

The float-equipped airplane departed from Strahan, Tasmania, Australia, with 10 passengers for a chartered sightseeing flight on Feb. 5, 2006. The Caravan was at 4,500 ft when the pilot observed the chip detector warning light, indicating the presence of metallic fragments in the engine oil and abnormal engine wear.

“The pilot decided to land the plane as soon as possible,” the ATSB report said. “During the diversion, five minutes after the chip detector light illuminated, a loud noise was heard, and the engine lost power. The pilot immediately feathered the propeller and carried out a forced landing on Lake Burbury.” The airplane came to a stop on a mud bank, with its floats clear of the water.

Examination of the engine revealed pre-existing thermal damage to the no. 1 main

“With a forward CG, the handling pilot would be required to pull the control column back a large amount.”

shaft bearing that was consistent with electrical discharge, or arcing. “The source of the electrical discharge damage was a starter/generator that was replaced due to a malfunction 18.7 hours prior to the engine failing,” the report said. Examination of the failed unit showed that insulation on the armature windings had been overheated and damaged during one or more engine starts and had created a short circuit through the starter/generator to the engine. The failed unit had been operated 852 hours since its last overhaul and had 748 hours remaining before its next scheduled overhaul.

The report said that PWC records showed that there were 42 previous PT6A starter/generator electrical discharge incidents worldwide, most of which led to bearing failures. Among recommendations based on the Lake Burbury accident, ATSB said that PWC should electrically isolate the starter/generators from the no. 1 main shaft bearings in PT6A engines.



PISTON AIRPLANES

Airplane Hits Trees During Night Approach

Aero Commander 500B. Destroyed. One fatality.

The pilot was conducting a cargo flight from Grand Rapids, Michigan, U.S., to Gaylord, Michigan, the night of Nov. 16, 2005. The Gaylord airport had 3/4 mi (1,200 m) visibility in light snow and mist, a broken ceiling at 800 ft, an overcast at 1,200 ft and temperature and dew point both at minus 1 degree C (30 degrees F), the NTSB report said.

The glideslope for the instrument landing system (ILS) approach to Runway 09 was reported as unmonitored and out of service, so the pilot requested and received clearance from ATC to conduct the localizer approach, which has published minimums of 1,700 ft — 381 ft height above touchdown — and 1/2 mi (800 m) visibility.

ATC radio and radar contact were lost after the pilot was cleared to change to the airport advisory frequency. The wreckage of the Aero

Commander was found in a wooded area about a mile from the runway. NTSB said that the probable cause of the accident was “clearance not maintained with terrain during a nonprecision approach.”

Crossfeed Misuse Leads to Fuel Starvation

Cessna T303 Crusader. Destroyed. Six serious injuries.

The heaviest passengers and baggage were in the rear of the aircraft, and the CG was more than 1.0 in (2.5 cm) aft of the aft limit throughout the round-trip flight between Denham (England) Airfield and Durham Tees Valley Airport near Darlington on Aug. 5, 2006. The T303 was 156 lb (71 kg) over its maximum takeoff weight and did not have adequate fuel reserves for the round-trip flight when it departed from Denham, the AAIB report said. The airports are about 178 nm (330 km) apart.

After landing at Durham Tees Valley Airport, the pilot checked the fuel gauges, which indicated about 60 gal (227 L) remaining, and decided not to have the aircraft refueled before the return flight to Denham. “The pilot, who suffered serious head injuries during the accident, had very poor recollection of some aspects of the flight,” the report said. “He could remember operating the fuel crossfeed and thought he may have retarded one of the throttles to idle in order to conserve fuel.” This likely occurred during descent, when the front-seat passenger observed the pilot turning rotary controls and noticed that one fuel gauge was “in the red marking” and the other was “just above the red marking.”

Noting that use of the fuel crossfeed system is prohibited during landing or when less than 10 gal (38 L) remain in the selected tank, the report said that the system was being used to deliver fuel from the left tank to both engines when the pilot turned left onto final approach at Denham Airfield. Both engines lost power due to fuel starvation during the turn, and airspeed decreased. The aircraft then stalled and descended into a densely wooded area. There was no fire. The six occupants were

unable to exit the aircraft; they were treated by paramedics and transported by ambulances to a hospital.

Heart Problem Incapacitates Pilot

Piper PA-23-160 Apache. Destroyed. One fatality.

Nighttime VMC prevailed for the cargo flight from Peoria, Illinois, U.S., to Smithfield, North Carolina, on Nov. 9, 2005.

The door opened on departure, and the pilot returned to the airport to close it. During the second departure, the Apache was about 44 nm (81 km) from Peoria when the pilot reported a problem with the right engine and requested clearance to return to the airport, the NTSB report said.

The approach controller issued a heading to Peoria and asked the pilot if he was declaring an emergency. The pilot said, “Negative. It’s just ... developing partial power. I’m in good shape.” The controller said that the Bloomington, Illinois, airport was about 7 nm (13 km) from the airplane’s position, and the pilot requested a vector to Bloomington.

The pilot established radio communication with the Bloomington airport traffic control tower. After he reported downwind and was cleared to land, his transmissions included several expletives and the sound of heavy breathing. The pilot did not respond to transmissions by the controller. The Apache crashed and burned in a field about 1 nm (2 km) from the airport.

“The pilot’s autopsy revealed evidence that a tear in the aorta (aortic dissection) had occurred prior to the accident and resulted in the rapid accumulation of blood around the heart, substantially impairing heart function and leading to impairment or incapacitation,” the report said. “This type of tear in the aorta typically [results in] a sudden onset of severe pain [and] would most likely have been fatal regardless of the circumstances under which it occurred.” The report noted that the pilot had been receiving treatment for hypertension and diabetes, and had obtained a “special issuance” airman medical certificate.

HELICOPTERS

Downwash Forces Rotor Into Tail Boom

Hughes OH-6A. Substantial damage. No injuries.

The OH-6A, a military version of the Model 500, had been landed and shut down at a private landing site near Newbridge, Ireland, on Oct. 13, 2006, a few minutes before a Eurocopter EC-120B passed in close proximity while being maneuvered to land. Downwash from the Eurocopter’s main rotor caused one of the main rotor blades on the OH-6A to flap down and strike the tail boom, said the report by the Irish Air Accident Investigation Unit.

“As the main rotor of the Hughes OH-6A is not equipped with a rotor brake, it is free to rotate in the effect of downwash,” the report said. “Damaged was caused to the tail boom, a main rotor blade and its associated rotor damper.”

Wind Gust Causes Control Loss

Bell 206B JetRanger. Substantial damage. One minor injury.

A local airport was reporting winds at 16 kt, gusting to 27 kt, when the pilot prepared to depart from a private landing site in Stockport, Cheshire, England, on April 30, 2007. “Having lifted into the hover, approximately into wind, the pilot turned and hover-taxied the helicopter downwind in order to give himself the full length of the field for the takeoff,” the AAIB report said.

The pilot then conducted a spot turn to the right, to position the helicopter into the wind. “Although he would normally have carried out the spot turn to the left, on this occasion, he was keen to keep some nearby power cables in sight,” the report said. “Carrying out a spot turn to the right involved reducing the thrust produced by the tail rotor.”

A sudden loss of tail rotor effectiveness occurred when the wind gusted during the spot turn. The JetRanger struck the ground and rolled onto its right side. The pilot was not injured. The passenger sustained a minor injury.

“The wind speed at the time of the accident was probably in excess of the demonstrated maximum sideways and rearwards airspeed [i.e., 17 kt] to which the helicopter had been [certified],” the report said. ●



Preliminary Reports

Date	Location	Aircraft Type	Aircraft Damage	Injuries
Dec. 2, 2007	Coeur d'Alene, Idaho, U.S.	Cessna Citation II SP	substantial	8 none
The Citation departed the right side of a slush-covered runway while landing with a left crosswind at 19 kt, gusting to 29 kt.				
Dec. 3, 2007	Whittier, Alaska, U.S.	Eurocopter BK 117C-1	destroyed	4 fatal
The helicopter is presumed to have crashed in the ocean during an air ambulance flight in instrument meteorological conditions (IMC) from Cordova to Anchorage.				
Dec. 4, 2007	New Castle, Delaware, U.S.	Beech Duke	destroyed	1 fatal
The Duke was departing in visual meteorological conditions when it entered a steep left turn and descended to the ground. Examination of the wreckage indicated that the right flap was fully extended and the left flap was retracted.				
Dec. 5, 2007	Columbus, Ohio, U.S.	Cessna 208 Caravan	destroyed	2 fatal
The cargo airplane struck terrain while departing in IMC from Rickenbacker International Airport.				
Dec. 9, 2007	Kiev, Ukraine	Beech C90B King Air	substantial	5 fatal
The King Air, en route from the Czech Republic, struck terrain on approach to Zhulyany Airport.				
Dec. 10, 2007	Salmon, Idaho, U.S.	Beech 200 Super King Air	destroyed	2 fatal, 2 none
Visibility was 1 mi (1,600 m) in snow showers when the pilot departed from the uncontrolled airport under visual flight rules, intending to obtain an instrument clearance in flight. He was attempting to return to the airport when the airplane struck a hangar. The pilot and one passenger were killed.				
Dec. 13, 2007	Curaray-Loreto, Peru	Bell 204B	destroyed	5 serious
The helicopter struck terrain while departing from an oil-exploration site.				
Dec. 15, 2007	Gulf of Mexico	Bell 407	destroyed	2 none
The pilot lost tail-rotor control while en route between offshore platforms and ditched the float-equipped helicopter. Both occupants exited into a life raft before the helicopter was overturned by high waves and sank.				
Dec. 16, 2007	Providence, Rhode Island, U.S.	Bombardier CRJ200	substantial	34 none
Ceiling was 300 ft and visibility was 1 1/2 mi (2,400 m) in mist when the regional jet landed hard and ran off the left side of the runway.				
Dec. 17, 2007	Greenville, South Carolina, U.S.	Bombardier CRJ200	minor	NA none
During pushback from the gate, the tow bar broke and the airplane's nose penetrated the tow vehicle's windshield.				
Dec. 17, 2007	Vernal, Utah, U.S.	Beech C-99	substantial	1 none
Visibility was 4 mi (6 km) in haze when the cargo airplane touched down before reaching the runway. The landing gear collapsed, and the C-99 came to a rest on the runway.				
Dec. 20, 2007	Mount Patterson, Antarctica	Douglas DC-3T	substantial	10 minor
The turboprop-converted DC-3 struck snow drifts while departing from a remote research site.				
Dec. 20, 2007	Andros Island, Bahamas	Cessna 208B Caravan	substantial	2 none
The airplane was returning to the United States from a missionary flight to the Dominican Republic when the engine lost power. The pilots ditched the Caravan and were rescued by a sailboat before the airplane sank.				
Dec. 26, 2007	Almaty, Kazakhstan	Canadair Challenger 604	destroyed	1 fatal, 3 serious
The Challenger made a fuel stop in Almaty during a business flight from Germany to Thailand. On takeoff in nighttime IMC, the airplane veered off the runway, struck a wall and caught fire.				
Dec. 30, 2007	Sabang, Indonesia	GAF Nomad	destroyed	5 fatal, 2 NA
About 15 minutes after departing for a maritime surveillance flight, the flight crew reported engine problems. While returning to Sabang, the Nomad crashed in adverse weather about 200 m (656 ft) offshore and sank. Two occupants were rescued.				
Dec. 30, 2007	Bucharest, Romania	Boeing 737-300	substantial	123 none
The 737 was accelerating through about 90 kt on takeoff when the left engine and main landing gear struck an airport-maintenance vehicle on the runway. The airplane then ran off the left side of the runway. Visibility was 250 m (820 ft) in fog.				

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.