# Hammered by Hail

Flight crew faulted for inadequate use of radar information.

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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

## 'Supercell Storms' on Departure Route

Boeing 737-300. Substantial damage. No injuries.

he aircraft took off from Geneva International Airport with 126 passengers for a scheduled flight to London the morning of Aug. 15, 2003. The 737 was climbing through about 8,500 ft on a standard instrument departure route when the flight crew requested clearance to fly west of course, on a heading of 310 degrees, for about 15 nm (28 km) to avoid thunderstorm cells, said the final report published in June 2007 by the Swiss Aircraft Accident Investigation Bureau.

"A few minutes later, the aircraft passed through a shower of hail, which seriously damaged it," the report said. The hail encounter lasted about five seconds and occurred as the aircraft was climbing through 15,400 ft over Oyonnax, France, about 35 km (19 nm) west of Geneva.

"The hail cell which caused the accident was part of a broad thunderstorm zone displayed with good resolution by the on-board weather radar," the report said.

"[Ground radar] showed returns characteristic of supercell storms with a maximum intensity level," the report said. "At the time and in the region of the accident, violent storms accompanied by hail were observed at several locations. According to eyewitnesses, the hailstones were as big as ping-pong balls (40 mm [1.6 in]); some were even 50 mm [2 in] in diameter."

The commander declared an emergency, reporting that the aircraft had encountered a "very heavy hailstorm," and received clearance from air traffic control (ATC) to return to Geneva.

The windshield in front of the copilot was cracked, and the commander told the copilot to don his oxygen mask and goggles, and to conduct the "Window Damage" checklist.

The report said that the hail did not adversely affect engine operation. The aircraft was landed about 14 minutes after the hail encounter and taxied to a stand, where the passengers were disembarked normally. Hail damage was found on the leading edges of the wings and tail, engine nacelles, windshield and radome.

The report concluded that the accident was caused "by the aircraft flying into a shower of hail embedded in a thunderstorm cell, following inadequate utilization of the information provided by the on-board weather radar." It noted that the crew of an aircraft following five minutes behind the 737 on departure avoided the thunderstorms by diverting farther to the west.

The report also said that soon after the 737 returned to Geneva, the crew of a departing Hawker Siddeley 125 was instructed to fly

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The aircraft was past the point where it had sufficient fuel to divert. the same departure route. ATC did not tell the Hawker crew about the hazardous weather that the 737 had encountered. The captain of the Hawker said that the aircraft encountered "heavy rain" during the departure. After the Hawker arrived at its destination in England, the radome and the leading edges of its wings and tail were found to have been damaged.

## Committed to Land

Airbus A330. No damage. No injuries.

he airplane was en route from Singapore and was scheduled to land in Perth, Australia, at 0020 local time on Sept. 16, 2006. Visual meteorological conditions (VMC) had been forecast for Perth, with a 30 percent probability of fog forming after 0200.

"In accordance with the operator's fuel policy, fuel was not specifically carried for a diversion from the destination to an alternate aerodrome," said the Australian Transport Safety Bureau (ATSB) report. The en route alternate was Learmonth, which is 599 nm (1,109 km) from Perth. The report said that Learmonth had no significant weather.

About 2308, the flight crew received an amended trend-type forecast (TTF) for Perth, indicating that fog would begin to form at 0030.

The aircraft was past the point where it had sufficient fuel to divert to Learmonth when the crew began the descent to Perth at 2350. "Once the crew commenced the descent, they were committed to a landing at Perth," the report said.

About 10 minutes later, the TTF again was amended to indicate that fog would form before the aircraft arrived at the airport. Fog actually began forming at about 0015, and visibility decreased from 2,000 m (1 1/4 mi) to 300 m (less than 1/4 mi) within the next 15 minutes.

The crew began an instrument landing system (ILS) approach to Runway 21 at 0010. "The crew reported that at the 250-ft [altitude] minimum, the visibility was less than the required 800 m [1/2 mi], and they initiated a missed approach," the report said. The crew of a departing aircraft reported that visibility at the approach end of Runway 03 was better, and the A330 crew was radarvectored by ATC for the ILS approach to that runway. "At the 320-ft minimum, the visibility was less than the required 1,500 m [about 1 mi], so the crew initiated another missed approach," the report said.

The crew declared an emergency and reported that they would conduct the ILS approach to Runway 21 and use the A330's autoland system to land. The pilot-in-command (PIC) said that at the decision height, visibility was about 400 m (1/4 mi) and he could see some of the approach lights. About 100 ft above the runway, the PIC saw the runway threshold lights. "The landing was reported to be normal, and the crew had sufficient visibility to navigate to the terminal," the report said.

After the incident, the aircraft operator changed its flight-planning fuel policy to require designation of an alternate airport for all flights to Perth when fog is forecast.

#### Parking Brake Not Set Correctly

Boeing 767. Substantial damage. No injuries.

A fter a flight from Calgary, Alberta, Canada, on Oct. 11, 2006, the aircraft was landed at London Heathrow Airport and taxied toward the assigned stand. However, the crew could not taxi the 767 onto the stand because a handling agent was not there to activate the visual docking guidance system and monitor the aircraft's arrival, the U.K. Air Accidents Investigation Branch (AAIB) report said.

"As the aircraft was blocking the taxiway, a member of the airport's airside staff was dispatched to marshal the aircraft onto stand; this he did without event," the report said. "Once the aircraft was on the stand, the marshaller left the area without placing any chocks in front of its wheels."

The commander believed that he had set the aircraft's parking brake correctly by pulling the parking-brake T-handle on the center console while depressing the toe brakes on top of the rudder pedals. The crew then shut down the engines. Because a handling agent still had not arrived, the passengers were told to remain seated.

About 15 minutes later, the aircraft began to roll forward. "At first, the pilots thought the pier [airbridge] was being moved into position, but soon the commander realized that the aircraft was moving forward and gathering speed quite quickly," the report said. "He applied the toe brakes and noticed the parking-brake T-handle was retracted."

Noticing that accumulator pressure was low, the copilot activated the hydraulic pumps. The 767 was stopped after rolling about 12 ft (4 m). The cowling on the left engine was dented when it struck the pier as the aircraft came to a stop.

"In an open and frank report, the commander admitted that the cause of the accident was his failure to set the parking brake correctly," the report said.

## **Steep Turn During Circling Approach**

Learjet 35A. Destroyed. Two fatalities.

he airplane was on a positioning flight from Twin Falls, Idaho, U.S., to pick up passengers at Truckee–Tahoe (California) Airport the afternoon of Dec. 28, 2005. Reported weather conditions included 2 1/2 mi (4,000 m) visibility, variable between 1/2 mi and 5 mi (800 m and 8 km), a broken ceiling at 1,500 ft and winds from 220 degrees at 15 kt, gusting to 22 kt, according to the U.S. National Transportation Safety Board (NTSB) report.

The flight crew conducted the global positioning system (GPS) approach, which had a final approach course of 104 degrees, and established the Learjet on a left downwind for Runway 28. The minimum descent altitude for the circling approach was 8,200 ft - 2,300 ft above airport elevation - and the published minimum visibility was 3 mi (4,800 m).

The Learjet was about 400 ft above the ground when it overshot the turn to final for Runway 28 and entered a steep left turn, which one witness described as banked nearly 90 degrees. The airplane then descended and struck the ground left-wing-first about 0.3 nm (0.6 km) from the runway threshold.

#### Struck by a Runaway Baggage Cart

Bombardier CRJ900. Substantial damage. No injuries.

hile taxiing to the runway at McCarran International Airport in Las Vegas the night of April 30, 2006, the captain noticed a train of baggage carts moving rapidly toward the airplane from the left.

The captain swerved right of the taxiway centerline in an effort to evade the carts, but the first cart in the train struck the CRJ's left wing, became wedged between the wing and the taxiway, and was dragged about 150 ft (46 m), the NTSB report said.

After the accident, the airline issued an employee memorandum that reiterated the importance of ensuring that the braking system is engaged before leaving baggage carts unattended.

#### **TURBOPROPS**

#### Wing Separates After Storm Encounter

Mitsubishi MU-2B-35. Destroyed. One fatality.

Before departing from Tulsa, Oklahoma, U.S., for a positioning flight to Panama City, Florida, on Sept. 1, 2006, the pilot — who had more than 30,000 flight hours, including about 10,000 flight hours in MU-2s — was told that there were no adverse weather conditions along the route.

The airplane was over northern Florida, descending from Flight Level (FL) 190 (about 19,000 ft) two hours later, when a warning was issued for thunderstorm activity southwest of the pilot's route. Thunderstorm activity also had been detected along the pilot's route, but no warning had been issued, the NTSB report said.

The pilot lost control of the MU-2 in a thunderstorm. "A witness located approximately one mile south of the accident site reported he heard a 'loud bang,' looked up and observed the airplane in a nose-down spiral," the report said. "The witness reported there were parts separating from the airplane during the descent. The witness said it was raining and there was lightning and thunder in the area."



As they taxied the
Twin Otter to a stand,
the lower section
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gear, including the
wheel, separated.

Investigators found that the left wing had separated after the front and rear spars failed from "catastrophic static up-bending overstress."

The report noted that the airplane was equipped with weather radar and that the pilot had not requested any deviations or asked ATC about the weather ahead. ATC radar had detected intense to extreme precipitation in the area of the accident. "During the flight, the pilot was given no real-time information of the weather ahead," the report said.

#### **Corrosion Causes Nosewheel Separation**

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

he flight crew felt a "slight thump" during the landing roll at Glasgow (Scotland) Airport the evening of March 22, 2007. As they taxied the Twin Otter to a stand, the lower section of the nose landing gear, including the wheel, separated.

The lower fuselage was damaged by the separated landing gear components. "The aircraft rapidly came to a standstill, resting on the projecting remains of the nose leg," the AAIB report said. None of the nine occupants was injured.

Investigators found that the separation was caused by corrosion of the locknut that secures the wheel fork to the strut. The nose landing gear assembly had accumulated 6,566 hours and 11,184 cycles since overhaul. The report noted that the Twin Otter was frequently operated on beach landing strips.

After the accident, the aircraft operator revised several maintenance procedures, including a requirement for an annual inspection of the strut and locknut assembly for corrosion.

#### **No Reason Found for Loss of Control**

Beech Super King Air 200. Destroyed. Six fatalities.

he NTSB was unable to determine why the pilot, who had an airline transport pilot certificate and about 3,400 flight hours, failed to maintain control of the airplane during approach to Grand Strand Airport in North Myrtle Beach, South Carolina, U.S., the night of Feb. 3, 2006.

A weather observation about an hour before the accident indicated that the airport was clear of clouds and had 7 mi (11 km) visibility; however, temperature and dew point both were 13 degrees C (55 degrees F), indicating the possibility of fog.

The King Air, arriving on a private flight from Trenton, New Jersey, was observed to make two approaches to Grand Strand's Runway 23, which is 5,996 ft (1,828 m) long. "During the first approach, the airplane was observed 'fish-tailing' while about 30 ft over the runway," the report said. The pilot told the airport tower controller that he was going around.

"The controller asked the pilot if he had problems with the sea fog," the report said. The pilot said no and explained that the left engine was producing "a little too much [power] and would not come back."

Witnesses said that during the second approach, the airplane climbed, rolled left, descended in an inverted nose-down attitude and struck terrain left of the runway. "Examination of the airplane, airplane systems, engines and propellers found no abnormal pre-impact condition that would have interfered with the normal operation of the airplane," the report said.

NTSB said that the probable cause of the accident was "the pilot's failure to maintain control during the landing approach for undetermined reasons."

#### **Destabilized Approach Ends in Tail Strike**

De Havilland DHC-8-300. Minor damage. No injuries.

The commander was the pilot flying the trip from Dublin, Ireland, to Cornwall, England, the afternoon of Dec. 31, 2006. He conducted a visual approach to Runway 12 at about 123 kt, or about 15 kt above VREF, the calculated reference landing speed, to account for surface winds from the southwest at 25 to 30 kt, gusting to 36 kt, the AAIB report said.

"The flight data showed that a stable approach was achieved initially but that this became unstable at a late stage, probably due to a combination of the gusty conditions and the associated large control inputs," the report said. "During the final stage of the approach, the airspeed decayed to 94 kt, significantly below both VREF and the target approach speed." The commander believed that the Dash 8's pitch attitude was not excessive on touchdown, but he noticed a caution light indicating that the pitch attitude was more than 6 degrees. "Aircraft technical publications alerted crews to the possibility of a tail strike if the pitch attitude exceeded 6 degrees during the landing," the report said.

During the landing roll, a "TOUCHED RUNWAY" warning light illuminated. Examination of the aircraft showed that the frangible fairing on the tail-strike sensor was broken and that there was light abrasion damage to the bottom of the rear fuselage.

#### **PISTON AIRPLANES**

#### **Fuel Loss Leads to Ditching**

Piper Seminole. Destroyed. No injuries.

he aircraft — one of two Seminoles that were being ferried from the United States to Australia — departed from Santa Barbara, California, for the first leg to Hilo, Hawaii, on June 9, 2006. During the flight, the pilot noticed that more fuel than expected was being drawn from the ferry tank; he also saw a scorch mark on the left engine cowling.

"Following discussion with the pilot of the accompanying Seminole, the pilot decided to shut down the left engine," the ATSB report said. About 7.5 hours into the flight, the pilot told ATC that the aircraft would have to be ditched because it was seven flight hours from Hilo and had enough fuel for only five more hours of flight.

The Seminole was intercepted by U.S. Coast Guard and Navy aircraft and escorted toward a ship. The pilot restarted the left engine and ditched the aircraft in calm seas 980 km (529 nm) northeast of Hilo. "The pilot and copilot exited the aircraft uninjured and were rescued by the nearby ship," the report said. "The aircraft sank [within four minutes] and was not recovered."

A 568-liter (150-gal) ferry tank had been installed behind the pilots' seats, with the electric pump switch and on/off valve within reach of the pilot. The ferry tank fed fuel to the left wing tank, and fuel was transferred from the left wing tank to the right wing tank through the aircraft's crossfeed valve.

"There was no fuel quantity gauge fitted to the ferry tank, and neither the aircraft nor ferry tank was fitted with a fuel flow gauge," the report said. "The ferry fuel system was designed to be turned on in the cruise phase of flight after one hour of flight. Fuel transfer was to cease when the left wing tank had reached no more than 95 percent of its capacity." Continued fuel transfer could cause fuel to be vented overboard.

Because the aircraft was not recovered, investigators were unable to determine what caused the cowling scorch mark reported by the pilot. The cause of the fuel loss also was not conclusively determined. "However, from the available information, it is likely that the left fuel tank was being overfilled by the ferry fuel system and was venting fuel overboard," the report said. The overfilling might have been caused by improper operation or malfunction of the ferry tank system, or a malfunction of the aircraft's fuel crossfeed system.

The other Seminole, which was equipped with the same ferry tank system, was landed in Hilo with enough fuel remaining for more than three hours of flight.

#### Out of Supplemental Oxygen at FL 270

Beech 56TC Baron. Destroyed. One fatality.

ight VMC prevailed for the personal flight from Glendive, Montana, U.S., to St. Paul, Minnesota, on March 17, 2006. The NTSB report said that the flight appeared to progress without incident until ATC observed the airplane climb 400 ft above its assigned altitude, FL 240.

"After being notified of the deviation, the pilot responded that he was attempting to look at his contrails," the report said.

The pilot then requested and received clearance to climb to FL 270. About 30 minutes later, the pilot asked ATC, "Did you hear me call in a few times?" This was the last radio transmission from the pilot, and attempts by ATC to reestablish radio contact were unsuccessful.

The airplane had been airborne about two hours when it overflew the destination. ATC



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requested assistance from the North American Aerospace Defense Command, which scrambled fighters to intercept the Baron. The fighter pilots observed that the airplane's exterior lights were illuminated, but they could not see the pilot. "Multiple attempts to gain the pilot's attention by firing flares and doing an afterburner flyby were unsuccessful," the report said.

The Baron had been airborne about four hours when it began to descend. Witnesses said that they heard a sound similar to a bomb exploding when the airplane struck a hill in Winfield, West Virginia, about 2250 local time.

The supplemental oxygen system installed in the unpressurized airplane and a portable oxygen bottle found in the cockpit were depleted. The report said that the probable cause of the accident was the pilot's failure to ensure that he had an adequate supply of supplemental oxygen, his inadequate in-flight planning and decision making, and his incapacitation by hypoxia.

#### Narrow Pass, Low Ceiling

De Havilland DHC-2. Destroyed. Two fatalities.

he Beaver was the first in a flight of two float-equipped airplanes en route from Galena, Alaska, U.S., to Anchorage on Sept. 15, 2006. The pilot of the second airplane told investigators that they were between 4,000 and 5,000 ft when they entered Mystic Pass in Denali National Park and then descended because of worsening weather conditions.

The pilot of the second airplane said that he radioed the Beaver pilot that he was not comfortable with the deteriorating visibility and was turning around. The Beaver pilot replied, "Turn around if you can. ... I'm not able to."

"The second pilot reported that the last time he saw the accident airplane was just before it entered a cloud bank, as the flight neared the narrowest part of the pass," the report said.

A search was launched after the Beaver was reported overdue in Anchorage. The wreckage was found in the pass two days later. The airplane had struck terrain at 3,700 ft — 300 ft below the ridge of a steep slope.

#### **Engine Fails on Maintenance Ferry Flight**

Piper Twin Comanche. Destroyed. Three fatalities.

The airplane had been parked outdoors and flown about 15 hours in the past 10 years. The owner obtained a special flight permit to have the airplane ferried 152 nm (282 km) from Raymond, Mississippi, U.S., to New Albany, Mississippi, where an annual inspection would be performed before the airplane was sold to a new owner, the NTSB report said.

The pilot had a commercial certificate and about 4,000 flight hours, but "there was no evidence found to verify any flight time for the last 24 years," the report said.

Although the permit specified that only minimum crew could be aboard for the ferry flight, there were two passengers aboard when the Twin Comanche was taxied for departure from Raymond on Dec. 1, 2005.

Winds were from 340 degrees at 12 kt, gusting to 15 kt, when the airplane took off from Runway 30, which was 3,992 ft (1,217 m) long. The airplane was about 100 ft above ground level (AGL) when the right engine lost power. The report said that the pilot did not retract the landing gear or maintain minimum singleengine control speed, VMC. The Twin Comanche banked steeply right and struck the ground in a near-vertical attitude.

#### **HELICOPTERS**

#### Survey Flight Ends With Wire Strike

Bell 206B-3. Destroyed. Three fatalities.

he JetRanger was engaged in a noxious weeds survey flight in Parkes, Australia, on Feb. 2, 2006. A witness driving on a road said that the helicopter was about 200 ft AGL when it passed his automobile on the right. The helicopter then turned around and flew over the road at 50–60 ft AGL.

"The driver described that, at that time, the helicopter was 'under full control, nothing wrong with it and flying level," the ATSB report said.

The helicopter was being flown at about 61 kt when its left landing gear skid struck a powerline that crossed the road. "The helicopter



was observed by the driver ... abruptly changing attitude before rotating as it fell to the left of its original direction of travel and striking the ground adjacent to the road," the report said.

The pilot and the two weeds-control officers were killed, and the JetRanger was destroyed by the impact and fuel-fed fire. "There was no damage to the powerline or its associated facilities and structures," the report said. "The powersupply company described the [powerline] as being very strong, having a breaking load of 25 kN [5,622 lb] and being under high tension."

The powerline was not marked and was not required to be marked because it was less than 90 m (295 ft) above terrain. "There is presently no single source of information available to pilots on the location of known powerlines or tall structures that might represent a hazard to low-level operations," the report said.

The helicopter was not equipped with a wire-strike protection system. "Due to the large number of variables associated with wire-strike accidents, the effect that the fitment of such equipment may have had in this instance cannot be determined," the report said.

#### 'Go Back Up ... It's Too Low'

Robinson R44. Destroyed. Three fatalities.

he R44 and a Bell 206B were on positioning flights Aug. 13, 2006, from Vancouver, Washington, U.S., to Long Beach, California, where they were to engage in aerial photography. A fuel stop was planned in Astoria, Oregon; but when the helicopters arrived, the airport was reporting a 400-ft overcast and 5 mi (8 km) visibility in mist, the NTSB report said.

The 206B pilot told the R44 pilot, "I'm going to go through it. Stay right behind me." The pilot later told investigators that he had planned to fly westbound, over water, and find a break in the overcast.

A passenger aboard the 206B said that the R44 was behind and above the 206B when they entered the fog. The R44 pilot radioed, "How fast are you descending?" The 206B pilot answered, "Very slow." About 30 seconds later, the R44 pilot said, "Go back up. It's much lower than we thought. Go back up right now." The 206B pilot conducted a climb and landed — the report did not say how — at the Astoria airport. He notified emergency personnel that he had lost radio contact with the R44 pilot and believed that the helicopter had crashed.

The report said that the R44 had descended into the water at about 0825 local time. At 0845, U.S. Coast Guard search-and-rescue personnel found two life vests and other debris about 1 mi (2 km) offshore; weather conditions at the accident site included 1 mi visibility and a 100-ft overcast. The bodies of the three occupants were recovered later that day.

#### Ice Ingestion Likely Caused Flameout

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

he pilot warmed the engine for about six minutes before taking off to spread powdered limestone on an ice-covered lake in Eringsboda, Sweden, the morning of March 1, 2006. A relatively low power setting was used during the overwater departure, said the Swedish Accident Investigation Board (AIB) report.

The helicopter was climbing through about 130 ft when the engine flamed out. "The pilot immediately initiated an autorotation, at the same time beginning a steep right turn into the wind toward land," the report said. "The helicopter came down onto the ice, about 20 meters [66 ft] from the shore, at low forward speed but at a high rate of descent. The pilot was unhurt and [exited] the helicopter without assistance."

Examination of the engine revealed damage to three compressor blades. Noting that the helicopter had been parked outside in falling snow before the flight, the report said that the engine likely flamed out when it ingested a buildup of ice.

The AIB recommended that the Swedish Civil Aviation Authority "point out to operators of this category of helicopter the importance of ensuring that ice, packed snow and water cannot be drawn into the engine, since even small amounts can cause the engine to stop." The board also recommended that an autoignition system be required as standard equipment in AS 350-B3 helicopters. "There is presently no single source of information available to pilots on the location of known powerlines or tall structures that might represent a hazard to low-level operations."

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Preliminary Reports					
Date	Location	Aircraft Type	Aircraft Damage	Injuries	
Aug. 1, 2007	Fort Lauderdale, Florida, U.S.	Piper Aerostar 601P	substantial	3 none	
The right engine failed on final approach, and the airplane struck a traffic light and crashed on a road during the forced landing.					
Aug. 2, 2007	Easton, Washington, U.S.	Robinson R44 II	destroyed	4 fatal	
The helicopter was departing in VMC for a charter flight when witnesses saw the tail section move left and right. The R44 then pitched down and descended into mountainous terrain.					
Aug. 3, 2007	Eket, Nigeria	Bell 412EP	destroyed	1 fatal	
The helicopter crashed while maneuvering at Qua Ibom Terminal Airfield.					
Aug. 5, 2007	Ruidoso, New Mexico, U.S.	Beech King Air E90B	destroyed	5 fatal	
The airplane was departing in nighttime VMC for an air ambulance flight when it struck terrain about 4 nm (7 km) southeast of the airport.					
Aug. 9, 2007	Moorea, French Polynesia	de Havilland Canada DHC-6	destroyed	14 fatal, 6 NA	
Both engines failed soon after the Twin Otter departed Moorea for a scheduled flight to Papeete. The airplane crashed and sank in a lagoon. Six passengers were not found.					
Aug. 11, 2007	Melville Hall, Dominica	Learjet 35A	substantial	6 none	
The airplane was on a charter flight from Antigua in daytime VMC when it overran the runway, traveled down an embankment and came to a stop on a road.					
Aug. 12, 2007	Pusan, South Korea	de Havilland Canada Q400	substantial	74 NA	
The airplane veered off the runway on landing and came to a stop in a drainage ditch. No fatalities were reported.					
Aug. 13, 2007	Moscow	Tupolev Tu-134	substantial	25 NA	
A landing gear collapsed when the airplane, operated by the Russian air force on a nonscheduled passenger flight, overran the runway.					
Aug. 16, 2007	Ketchikan, Alaska, U.S.	de Havilland Canada DHC-2	destroyed	5 fatal, 4 serious	
Strong, gusty winds were reported when the float-equipped Beaver struck terrain during takeoff from a bay about 20 nm (37 km) north of Ketchikan. The airplane was on a chartered sightseeing flight.					
Aug. 16, 2007	Gulf of Mexico	Bell 407	substantial	1 minor, 1 none	
The engine failed during a charter flight between two offshore platforms. The pilot deployed the emergency floats and landed on the water. A large wave then broke the windshield and rolled the helicopter inverted. The occupants exited the helicopter and were rescued by the crew of a shrimp boat. Initial examination of the engine revealed an uncontained failure of the third-stage turbine wheel.					
Aug. 20, 2007	Okinawa, Japan	Boeing 737-800	destroyed	165 NA	
A fuel leak was observed when the airplane was taxied to the gate after landing at Naha Airport. All the occupants evacuated on slides before a fire erupted and an explosion occurred. No fatalities were reported. Preliminary investigation indicated that a bolt had separated from a wing slat assembly and pierced a fuel tank.					
Aug. 22, 2007	Curitiba, Brazil	Embraer EMB-110P1	destroyed	2 fatal	
The Bandeirante struck ter	rrain at 0035 local time while departing for a	a domestic flight to Jundiaí.			
Aug. 22, 2007	Pasto, Colombia	Antonov An-26B	destroyed	53 NA	
The airplane was en route from Cali to Villagarzón when the flight crew reported engine problems and diverted to Pasto. The twin-turboprop airplane overran the runway and traveled down an embankment. No fatalities were reported.					
Aug. 22, 2007	Houston	Mitsubishi MU-2	none	1 serious	
A lineman was removing a	a wheel chock when his head was struck by	a rotating propeller.			
Aug. 26, 2007	Kongolo, Democratic Republic of Congo	Antonov An-32	destroyed	14 fatal, 1 NA	
The flight crew was attempting to return to the airport, after encountering engine problems on takeoff, when the airplane struck trees and crashed short of the runway.					
Aug. 31, 2007	Port-au-Prince, Haiti	Cessna 208 Caravan	destroyed	1 minor, 5 none	
The airplane overturned d	uring a forced landing soon after takeoff.				
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.					