'Dangerously Low'

Pilots misinterpreted departure procedure.

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

Commander Said Chart Was 'Unsuitable'

Boeing 737-800. No damage. No injuries.

The 737 took off from Runway 05 at London Stansted Airport in visual meteorological conditions (VMC) for a return flight with 93 passengers to Istanbul, Turkey, the morning of Oct. 16, 2006. The flight crew had been cleared by air traffic control (ATC) to conduct the Dover Five Sierra standard instrument departure (SID) procedure. The chart has a note that says, "Initial climb straight ahead to 850 [ft]." Although the note means that flight crews should climb straight ahead to 850 ft — about 500 ft above airport elevation — before making any turns, the commander and copilot believed that they were required to maintain 850 ft until receiving a further climb clearance from ATC, said the report by the U.K. Air Accidents Investigation Branch (AAIB).

The departure procedure calls for a right turn to a southwesterly heading soon after takeoff and an initial climb to 5,000 ft.

The copilot, the pilot flying, had set 900 ft in the altitude selector while briefing the commander on the departure. The copilot hand-flew the takeoff and engaged the autopilot and the altitude-hold mode while climbing through about 880 ft. "A pitch-down command was signaled by the autopilot, but, due to the rate of climb and late acquire, [the aircraft] overshot the selected altitude," the report said. The commander took control, disengaged the autopilot and began a descent to 900 ft. Recorded flight data indicated that the 737 had climbed to 1,186 ft during this time and that the subsequent descent rate reached 2,029 fpm.

The crew of another aircraft, an Airbus A319 that had just landed at Stansted, saw the 737 descending in a steep nose-down attitude and believed that an engine had failed. One of the A319 pilots told the ground air traffic controller, "See the aircraft on climb-out? The 737 on climb-out just rapidly lost height."

The 737 leveled at 900 ft about 1 nm (2 km) northeast of Runway 05 and turned right to the southwesterly heading. The crew had been told to establish radio communication with London Air Traffic Control Centre (LATCC), but there was a delay because of congestion on the frequency. Meanwhile, the LATCC controller had been notified about the situation. "The LATCC controller was aware of the incident when [the 737] came onto his frequency," the report said. "If he had not been aware, there would have been a delay in [his realization] that the aircraft was at a dangerously low altitude." The 737 was below ATC radar coverage.

The report said that the aircraft had been flown below the minimum safe altitude (MSA), 1,800 ft, for several miles when the controller asked the crew to confirm their altitude. When the crew replied "900 feet," the controller said, "Climb now immediately to altitude 5,000 feet." The crew

complied with the instruction and subsequently completed the flight without further incident.

Investigators interviewed the pilots in Istanbul three weeks later. "The commander realized that he and the copilot had not registered the exact meaning of the 'initial climb' note on the SID [chart] and thought this might have been due to a language issue," the report said. "He added that the format of the [chart] was also 'unsuitable,' compared to those of the other major European airports into which he operates, where the initial level-off altitude is displayed more conspicuously."

AAIB concluded that the incident resulted from "a misunderstanding of the notes on a SID [chart] and a breakdown in CRM [crew resource management]." The report said that "had the MSA been more critical [or had the aircraft] been in IMC [instrument meteorological conditions] and operating from an airport where terrain was more prevalent, this incident could have quickly become more serious."

Control Lost Briefly During Flare

Airbus A319-100. No damage. No injuries.

The A319 pitched about two degrees nose-down while the captain was applying aft sidestick control to flare the aircraft for landing at Denver the afternoon of Oct. 23, 2006. "The rate that the nose descended seemed to be commanded and extremely smooth," said the report by the U.S. National Transportation Safety Board (NTSB). About one second later, the captain's sidestick became responsive again, and he landed the airplane without further incident.

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Analysis of recorded flight data indicated that the takeover and priority button on the first officer's sidestick inadvertently had been pressed, deactivating the captain's sidestick. "With the first officer's priority button pressed, the EFCS (electronic flight control system) disregarded the captain's inputs to the benefits of the first officer's [inputs]," the report said. "During this time, as no order (neutral) was applied on the first officer's sidestick, the aircraft elevators returned to the neutral position, [causing] pitch attitude to be reduced. The EFCS switched back to the captain's sidestick when the priority switch was released."

The airline requires the pilot monitoring to be in a position to take control from the pilot flying, if required, but to keep his or her hand off the sidestick during critical phases of flight, such as the landing flare. The report said that the A319 first officer "wondered if he could have accidentally bumped his sidestick, but he did not think that action occurred."

Pitot Icing Causes Erratic Indications

Boeing 717-200. No damage. No injuries.

The autopilot disengaged and airspeed indications on the flight crew's primary flight displays became erratic when the 717 was climbing through 21,500 ft in IMC about 10 minutes after departing from Perth, Australia, for a scheduled flight to Port Hedland on Sept. 7, 2006. "The pilot-in-command's displayed airspeed dropped as low as 115 kt, while the co-pilot's [displayed] airspeed reached a maximum of 348 kt," said the report by the Australian Transport Safety Bureau (ATSB). "Both the stall warning and overspeed warning sounded."

While conducting the "Airspeed: Lost, Suspect or Erratic" checklist, the crew determined that the airspeed indications displayed by the standby instrument system seemed to be accurate and used the standby instruments to continue the climb to Flight Level (FL) 330 (approximately 33,000 ft). They cycled the air data heat switch, a pushbutton on the overhead ice protection panel, while conducting the checklist and observed the primary airspeed indications return to normal. "The aircraft returned to Perth and conducted a normal approach and landing with all air data systems operating," the report said.

Analysis of recorded flight data indicated that ice had accumulated on two of the three pitot probes, blocking the opening of the probe associated with the air data system for the captain's displays and both the opening and drain hole of the probe for the first officer's displays.

Examination of the air data heat switch showed that its latching mechanism had been broken "when the lamp capsule was forcibly opened while the switch was in the latched ['ON'] position," the report said. Although the

switch is designed to remain in the "ON" position following a failure of the latching mechanism, "it is possible that a piece of the broken latching mechanism jammed the switch in the 'OFF' position, which resulted in no heat being supplied to the air data sensors, including the pitot probes," the report said. "The 'OFF' light on the air data heat switch was probably illuminated. However, the crew may not have noticed it due to its location on the overhead panel."

The auxiliary pitot probe for the standby instrument system likely had accumulated ice, also. "As a result, it was likely that the indicated airspeed displayed on the [standby system] was also inaccurate," the report said. "The flight data displayed on the [standby system] was not recorded on the flight data recorder, so the accuracy of the indicated airspeed could not be verified."

Following the incident, Australian and U.S. authorities issued airworthiness directives requiring separation of the air data heating systems to reduce the risk of ice accumulating simultaneously on all three pitot probes.

Engine Fails After Ingesting 'Hard Object'

Airbus A300-B4. Substantial damage. No injuries.

The flight crew heard an explosion and saw instrument indications that the left engine had failed while the airplane was accelerating for takeoff from Amsterdam (Netherlands) Airport Schiphol the night of June 29, 2005. The crew rejected the takeoff at 142 kt — 10 kt below V_1 — and stopped the A300 on the runway, said the report by the Dutch Safety Board.

"After arrival of the fire brigade, tire and brake cooling operations were carried out, and, after completion of all the safety measures, the aircraft was pulled back to the parking area," the report said. "Inspection of the left engine revealed severe damage to the engine fan and fan inlet duct. One fan blade had separated [and] a piece of debris had penetrated and exited the acoustic panels and engine cowling. The airplane fuselage showed a few little dents."

The investigation concluded that the engine failure was caused by foreign object damage. No traces of a bird strike were found. The report said that ingestion of "a hard object — for example, a metal fragment left behind on the runway by another aircraft or a piece of concrete — is likely [to have caused the engine damage]."

Snowplow Involved in Near Collision

Boeing 737-500. No damage. No injuries.

After plowing snow on a service road at Denver International Airport the evening of Feb. 2, 2007, the snowplow operator drove toward another area that required snow removal. The route crossed a taxiway and the parallel, active, runway. "The driver stopped short of the taxiway but, without ATC or airport operations clearance, crossed the runway," the NTSB report said.

The flight crew saw the snowplow holding short of the taxiway when the 737, with 101 people aboard, was on final approach. After touchdown, the crew saw the snowplow crossing the runway in front of them and applied "significant" reverse thrust and wheel braking to stop the 737. The incident was classified as a near collision.

After touchdown, the crew saw the snowplow crossing the runway in front of them.

"The ground controller did not see the snowplow but was alerted to the runway incursion by the flight crew's report," the incident report said. "The airport movement area safety system (AMASS) was operational, but no alarm sounded."

The report noted that the snowplow driver was employed by the airport in 2004 and in 2005 was authorized to drive ground vehicles on airport movement areas with prior approval from airport operations personnel. The authorization was changed in 2006: "He was allowed to drive only on specific routes and cross certain taxiways," the report said. "He could not drive in a movement area unless escorted."

Hydraulic Leak Leads to Runway Excursion

Cessna Citation X. No damage. No injuries.

The Citation was en route from Newcastle, England, to London Luton Airport the evening of Sept. 20, 2006, when the master caution light illuminated and a "LOW FLUID" warning was displayed for Hydraulic System A. "The crew observed the hydraulic fluid level decreasing on the flight deck display, and, shortly

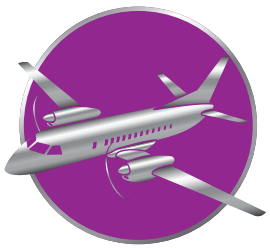
afterward, the A system power transfer unit (PTU) failed," the AAIB report said.

The A system is pressurized by a hydraulic pump driven by the left engine. The PTU is a hydraulic pump, a backup to the engine-driven pump, and is driven by pressure from the B system. "The PTU operates automatically when a drop in system pressure is detected," the report said. The emergency checklist for a hydraulic leak requires disabling the PTU by pulling its circuit breaker.

"The loss of Hydraulic System A disabled the left engine thrust reverser and required the landing gear to be deployed using the emergency system," the report said. "It also meant that the emergency braking and nosewheel steering systems would have to be used on landing."

The crew told ATC that they had an urgent condition, recalculated their landing distance requirements and decided to continue the flight to Luton. "The touchdown was uneventful, and, as the aircraft decelerated through 70 kt, nosewheel steering was required to maintain the runway heading," the report said. "After [the Citation] had slowed further, nosewheel steering proved ineffective, and the aircraft began to drift to the left edge of the runway. It came to rest with the nosewheel on the grass … but with both main wheels on the paved surface."

Investigators found that a pressure hose connected to the PTU had failed after having been exposed to abnormally high temperatures, likely during prolonged operation of the PTU during a previous flight, and that an O-ring seal in a connection between a hose and the hydraulic manifold was defective. "Examination of the O-ring revealed signs of mechanical damage to its outer edge, which were indicative of it having been 'pinched' during installation," the report said.



TURBOPROPS

Pilots Deceived by Faulty Fuel Gauge

Fairchild Metro III. No damage. No injuries.

The aircraft was at FL 170, en route from Thangool, Australia, to Brisbane with 16 passengers the evening of Sept. 23, 2005, when a warning light illuminated, indicating that the left fuel transfer pump was not operating and that less than 70 lb (32 kg) of fuel remained in the left wing tanks. The flight crew "initially thought that the warning may have been false, as the fuel quantity indicator showed that there was substantial fuel in the left tanks," the ATSB report said. "In accordance with the checklist, they selected the alternate boost pump, but the caution light remained on."

The crew diverted the flight to Bundaberg, which was 55 nm (102 km) away and 42 nm (78 km) closer than Brisbane. The left engine flamed out about 10 nm (19 km) from the Bundaberg airport, and the crew conducted a single-engine approach and landing without further incident.

When the Metro was examined the next day, the fuel quantity indicator showed 400 lb (181 kg) of fuel in the left tanks and 250 lb (113 kg) in the right tanks. "Four pounds [2 kg] of fuel was subsequently drained from the left tanks, indicating that the left engine stopped because of fuel exhaustion," the report said. "There were 49 pounds [22 kg] of fuel in the right tanks, sufficient for about 10 minutes of flight."

Investigators found that the fuel quantity indicating system had not been recalibrated properly during maintenance performed before the incident flight. "The crew relied on the fuel quantity indicator to determine the quantity of fuel on the aircraft before the flight," the report said. "That practice was common to most of the operator's crews. The fuel quantity management procedures and practices within the company did not ensure validation of the aircraft's fuel quantity indicator readings. There was also no system in place to track the aircraft's fuel status during and after maintenance."

Mis-Set Switches Suspected in Avionics Loss

Beech King Air B200. Substantial damage. No injuries.

Soon after departing from Glasgow, Scotland, with two passengers for a flight to Peterborough, England, the morning of March 28, 2006, the pilot noticed a gradual and progressive loss of information displayed by the primary electronic flight instruments. He attempted to

tell ATC that he was returning to Glasgow but found that the radios were not functioning, the AAIB report said.

The pilot referred to standby instrument indications while continuing the climb in IMC to his assigned altitude, FL 150, where the King Air was above the clouds. "Throughout the flight, the [pilot] considered that the workload involved in maintaining controlled flight had made fault-finding almost impossible," the report said.

After losing radio and secondary radar contact with the airplane, ATC arranged to have a Royal Air Force (RAF) Tornado intercept the King Air. The Tornado pilot rocked his wings, to indicate that the King Air pilot should follow him, and turned southwest toward Prestwick, Scotland. Although the King Air pilot had rocked his wings in response, he did not understand the Tornado pilot's signal and turned northeast toward an area where weather conditions were better. "The RAF crew saw [the King Air] enter cloud in an apparently uncontrolled fashion, and they transmitted a 'MAYDAY RELAY' message," the report said.

The King Air pilot said that the standby instruments had begun to flash on and off, and then had failed. "By then, [the King Air] was in a steep descent in cloud, and the [pilot] had great difficulty in recovering the aircraft into a climb," the report said. "He eventually achieved straight and level flight above cloud." The Tornado crew saw the aircraft emerge from the clouds in a steeply banked turn.

A passenger used his mobile telephone to contact ATC and was told that the Tornado would escort the King Air to RAF Leuchers. "In company with the RAF aircraft, the [pilot] eventually found sufficient gaps in the cloud and descended to VMC below cloud," the report said. He used the backup, manual landing gear extension system and landed at the RAF base without further incident. "The aircraft had been airborne for almost two hours and had been without electrical power for at least 90 minutes," the report said.

Examination of the aircraft showed that the skin on the outer wing panels was wrinkled. When the panels were removed, the outer wing spars were found damaged. "The damage to the aircraft was characteristic of it having been subjected to abnormally high flight loads," the report said.

When external electrical power was applied, the King Air's instruments and radios functioned correctly. The avionics equipment and electrical system were tested extensively, but no defects were found.

The report said that the loss of electrical power might have been caused by the pilot's inadvertent selection of the ignition and engine-start switches when he meant to select the engine autoignition switches just before takeoff. The unguarded switches are located on the lower left subpanel. Selection of the ignition and engine-start switches would have caused the generators to trip off-line. Although the starter motors would not have engaged the engines, they would have drawn substantial electrical current, draining the batteries within about six minutes, which is consistent with the avionics failure encountered by the pilot. The standby instruments have a battery backup that provides about 30 minutes of operation. Tripping of the generators would have caused the master warning light and two amber caution lights to illuminate. "It was possible that the [pilot] may have canceled the [master warning] as a reflex action and then did not critically examine the lights on the caution panel," the report said. "Tests indicated that these lights would have dimmed within about five minutes of the generators going off-line."

Selection of the ignition and engine-start switches would have caused the generators to trip off-line.

Blade Separation Causes Engine Failure

ATR 42. Substantial damage. No injuries.

The aircraft was climbing through FL 170 during a flight with 33 passengers from Farranfore Airport, Kerry, Ireland, to Dublin on Nov. 1, 2006, when the flight crew heard a loud bang and felt a jolt, said the report by the Irish Air Accident Investigation Unit (AAIU). The interstage turbine temperature indication for the left engine exceeded 1,200 degrees C

(2,192 degrees F), and a cabin crewmember told the pilots that flames and smoke were coming from the left engine.

The flight crew shut down the no. 1 engine, completed the in-flight engine fire checklist, declared an emergency and diverted to Shannon Airport, which was 5 nm (9 km) away. "A single-engine approach was carried out, and a normal single-engine landing was made on Runway 24," the report said.

Examination of the Pratt & Whitney Canada PW-120 engine indicated that two blades on the low-pressure turbine, as well as a small portion of the turbine disc that held the blades, had broken off and lodged in the stators, causing impact damage to the remaining blades. The first-stage power turbine also was damaged.

The report said that a service bulletin, SB 21555, had been issued in 1997 to reduce corrosion of the low pressure turbine caused by hot gas leaking onto the disc. The bulletin, which called, in part, for replacement of the seal assembly and turbine blades with improved parts, was classified as Compliance Category 7 — "low priority" to be accomplished "when all pre-SB parts are used up," the report said.

During maintenance to repair an oil leak in the left engine in October 2005, the seal assembly and several turbine blades on the low pressure turbine had been replaced; 47 blades had not been replaced. "Had the modification been classified as a Category 6, 'recommended,' service bulletin, greater emphasis would have been placed on renewing [all] the blades to the higher standard," the report said.

As a result of the investigation, AAIU told the manufacturer that it should "give more urgency to the implementation of SB 21555" by changing the compliance category from 7 to 6.

PISTON AIRPLANES

Engine Fire Could Not Be Extinguished

Douglas C-54G. Substantial damage. No injuries.

The four-engine airplane was on an unscheduled cargo flight, carrying 3,000 gal (11,355 L) of heating fuel from Fairbanks, Alaska, U.S., to the Nixon Fork Mine on Jan. 17, 2007, when the no. 2 — left inboard — engine began to run rough. The captain decided to shut down the engine and return to Fairbanks. However, during the shutdown procedure, the engine caught fire, the NTSB report said. The captain then turned toward Nenana Airport.

"The fire-extinguishing system was activated," the report said. "The crew thought the fire was out, but it erupted again, and the captain elected to land the airplane gear-up on the snow-covered tundra." The emergency landing was conducted about 5 nm (9 km) from Nenana Airport. "Once on the ground, the left wing was consumed by fire," the report said.

Examination of the no. 2 engine by company maintenance personnel indicated that the fire had been caused by a cylinder failure. "The airplane was not examined by the NTSB due to its remote location," the report said.

Thunderstorms in Vicinity of Breakup

Piper Chieftain. Destroyed. Four fatalities.

Scattered thunderstorms were forecast along the route from Archerfield, Australia, to Griffith on Dec. 2, 2005, but soon after the Chieftain departed on the corporate flight, a significant weather advisory (SIGMET) was issued for a line of thunderstorms south of Coonamble, a waypoint on the route. "Air traffic services did not pass the SIGMET information to the pilot of the aircraft, nor did their procedures require the information to be passed," the ATSB report said. "There was no request from the pilot for weather information at any stage during the flight."

The aircraft, which did not have weather radar or lightning-detection equipment, was at 10,000 ft near Coonamble when the pilot told ATC that he was diverting 20 nm (37 km) left of course due to weather. Ten minutes later, the pilot said that he was deviating farther left of course. Soon after this report, ATC lost radio and radar contact with the aircraft.

The report said that the Chieftain likely was "surrounded … by a large complex of storms" when it broke up in flight. The wreckage was found about 30 nm (56 km) left of course. "The wreckage trail extended for more than 4 km [3 mi]," the report said. "The wings outboard of the engine nacelles, the right engine and sections of the empennage had separated from the aircraft in flight. The remaining structure impacted the ground inverted and was destroyed by a post-impact fire."

Bolt Separation Results in Elevator Flutter

Cessna 421. Substantial damage. No injuries.

While climbing through 9,400 ft during a positioning flight from Idaho Falls, Idaho, U.S., to American Falls on Jan. 30, 2007, the pilot heard a thud and felt the control wheel move back and forth. The 421 then began to shudder and entered a diving left turn, the NTSB report said. The pilot reduced power and saw that the right horizontal stabilizer and elevator were "fluttering violently."

"He then further reduced the power on the right engine and added power to the left engine, which effectively crabbed the aircraft to the right and reduced the airflow over the right stabilizer/elevator," the report said. The 421 stopped shaking, and the pilot conducted an emergency landing at Pocatello, Idaho.

"After exiting the aircraft, the pilot discovered that the inboard one-half of the right elevator had departed the airframe while in flight," the report said. Investigators found that the bolt that connects the elevator trim tab actuator rod to the trim tab horn had separated in flight.

HELICOPTERS

Control Loss Likely During Survey Flight

Robinson R44. Destroyed. Four fatalities.

The pilot was conducting aerial survey flights near Gunpowder, Australia, on Feb. 21, 2006. "When the helicopter did not arrive at a prearranged rendezvous point [during the fourth flight], a search was initiated," the ATSB report said. "Searchers found the burned wreckage of the helicopter the next day." Examination of the wreckage indicated that the piston engine was producing power and the main rotor had low rotational energy when the R44 struck the ground at a high vertical velocity and in a level attitude.

Investigators found that the helicopter had been operated over its maximum takeoff weight, at low speed and in a hover during previous survey flights. "At the estimated helicopter weight and the prevailing air density, the helicopter did not have the performance to hover at the survey altitude, which was estimated to be about 1,000 ft above ground level," the report said. "The helicopter probably descended contrary to the pilot's intentions, possibly influenced by a partial engine power loss or downdraft, and induced the pilot to apply collective, which developed into overpitching and ultimately main rotor stall."

Moose Charges, Strikes Tail Rotor

Hughes 369D. Substantial damage. No injuries.

The passenger was a scientist who was shooting tranquilizing darts at moose so that they could be captured and collared by ground personnel in Gustavus, Alaska, on March 3, 2007. A witness said that after being shot by a dart, one moose charged the helicopter, reared or jumped and struck the tail rotor. The pilot lost directional control during the attempted autorotational landing, and the tail boom separated.

The helicopter operator had required pilots to remain at least 10 ft above the ground and 10 ft (3 m) from the animal during such operations. "This was the first incident of extreme, erratic behavior on the part of a darted animal," the report said. "The company … now requires the pilot to maintain 30 feet of altitude above the ground and 30 feet [9 m] horizontally from a darted animal." ●

Preliminary Reports

Date	Location	Aircraft Type	Aircraft Damage	Injuries
Nov. 2, 2007	Wichita, Kansas, U.S.	Douglas DC-8-73F	minor	4 none
About an hour after departing from Kentucky for a cargo flight to California, the flight crew saw smoke. The captain removed a panel in a lavatory and emptied a halon fire extinguisher into the opening. The smoke dissipated. The crew conducted an emergency landing in Wichita without further incident.				
Nov. 4, 2007	São Paulo, Brazil	Learjet 35A	destroyed	8 fatal, 1 serious, 1 minor
Visual meteorological conditions prevailed when the air ambulance banked right and crashed in a residential area on departure from Campo de Marte Airport. The two pilots and six people on the ground were killed.				
Nov. 4, 2007	Santa Elena, Guatemala	Beech King Air A100	destroyed	2 fatal
During a flight from Colombia to Mexico, the crew reported a technical problem and diverted to Santa Elena. The airplane crashed in a field about 30 km (16 nm) from the airport.				
Nov. 5, 2007	Jamestown, Tennessee, U.S.	Robinson R44	destroyed	3 fatal
Strong winds were reported when the helicopter struck a power line while departing from an oil-drilling site.				
Nov. 5, 2007	Culiacán, Mexico	Cessna 208B	destroyed	3 serious, 12 minor
The airplane struck terrain after losing engine power during departure for a scheduled air taxi flight to Cabo San Lucas.				
Nov. 6, 2007	Chino, California, U.S.	Beech King Air A100	destroyed	2 fatal
Instrument meteorological conditions prevailed when the airplane struck trees and crashed in an open field soon after departing on a business flight.				
Nov. 7, 2007	Cape Town, South Africa	Boeing 737-200	substantial	106 none
The right engine separated during departure. The crew returned to Cape Town and landed without further incident.				
Nov. 8, 2007	Khartoum, Sudan	Antonov An-12	destroyed	2 fatal, 4 serious
An engine failed when the airplane struck birds on departure. The airplane crashed during the emergency landing, killing two people on the ground.				
Nov. 9, 2007	Quito, Ecuador	Airbus A340	substantial	349 none
Inbound from Madrid, Spain, the airplane overran the runway after one or more tires burst on landing at Quito.				
Nov. 9, 2007	McFarland, California, U.S.	Piper Aerostar 602P	destroyed	3 fatal
The airplane crashed in a citrus grove soon after the pilot declared an emergency because of engine problems. The preliminary report said that the airplane had been parked on a slope and might not have been refueled fully before departure.				
Nov. 11, 2007	Kansas City, Missouri, U.S.	Learjet 60	minor	2 none
The crew rejected the takeoff after a tire burst, and the airplane veered off the runway.				
Nov. 11, 2007	Fox Harbour, Nova Scotia, Canada	Bombardier Global 5000	substantial	10 none
The left wing contacted the runway during landing. The airplane spun, and the landing gear collapsed.				
Nov. 15, 2007	Toulouse, France	Airbus A340	substantial	3 serious, 7 NA
The airplane reportedly jumped its chocks during an engine test and struck a blast fence.				
Nov. 15, 2007	Nakatsukawa, Japan	Cessna 404	destroyed	2 fatal, 1 serious
The airplane was on a photographic flight when it crashed near the summit of a mountain.				
Nov. 15, 2007	Las Vegas	Eurocopter EC30	substantial	1 none
The helicopter was being shut down when downwash from another helicopter passing overhead caused the main rotor to strike the tail boom.				
Nov. 30, 2007	Isparta, Turkey	McDonnell Douglas MD-83	destroyed	57 fatal
Inbound from Istanbul, the airplane was on approach to Isparta when it crashed in mountainous terrain about 20 km (11 nm) from the airport.				

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.