

# MD-83 Clips Approach Lights on Departure

**Errors, omissions affected the flight crew's takeoff calculations.**

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

### 'Pressured by the Production Target'

McDonnell Douglas MD-83. No damage. No injuries.

The flight crew's emphasis on "production" — getting the job done — influenced takeoff performance calculations that failed to show the aircraft was too heavy to depart safely from the chosen runway, said an incident report published recently by the Swedish Accident Investigation Board (SHK).

The MD-83 lifted off near the end of the runway and struck several approach lights while struggling to become airborne. None of the 169 passengers and six crewmembers was injured, and there was no damage to the aircraft, according to the report.

The incident, classified as "very serious" by SHK, occurred the night of Sept. 9, 2007, during departure for a charter flight from Åre/Östersund (Sweden) Airport to Antalya, Turkey. The charter flight had been arranged by a Swedish travel agency and contracted to a Turkish charter airline, which in turn had entered an agreement with an Austrian company to lease the aircraft and crew.

The contract flight crew, former employees of the Turkish airline, held Turkish pilot certificates that had been validated by Austria. The

commander, 38, had 9,260 flight hours, including 8,160 hours in type. The copilot, 32, had 2,060 flight hours, including 1,820 hours in type.

Night visual meteorological conditions (VMC) prevailed for the departure. The weather conditions were the same that the crew had experienced an hour earlier, when they landed the aircraft on Runway 12 at Åre/Östersund while completing the positioning flight from Antalya. Surface winds from 130 degrees at 8 kt favored takeoff from Runway 12, but the crew planned to depart in the opposite direction, from Runway 30, which provided "a more favorable climb-out profile from a performance point of view, as there were no obstacles in the climb-out direction," the report said.

However, the crew did not correct their takeoff performance calculations to account for the 8-kt tail wind that resulted from their choice of Runway 30. The takeoff performance calculations and the weight-and-balance calculations were performed by the copilot and checked by the commander. "The copilot stated that he — without remembering why — had used zero wind as a base value when he was calculating the various takeoff alternatives," the report said.

Investigators found several discrepancies in the crew's calculation of the MD-83's takeoff weight. The load sheet prepared by the crew indicated that the takeoff weight was slightly below the 155,620-lb (70,589-kg) limit for takeoff from Runway 30 under the existing conditions. However, investigators' calculations showed that the aircraft's actual takeoff weight was 6,940 lb (3,148 kg) greater than the limit.

**“Neither the crew nor air traffic control reported anything abnormal during the takeoff.”**

Among the discrepancies on the load sheet was the omission of 29 bags in the forward cargo compartment. The report said that the most significant consequence of this omission was the miscalculation of the aircraft’s center of gravity — and, thus, the required horizontal stabilizer and flap settings.

The crew used the full length of the runway — 2,500 m (8,202 ft) — for takeoff, applying full power before releasing the brakes. Both pilots told investigators that the MD-83 seemed to accelerate normally. The commander said that he rotated the aircraft slowly to avoid a tail strike and that the aircraft felt “nose-heavy” during rotation — a consequence of mis-setting the horizontal stabilizer.

“Data from the flight recorder showed that the aircraft rotated at about two degrees per second, against the recommended rate of about three degrees per second,” the report said. The data also showed that the main landing gear lifted off the runway 30 m (98 ft) from the departure threshold and crossed the end of the runway at a height of less than 30 cm (12 in).

“Neither the crew nor air traffic control reported anything abnormal during the takeoff, and the flight continued as planned to Antalya,” the report said. “Afterward, it was established that the aircraft had collided with the approach lights for the opposite runway. Damage had been made to lights and reflective poles up to a distance of 85 m [279 ft] from the runway end.”

The report said that, when planning the departure, the crew likely knew that some passengers and/or baggage would have had to be offloaded to meet weight limits and performance requirements but were “pressured by the production target — the ambition to take all the passengers and baggage — in the belief that the deviations would not have any consequences in terms of the takeoff.”

### Spurious Warnings Plague Flight Crew

Airbus A319-111. No damage. No injuries.

**E**n route with 78 passengers from Barcelona, Spain, to Liverpool, England, the afternoon of Feb. 6, 2007, the A319 was crossing the southern coast of England when an aural

master warning sounded and a message on the electronic centralized aircraft monitor (ECAM) indicated a discrepancy with the no. 2 engine’s exhaust gas temperature (EGT).

“The copilot continued to fly the aircraft on autopilot while the commander reviewed the ECAM checklist action items,” said the report by the U.K. Air Accidents Investigation Branch (AAIB).

Shortly after generating the first caution message, the ECAM warned that the no. 2 engine EGT was above the limit. “The action items for this condition required the no. 2 (right) engine thrust lever to be moved to idle and the engine to be shut down,” the report said. “The commander retarded the thrust lever and was considering the implications of shutting down the engine when the ‘ENG 1 EGT OVER LIMIT’ caution message appeared.”

The displayed engine parameters, however, were normal. The commander concluded that the warnings likely were false, and he restored cruise power on the no. 2 engine.

Meanwhile, the aural master warning continued to be generated about four times a minute. The normal indications on the pilots’ primary flight displays and navigation displays were replaced with messages similar to those that appear during alignment of the inertial reference systems. Other messages appeared, as well, warning the crew to use manual pitch trim only and to check the aircraft’s attitude, for example.

The commander informed air traffic control (ATC) of the situation, declared an emergency and requested direct routing to London Stansted Airport, which had better weather conditions and longer runways than Liverpool.

The controller advised the crew that Runway 23 was in use at Stansted, and the commander programmed the flight management system (FMS) for the approach to that runway. After being handed off to another controller, however, the crew was told that Runway 05 was active. The requirement to reprogram the FMS added to the commander’s workload at a critical time, the report said.

“The ECAM continued to produce various cautions and associated aural tones throughout

the rest of the flight, too frequently to be read, acted upon or canceled,” the report said. “The commander briefed the senior cabin crewmember and informed the passengers of the intention to divert, a task complicated by the frequent sounding of aural tones.”

The copilot armed the autopilot approach mode while flying an assigned heading to intercept the instrument landing system (ILS) final approach course. However, the commander determined that the aircraft would overshoot the extended runway centerline. He took control and hand flew the final approach and landing without further incident. “The commander commented that the aircraft flew normally under manual control,” the report said.

Investigators examined engine trend-monitoring data recorded before the incident and found no sign of a developing engine problem. Data recorded during the incident flight showed no engine faults. These findings confirmed that the warnings generated during the incident flight were false.

Extensive testing of the A319’s electronic instrument system (EIS) pointed to an intermittent fault in one of the display management computers (DMCs) as the likely cause of the false warnings.

The incident aircraft had been involved in a similar but less complicated event on Sept. 29, 2006. The crew of that flight had received spurious messages about discrepancies related to one engine and had suspected a DMC problem. The messages stopped after the crew selected another of the three DMCs aboard the A319. “The reported symptoms could not be reproduced during subsequent troubleshooting, and the aircraft was returned to service,” the report said.

The report said that the 2007 incident was more complex, and “the combination of symptoms observed by the crew did not obviously point toward a DMC fault.” As a result of the investigation, the AAIB recommended that Airbus introduce either an addition to the quick reference handbook or a memory drill “to emphasize that EIS DMC switching may be an appropriate response to abnormal display unit operation.”

## Deflated Strut Causes Nose Gear to Jam

Bombardier Challenger 601. Substantial damage. No injuries.

The flight crew was completing an emergency medical services flight to Québec City/Jean Lesage International Airport the morning of March 20, 2008, when they received visual and aural warnings that the nose gear had not extended.

“The flight crew did a low fly-pass, and the tower controller and an aircraft maintenance engineer confirmed the nose gear anomaly,” said the report by the Transportation Safety Board of Canada.

The crew conducted the appropriate checklists and made three unsuccessful attempts to correct the problem using the normal and emergency landing gear extension procedures. The crew then prepared the six passengers — three patients, a physician and two nurses — for landing with the nose gear retracted.

VMC prevailed at the airport when the crew landed the aircraft. “Damage was limited to the nose landing gear doors and the nose landing gear well structure,” the report said.

Investigators determined that the gear-extension problem was related to a modification of the Challenger for operation on unpaved runways. Bombardier had developed the modification kit, which included installation of two gravel deflectors on the nose gear. “The deflectors are used to protect the aircraft exterior surfaces and engines against damage that can be caused by solid particles that are projected during takeoffs and landings,” the report said. “Only eight of 255 [Challenger] models that were built are equipped with this kit.”

Examination of the nose gear revealed that the strut (shock absorber) had collapsed because of a gradual loss of nitrogen pressure. Investigators determined that the likely cause of the pressure loss was a loose nut on the strut-filler valve. During the flight to Québec City, the strut had collapsed sufficiently to allow the nose gear to be released by its uplock latch. The nose gear had rotated as it fell onto the gear doors, and the gravel deflectors had jammed inside the wheel well, preventing gear extension.

**The gravel deflectors had jammed inside the wheel well, preventing gear extension.**

“The clearance between the gravel deflectors and the nose landing gear well structure is very narrow when compared to similar aircraft that are not equipped with gravel deflectors,” the report said. “Another oleo pneumatic shock absorber (oleo strut) compression could result in the same situation occurring again.”

### Fast Approach Sets Stage for Overrun

British Aerospace 146-200. Substantial damage. No injuries.

The combined effects of a faster-than-appropriate touchdown speed, nondeployment of the lift spoilers and the flight crew’s perception of a wheel-brake system failure and use of the emergency system caused the aircraft to overrun the available landing distance after all four main landing gear tires burst, said the AAIB report.

The serious incident occurred at London City Airport the morning of Feb. 20, 2007. The aircraft was inbound from Paris with 55 passengers and five crewmembers. VMC with light surface winds prevailed in London, but the runway was reported as wet. The copilot incorrectly calculated a reference approach speed ( $V_{REF}$ ) of 119 kt. The correct value for  $V_{REF}$  was 110 kt, the report said.

The crew received vectors for the ILS approach to Runway 10, which has an available landing distance of 1,319 m (4,327 ft). Pavement extends 189 m (620 ft) beyond the available landing distance and includes a runway end safety area (RESA) that is bordered by a dock.

The crew gained visual contact with the runway as the BAe 146 descended below 1,000 ft. “The aircraft touched down at the far end of the touchdown zone, at 119 kt, and in an approximately level pitch attitude,” the report said. It bounced and touched down again 2.5 seconds later.

Recorded flight data indicated that the control columns were moved forward of the normal position, which reduced the weight on the main wheels — and, hence, wheel-braking effectiveness. Although the commander recalled that he selected the lift spoilers, they did not deploy. This also reduced braking.

The commander believed that the lower-than-normal deceleration was a result of brake system

failure. “He recalled pressing the brake pedals to their full travel but sensed that there was ‘not a hint of deceleration,’” the report said. He selected another hydraulic system to power the brakes, but the aircraft continued “coasting down the runway.”

The commander then selected the emergency brake system, and the aircraft seemed to decelerate slowly. “During the final part of the roll, all four main landing gear wheels locked, and the tires were worn down by the friction with the surface until they burst,” the report said. The airport traffic controller saw smoke coming from the landing gear and alerted the fire and rescue service.

The aircraft came to a stop about 160 m (525 ft) from the dock. There was no fire, and the aircraft was evacuated using mobile steps.

“Examination of the aircraft after this incident found no faults in the flying controls or wheel braking systems [and] no defects that could explain the reason for the lift spoilers not deploying on landing,” the report said.

However, investigators found that very little force was required to move the airbrake/spoiler lever out of the lift spoiler position. “Indeed, during the aircraft tests, it was noted that just nudging the lever while in the lift spoiler detent caused the deployed lift spoilers to retract,” the report said. “With this lack of resistive force, it is possible that [the lever] could be nudged or vibrated out of the selection, thereby stowing the deployed spoilers.”

The report noted that a modification recommended by the manufacturer in 1988 to increase the force required to move the airbrake/spoiler levers in BAe 146 and Avro RJ series aircraft out of the lift spoiler position had not been accomplished in the incident aircraft.

### Collision Occurs During Tow on Snowy Runway

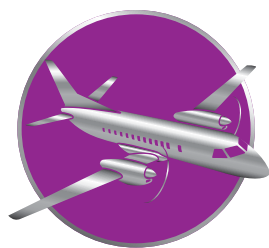
McDonnell Douglas DC-9-50. Substantial damage. No injuries.

After landing on a snow-covered runway at Madison, Wisconsin, U.S., on Dec. 3, 2008, the aircraft slid past the assigned taxiway. The flight crew received permission from ATC to make a 180-degree turn. “During the turn, the airplane began sliding on the snow, and the flight crew stopped the airplane about 90

Although the commander recalled that he selected the lift spoilers, they did not deploy.

degrees into the turn,” said the report by the U.S. National Transportation Safety Board (NTSB).

The airline sent a tug to tow the DC-9 to the gate, and airport workers spread sand in front of the airplane. However, when the tug was attached and began to move, the tug and the airplane slid on the snow and jackknifed toward each other. “The tug impacted the left side of the airplane’s fuselage, causing a puncture to the skin and damage to internal structural members,” the report said. “The tug was subsequently reconnected, and the airplane was towed to the gate, where the passengers deplaned normally.”



## TURBOPROPS

### Pilot Mishandles Engine Failure

Embraer 110P1 Bandeirante. Destroyed. One serious injury.

Night VMC prevailed when the airplane lifted off the runway at Manchester, New Hampshire, U.S., for a cargo flight on Nov. 8, 2005. Immediately after the pilot retracted the landing gear, he heard an explosion and saw gauge indications of a loss of power from the left engine. He also saw that the left propeller had feathered automatically.

The pilot said that although he brought the right engine to full power, he “could not hold V speeds” and heard the stall-warning horn sounding continuously, the NTSB report said. “He further stated that although he ‘stood on the right rudder,’ he could not stop the airplane’s left turning descent.”

The Bandeirante descended into a department store garden center and struck several large metal storage containers. “The cockpit separated from the rest of the fuselage, slid through the back fence and out of the garden center, and came to a stop on its right side,” the report said. Bystanders helped the pilot from the wreckage. There was no fire, and no one on the ground was hurt.

The pilot had conducted the takeoff with the flaps extended to 25 percent of their full travel, in compliance with the company’s operating procedures. Performance calculations conducted by investigators indicated that “the airplane, with flaps set at 25 degrees, would have been

able to climb at more than 400 fpm if the pilot had maintained best single-engine rate of climb airspeed and if the airplane had been trimmed properly,” the report said.

However, the findings of the investigation indicated that the pilot had “misapplied the flight controls,” the report said. “The pilot’s comment that he ‘stood on the rudder’ suggests that he either had not trimmed the airplane after the engine failure or had applied trim opposite the desired direction. The activation of the stall-warning horn and the pilot’s statement that he ‘could not hold V speeds’ indicate that he also did not lower the nose sufficiently to maintain best single-engine rate of climb [Vyse] or best single-engine angle of climb airspeed [Vxse].”

Examination of the airplane revealed that the engine failure had been caused by fatigue fracturing of the first-stage sun gear in the propeller reduction gearbox.

Maintenance records showed that the planet gear, which revolves around the sun gear, had been replaced during an overhaul of the engine in 1998 because it had “frosted and pitted gear teeth.” In accordance with accepted practice at the time, the sun gear was inspected, found not to be defective and reinstalled.

“However, since then, the engine manufacturer determined that if either the sun gear or planet gear assembly needs to be replaced with a zero-time component, the corresponding mating gear/assembly must also be replaced with a zero-time component,” the report said. “Otherwise, the different wear patterns on the gears could potentially cause ‘distress’ to one or both of the components.”

In addition, the engine manufacturer, Pratt & Whitney Canada, in 2002 issued a service bulletin requiring replacement of several components in PT6A 30-series engines at specified intervals. Notably, the service bulletin required replacement of the first-stage sun gear in the Bandeirante’s PT6A-34 engines at 12,000 hours.

However, the company that operated the accident airplane had a previously approved on-condition maintenance program and was not required to comply with the service bulletin. The sun gear in the accident airplane failed at 22,065 hours.



NTSB concluded that the “grandfathering” of the company’s maintenance program and “inadequate oversight” of the company by the U.S. Federal Aviation Administration (FAA) were contributing factors in the accident (ASW, 10/09, p. 9). “If the FAA had been properly monitoring [the company’s] maintenance program it might have been aware of the operator’s inadequate maintenance practices that allowed, among other things, an engine with a sun gear well beyond what the manufacturer considered to be a reliable operating time frame to continue operation,” the report said.

### Excessive Sink Rate Precedes Undershoot

Dornier 328-100TP. Substantial damage. No injuries.

The flight crew was conducting a scheduled flight with 36 passengers from Manado, North Sulawesi, Indonesia, to Fak-Fak, Papua, the morning of Nov. 6, 2008. The first officer, who was receiving training to serve as pilot-in-command (PIC) in type, was the pilot flying.

The report by the Indonesian National Transportation Safety Committee (NTSC) said that the 1,120-m (3,675-ft) runway at Fak-Fak’s Torea Airport did not have a RESA at either end, as required by the International Civil Aviation Organization.

During short final approach to the runway, the first officer selected “a power setting that created propeller disking, resulting in an excessive rate of sink, before the aircraft was above the touchdown area,” the report said. “The PIC (pilot monitoring/flight instructor) did not monitor the operation of the aircraft sufficiently to ensure timely and effective response to the pilot-induced excessive sink rate.”

Cockpit voice recorder data indicated that after calling 100 ft radio altitude, the PIC had shouted, “Too short ... too short ... I have it.” The report said that the PIC increased power, but the Dornier’s main landing gear touched down on rock-covered terrain that was 5 m (16 ft) from the runway threshold and 30 cm (12 in) lower than the runway. The left main landing gear fractured in two places, and the aircraft slid about 500 m (1,640 ft) before coming to a stop on the runway. There was no fire, and the

passengers were evacuated through the main cabin door and service door.

Based on the findings of the investigation, NTSC recommended that the airline ensure that its pilots receive crew resource management (CRM) training, as well as training based on the Flight Safety Foundation *Approach-and-Landing Accident Reduction (ALAR) Tool Kit*.

## PISTON AIRPLANES

### Rapid Ice Build-Up Forces Landing

Beech B60 Duke. Substantial damage. No injuries.

Clear ice accumulated rapidly while the Duke was in instrument meteorological conditions at 16,000 ft during a business flight from Scottsbluff, Nevada, U.S., to Saratoga, Wyoming, on Nov. 29, 2008. “In an effort to get out of the icing conditions, the pilot requested and received clearance to progressively lower altitudes,” the NTSB report said. “He requested a turn, and this was denied by the controller as there were two other airplanes in the vicinity with similar icing problems.”

The airplane was at 9,000 ft when the pilot acquired visual contact with some ground features. “At this point, both windshields were completely covered with clear ice, as were the unprotected portions of the aircraft, and both engines were operating at full power,” the report said.

The pilot decided to land the Duke on a highway. On approach, however, the airplane struck a power line that severed the upper half of the rudder and vertical stabilizer. The pilot landed the airplane on a terraced field next to the highway. The landing gear separated when the airplane struck a ditch, but the pilot and passenger escaped injury.

### Circuit Breaker Fails to Trip

Piper Chieftain. Minor damage. No injuries.

The Chieftain was climbing through 7,000 ft after departing on a commercial flight from Boscombe Down, Wiltshire, England, the morning of May 30, 2008, when the pilots detected the odor of something burning and then saw smoke and flames emerging from the overhead



panel. They disengaged all nonessential electrical equipment and turned back toward the airport.

“The copilot tackled the fire with a [Halon 1211] fire extinguisher, but the fire continued to smolder throughout the descent,” the AAIB report said. An airport fire crew was standing by when the pilots landed the aircraft without further incident.

Examination of the aircraft revealed that a motor in a cockpit air-recirculation fan had malfunctioned, but the 10-ampere circuit breaker guarding the circuit had failed to trip. “The excessive current drawn by the fan had caused the wiring to overheat, producing the smoke and flames,” the report said.

The circuit breaker was found to have significant heat damage, which was attributed to long exposure to electrical current “well in excess” of 10 amps. The report noted that the incident aircraft was exempt from a 1982 service bulletin that required installation of fuses rated less than 10 amps to help protect the fan circuit. After the incident, the operator installed the fuses in the incident aircraft.

### Loose Clamp Leads to Hydraulic Failure

Aero Commander 500B. Substantial damage. No injuries.

Inbound in VMC on a charter flight from the Dominican Republic on June 1, 2008, the pilot observed indications that the left main landing gear had not fully extended and locked on approach to Charlotte Amalie, U.S. Virgin Islands. He tried unsuccessfully to extend the left gear using the normal and emergency gear-extension systems, and by bouncing the right main gear on the runway.

The left main gear separated during the subsequent landing, but none of the seven people aboard the Aero Commander was injured.

The NTSB report said that the malfunction of the gear-extension system was caused by a loss of hydraulic fluid through fatigue cracks that had formed in an aluminum hydraulic tube that had accumulated more than 18,000 service hours. Although two clamps are required, the tube had only one, and it was loose. Vibratory loads had caused the tube to crack.

The report said that the probable cause of the accident was the failure of maintenance technicians to detect the inadequate clamping and fatigue cracks during an annual inspection of the Aero Commander five months, and 62 flight hours, earlier.

## HELICOPTERS

### Tail Rotor Pedal Lock Neglected

Hughes 369. Destroyed. One fatality, one serious injury.

Shortly after lifting off from a fishing vessel near Honiara, Solomon Islands, the morning of Dec. 28, 2008, the helicopter began to spin. A witness, the helicopter’s maintenance technician, saw the pilot “trying to grab the pedal lock” and later told investigators that the pilot likely had forgotten to remove the tail rotor pedal lock before takeoff.

The helicopter descended out of control, and the fixed floats separated when it struck the surface of the Solomon Sea. The helicopter then sank and was not recovered. “The pilot, a Philippine national, was not found and is presumed dead,” the NTSB report said. “The passenger, a Chinese national, sustained serious injuries.”

### Loose Fitting Causes Power Loss

Bell 206B JetRanger. Substantial damage. Two minor injuries.

About eight minutes after the helicopter departed from Lantana, Florida, U.S., for a television traffic-reporting flight the morning of Nov. 11, 2008, the engine lost power. The pilot initiated an autorotation and maneuvered the JetRanger toward a road in an industrial park.

“To clear power lines near the forced-landing area, the pilot used collective to extend the helicopter’s glide,” the NTSB report said. “The helicopter then touched down hard, severing the tail boom.”

Examination of the JetRanger revealed that the pneumatic line leading from the power turbine governor was not attached to the fuel control unit. The report said that the B-nut on the fitting likely had not been secured properly after it was removed to facilitate inspection of the engine gearbox during maintenance performed three days before the accident. 🌀



**Preliminary Reports, September 2009**

Date	Location	Aircraft Type	Aircraft Damage	Injuries
Sept. 1	Jackson, Mississippi, U.S.	Robinson R44	destroyed	1 fatal, 1 serious
Two U.S. Federal Aviation Administration inspectors were conducting a proficiency flight when the helicopter descended rapidly on approach and struck trees and a vacant house.				
Sept. 2	Kurnool, India	Bell 430	destroyed	5 fatal
The helicopter struck a hill in heavy rain during a flight from Hyderabad to Anuppalle.				
Sept. 4	Mumbai, India	Boeing 747-400	minor	21 minor, 208 none
Fuel leaking from the no. 1 engine ignited after the 747 was pushed back from the gate. The injuries occurred during an emergency evacuation.				
Sept. 4	Sugar Land, Texas, U.S.	Cessna 421C	minor	1 none
The pilot landed the 421 without further incident after an elevator pitch trim runaway and separation of the trim cable occurred during descent.				
Sept. 7	Long Apung, Indonesia	GAF Nomad N24A	destroyed	5 fatal, 4 serious
The maritime patrol airplane was en route from Long Bawan to Tarakan when it crashed under unknown circumstances.				
Sept. 7	Monte Bianco, Italy	Aerospatiale SA 315B	destroyed	2 fatal, 1 serious
The crew was performing power line maintenance when the helicopter crashed on the Toulou Glacier.				
Sept. 9	Onikeyevo, Ukraine	Antonov An-2R	destroyed	3 none
The utility biplane, which had an expired airworthiness certificate, crashed and burned after the engine failed on takeoff from a farm road.				
Sept. 11	Mount Okuhotaka, Japan	Bell 412EP	3 fatal, 2 none	
After two crewmembers disembarked from the hovering police helicopter to rescue a climber, the tail rotor struck rocks and the 412 crashed.				
Sept. 14	Stuttgart, Germany	Fokker 100	substantial	78 none
After several unsuccessful attempts to extend the main landing gear, the flight crew conducted an emergency landing on a foamed runway.				
Sept. 14	Nairobi, Kenya	Cessna 404	destroyed	1 fatal, 1 serious
The airplane stalled and crashed on takeoff for a training flight.				
Sept. 15	Castro Verde, Portugal	Piper PA-34-220T	destroyed	3 fatal
An autopilot pitch-trim malfunction might have occurred before the Seneca crashed during a night training flight.				
Sept. 15	Sheffield, Massachusetts, U.S.	Cessna 208	destroyed	6 minor
The right wing struck a tree and separated when the pilot conducted an emergency landing in a field after the engine lost power. The occupants exited before the Caravan was engulfed in flames.				
Sept. 16	Hayward, California, U.S.	Beech King Air B200	destroyed	1 none
The King Air struck terrain and burned after an apparent loss of power during takeoff.				
Sept. 18	Savoonga, Alaska, U.S.	CASA 212CC	substantial	2 none
Surface winds were from 010 degrees at 28 kt, gusting to 33 kt, when the cargo airplane veered off the right side of Runway 05 during landing and came to rest in a ditch.				
Sept. 22	Qarchak, Iran	Ilyushin 76M	destroyed	7 fatal
The Il-76 might have collided with a Saeghe fighter during a military-exhibition flight over Tehran. Control was lost when a radar dish separated from the rear fuselage and struck the vertical stabilizer.				
Sept. 22	Page, Arizona, U.S.	Agusta A109	substantial	1 none
The pilot had observed low-fuel warnings before both engines flamed out near the destination. The helicopter touched down hard during the forced landing.				
Sept. 24	Durban, South Africa	BAe Jetstream 41	destroyed	4 serious
The airplane crashed near a school after the flight crew reported an engine problem during takeoff for a positioning flight. One person on the ground was injured.				
Sept. 24	Tucson, Arizona, U.S.	Eurocopter AS 350-B3	substantial	4 none
The emergency medical services (EMS) helicopter touched down hard after the pilot lost tail-rotor control while landing on a hospital helipad.				
Sept. 25	Georgetown, South Carolina, U.S.	Eurocopter AS 350-B2	destroyed	3 fatal
After transporting a patient to Charleston, the EMS helicopter crashed in night instrument meteorological conditions while returning to its home base in Conway.				
This information, gathered from various government and media sources, is subject to change as the investigations of the accidents and incidents are completed.				