

# Aviation Human Factors Industry News

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*From the sands of Kitty Hawk, the tradition lives on.*

Hello all,

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In this weeks edition of *Aviation Human Factors Industry News* you will read the following stories:

★**Poor Disaster Response Sealed Fate of Dana Crash Victims – Expert**

★**Two airliners destroyed during maintenance works**

★**Air France Flight 447 Investigation: Pilots Not Properly Trained to Fly the Airbus A330?**

★**"Get-there-itis"**

★**Racing the Storm: The 1999 Crash of American 1420**

★**'Human error' to blame for Doncaster blast that destroyed last Vulcan bomber's engines**

## Poor Disaster Response Sealed Fate of Dana Crash Victims – Expert

An aviation security consultant and president, Association of Industrial Security and Safety Operators of Nigeria (AISSON), Dr. Ona Ekhomu, has said that **poor disaster response** was responsible for the huge death toll in the Dana Air flight 992 disaster. According to the expert, if disaster response had been prompt and effective, some of the trapped victims in the plane would have been rescued before the fuel tank explosion that sealed their fate.



The international security expert explained that, “once the Pilot, Captain Peter Waxtam, declared a Mayday based upon the engine problem his aircraft was having, emergency responders should have tracked the trajectory of the stricken jet in order to know where it would land in order to save the lives aboard.”

“It was a shame on Nigerian disaster responders that this crash occurred in an urban setting, yet no soul was rescued. The Dana Air Flight 992 crash showed the **weak under-belly** of Nigerian disaster response infrastructure,” he said, adding that the airlines also had a duty to have sound disaster response plans which would kick in once a jet is stricken.

Ekhomu called for the adoption of Incident Command System (ICS) in Nigeria, as this, he said, would help ensure smooth co-ordination among disaster management agencies in the event of a disaster.

He also called for **proper site security** at air crash sites which will define an inner cordon, that is the actual crash site, and outer area where normal activities such as media briefing, staging and spectator area, will go on.

## Two airliners destroyed during maintenance works

Two airliners have been destroyed within a few hours while undergoing maintenance works.

A CSA Czech Airlines Avion de Transport Regional ATR-42-500 registration OK-KFM was undergoing maintenance work in CSA's maintenance hangar at Prague (Czech Republic) when



an explosion occurred and put the aircraft ablaze at 21:20L (19:20Z) on Jun 9th. Emergency services were able to extinguish the fire by about 22:00L. One mechanic received injuries in the accident. The cause of the explosions is to be determined. The aircraft has been destroyed, two other aircraft received damage, the damage is currently estimated at more than 200 million Czech Crowns/8.2 million Euros/10.3 million US\$.

A LIAT De Havilland Dash 8-300 registration V2-LGH was also undergoing maintenance works in LIAT's maintenance hangar at Antigua (Antigua), when a number of explosions set aircraft and hangar ablaze at around 22:30L on Jun 10th (02:30Z Jun 11th). Oil and Fuel stored in the hangar as well as a fuel line underneath the hangar, which ruptured, are fueling the blaze and cause further explosions. It is unclear what started the accident. The aircraft, that was undergoing a C-Check, and the hangar have been destroyed.

## Air France Flight 447 Investigation: Pilots Not Properly Trained to Fly the Airbus A330?

The Airbus A330 has one of the most sophisticated automated piloting systems in the airline industry, but the 2009 crash of Air France Flight 447 has some experts saying that the [pilots weren't adequately trained](#) to handle the plane in an emergency situation, and that the plane's stall alarm system may have added to the [crew's confusion and contributed](#) to the



disaster. The crash, which killed all 228 passengers and crew on board, is considered one of the worst -- and most mysterious -- aviation disasters in modern history. One theory for what caused that Airbus A330 to go down is that the two co-pilots, led by 58-year-old Captain Marc Dubois, were not properly trained and [depended too heavily on the plane's autopilot system](#). That system disconnected at high-altitude when a speed sensor, called a pitot tube, froze over, sending inconsistent readings to the plane's computers.

Air France declined ABC News' request for an interview, pending the [July release of the final report](#) from France's investigation. But according to Bill Voss, the president and CEO of the Flight Safety Foundation, Air France was [so confident in the design](#) of the Airbus A330, the airline had not trained nor prepared its pilots for the situation the crew of Flight 447 encountered the night of the crash.

"No one was trained for high-altitude stall recovery in the cockpit," said Voss. "It's not part of the normal training curriculum...this is something that really has to be reformed globally. This is a really big deal."

Air France Flight 447 was en route from Rio de Janeiro to Paris on May 31, 2009, for an overnight trip, when it vanished. The plane crashed into the Atlantic Ocean in the early morning hours of June 1, 2009 -- nearly four hours after take-off.

Black box tapes were recovered from the wreckage two years later in April 2011 and, amazingly, still worked. The tapes revealed that almost four hours into the flight, the plane was 800 miles off the coast of Brazil, and Captain Dubois left the cockpit for a scheduled nap. At the time, the plane was about [to fly into a thunderstorm, one that other flights that night had steered around](#).

Once in the storm, the plane's pitot tube, a critical piece of equipment that tells the pilot the aircraft's air speed, failed, likely from ice crystals forming on it, according to BEA officials who inspected the wreckage. When the pitot tube fails, the Airbus's automatic pilot system disengages, shifting control back to the pilot.

According to the tapes, First Officer Cedric Bonin, a 32-year-old pilot who had [fewer than 5,000 flight hours under his belt](#), was at the controls but had never been in this situation before at high-altitude. Bonin made the [fatal mistake](#) of pulling the plane's nose up, which caused it to go into a deep stall.

"It seems that the pilots did not understand the situation and they were not aware that they had stalled," said Jean-Paul Troadec, the director of BEA, the French authority conducting the investigation into the Flight 447 crash.

When the Airbus A330 goes into a stall as severe as what happened to Flight 447, Voss said the plane's computer rejects the data it's receiving, thinking the plane couldn't possibly be flying in such a radical condition, and then shuts off the stall alarm.

"The computer is thinking 'this doesn't make any sense, we must be on the ground. We must be parked at the gate or we would be dead,'" Voss said.

Airbus claims the stall alarm on Flight 447 "was performing as designed," and said there is rationale behind its design.

"If you get as low as 60 knots, the stall warning will cut out by design, and we do that because on landings and take-offs at a low air speed, when the angle of attack is erratic and it may not be reliable, we cut that out so [it would not distract pilots during take-offs and landings](#)," said Bill Bozin, the vice president of safety and technical affairs at Airbus.

As co-pilot Cedric Bonin pulled continuously up on the controls, the stall alarm sounded for 54 seconds straight. But as Flight 447 went deeper into its catastrophic stall, the alarm cut in and out intermittently, the black box tapes revealed. The stall warning was working as designed, but critics charge the pilots would have [been confused](#) by the mixed signals.

The co-pilots called frantically for help from the captain, the black box tapes showed, but it took Dubois more than one minute to return to the cockpit.

[VIDEO: What It Was Like in the Flight 447 Cockpit](#)

[INFOGRAPHIC: Air France Flight 447: Timeline of Events](#)



## "Get-there-itis"

CALLBACK takes a look at how the urge to press on to one's destination, despite conditions that might otherwise discourage such a decision, can lead to [risky behavior and undesirable consequences](#). This pilot who let "get-home-itis" cloud his thinking share valuable insights into avoiding this dangerous malady in the following ASRS reports.

Just as the more common "get-home-itis" can lead to poor decision making, so can the desire to get to a destination other than home. In this case, family commitments pressured a Private Pilot to [act against better judgment](#).

- OK, I did it; the dumbest thing I have ever done in my entire life. I busted the MDA on [a GPS approach]. I can't believe I did this. I am now a statistic. At least I'm a live statistic. It was a classic case of "get-there-itis" to the extreme. My wife and I had booked a bed and breakfast and I [was blinded](#) by my desire to please her.... I knew the ceilings, as reported by ATIS, were half of what the minimums were on the plates. ATC cleared me for the approach and I went ahead and shot the approach anyway. The ironic thing is that it was probably the best approach I ever shot in my life. That doesn't dismiss the fact that it was also the dumbest decision I probably ever made and I am not short on doing dumb things.

I am, by nature, a safe and conservative pilot. On this day my brain went dead. I'm pretty sure I know what led me to the bad decision making process. The advance booking pretty much set a deadline that I **subconsciously** determined I was going to make. The rest is history. I feel like an alcoholic who has just recognized he has a problem. I can only hope this experience shakes the dumbness out of my head for the rest of my life.

## **Racing the Storm: The 1999 Crash of American 1420**

National Transportation Safety Board investigator Michael Kelly looks at the crash site of American Airlines Flight 1420 at Little Rock National Airport in this June 4, 1999 photo in Little Rock, Ark. A flight attendant on the plane told jurors Tuesday, May 17, 2005 at a federal trial in Little Rock that she never felt her life was in danger while Capt. Richard Buschmann flew American Airlines Flight 1420 from Dallas to Little Rock on June 1, 1999.



The data for the following story was gathered from the official accident report issued by the National Transportation Safety Board.

As the sun set on the first day of June in 1999, passengers of American Airlines Flight 1420 boarded an MD-82 aircraft in Dallas, Texas, destined for Little Rock, Ark. It was warm, the air humid and the stage set for disaster.

### **A "Bowling Alley" Approach**

In springtime, cool, dry Canadian air races southward while sticky, sultry, warm air resides across the Deep South. When these two air masses clash, the stage is set for violent thunderstorms. These ingredients came together on June 1, 1999 across Arkansas as Flight 1420 flew towards Little Rock.

Already delayed by poor weather in the Dallas area, Captain Richard Buschmann and First Officer Michael Origel were behind schedule and in danger of going beyond their allowed duty times. Prior to leaving Dallas, the crew was briefed on the developing thunderstorms in Arkansas, but believed they would be able to make it to Little Rock.

While in the air, an American Airlines flight dispatcher informed the flight crew that storms were closing in on Little Rock, but a "bowling alley" of clear air still existed and recommended expediting their approach to avoid the weather.

Just before 11:30 p.m. as Flight 1420 was about 30 minutes away from Little Rock, the airport weather observing station began reporting a thunderstorm. At this point, winds were still light, just 10 mph.

In the cockpit, Buschmann and Origel began to feel the effects of the increasingly bad weather with turbulence and frequent lightning. The increased workload of landing in poor weather would take its toll.

### The "Bowling Alley" Closes-In

As Flight 1420 was on final approach, the weather rapidly deteriorated and the "bowling alley" closed in. Visibility on the runway dropped below the minimum required for landing and winds increased above the acceptable limit. Yet the pilots, tired from a long day of work, did not decide to abandon the approach and go to their alternate airport.

With lightning engulfing the plane, turbulence rocking it from side to side, and rain pelting the windows, the MD-82 touched down on the runway. Immediately, the plane began sliding, not losing speed. Despite applying the brakes, the plane continued through the end of the runway and careened into a steel walkway, coming to rest on the bank of the Arkansas River.

Captain Buschmann was killed instantly while 10 other passengers perished in the crash; 134 people survived.

The focus of the National Transportation Safety Board (NTSB) investigators quickly turned to the lack of braking and the weather. What they found would reveal a startling pattern in the aviation community.

## "Get There-Itis" and a Culture of Flying Through Storms

After months of investigation, witness interviews and studies of [pilot behavior](#) in thunderstorms, the NTSB found that two out of three pilots would land in a thunderstorm. They were more likely to do so if it was nighttime, they were [behind schedule](#), or if other planes had landed in front of them.

This unsafe practice shocked many in the aviation community. It was also found that American Airlines had a [vague policy](#) about flight through thunderstorms. In response, more specific guidelines were adopted.

The storm that hit Little Rock late in the evening on June 1 was a severe thunderstorm. Just after the fatal crash, a wind gust to 88 mph was reported at the airport-clearly unsafe weather to attempt a landing. However, the flight crew decided to land anyway. Lead NTSB investigator Greg Feith described the insistence of landing despite weather "[get there-itis](#)."

But despite the poor weather, Flight 1420 had successfully landed. Why had the plane skidded off the runway without stopping? The key to unlocking this mystery was found on what was NOT heard on the cockpit voice recorder. There was [no mechanical click](#) signifying that the spoilers were armed.

The spoilers aid in braking by disrupting flow of air over the wing. In addition, they reduce lift which allows the plane to put its full weight on the wheels. In the case of Flight 1420, the flight crew [forgot to arm the spoilers](#) to deploy upon landing.

As a result, the pilots had extremely limited braking ability and could not slow the plane in time.

In the aftermath of this tragic accident, the NTSB recommended numerous improvements in cockpit procedures, communication of weather forecasts and flight crew training.

Despite the changes and lessons learned from June 1, 1999, weather [continues to be a leading cause of aviation disasters](#). Incidentally, exactly 10 years later, Air France Flight 447 would vanish over the Atlantic Ocean, killing all 228 people on board--more on that fatal night coming soon.

## 'Human error' to blame for Doncaster blast that destroyed last Vulcan bomber's engines

An explosion which grounded the last-remaining Vulcan Bomber just prior to take off has destroyed two of the aircraft's engines, with **human error** apparently to blame. The plane failed to take off from Doncaster's Robin Hood Airport this month, with witnesses reporting a large explosion and smoke billowing from the aircraft.



The Vulcan to the Sky Trust which manages and operates the plane, based in Doncaster, confirmed that the primary cause of the damage was the **"ingestion" of silica gel desiccant bags into the one of the engines** on the port side of the aircraft.

The silica gel bags are used to reduce moisture and were **apparently left inside the engine by mistake**.

A statement on the Vulcan to the Sky Trust's website said: "The most likely sequence of events was that material was ingested by No.1 engine, which surged and suffered LP compressor blade failure.

"Debris was then sucked into No. 2 which then also failed."

Investigations have shown that both of the XH558 aircraft's port side engines are beyond repair, having suffered blade damage and the effect of excessive heat.

However there was some good news for the trust and its supporters in that there has been no structural damage to the aircraft.

The head of the Trust's Safety Review Committee is now conducting a formal investigation of the incident while work is already underway to repair the damage.

The Aircraft Accident Investigation Branch has confirmed that, as the damage to the engines was contained, the incident is not reportable to them. The Civil Aviation Authority, which inspect the aircraft regularly and carry out test flights at least twice a year, confirmed to the Yorkshire Post that they were satisfied that the Trust's maintenance and management of the aircraft was sound and that it would not be launching any investigation itself.

The Vulcan had been due to be part of the Jubilee celebrations prior to the explosion but Michael Trotter, Business Development Director with the Trust has contacted all of the display organizers booked up to and including RAF Waddington, to advise them that XH558 would not be able to attend. It is now targeting the Royal International Air Tattoo in July for its next appearance.

Michael Glynn, a councillor on Hatfield Town Council, expressed concerns to the Yorkshire Post, saying: “I would have thought it would have been inspected before take off to make sure things like this were removed, especially when it is flying over residential areas.”