

CALLBACK



From NASA's Aviation Safety Reporting System

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Fourth Annual Award Winning Lessons

For the past three years, **CALLBACK** has presented the “best” reporter performances in incident reports submitted to the ASRS. Like award-winning films, these incidents have all the ingredients of outstanding drama – compelling plots, edge-of-the-seat suspense, winning performances, and the zest of adventure. In this, our fourth annual issue of award-winning lessons, we present a selection of incidents that were handled with skill, initiative, and professionalism. We believe these incidents illustrate the value of training, communication, and teamwork when the unexpected occurs.

And the Winners are...



Best Performance in a “B”-Feature

A B747-400 flight crew was following the script for a trans-oceanic flight, when they were notified that unusual cargo was being loaded.

■ *The aircraft was an unmodified aircraft for aft cargo fire warnings...I was given a Pilot Notification for Dangerous Goods, which indicated that we would be carrying 'Dry Ice (Live Bees),' 1 package, 120 pounds...The First Officer remarked that during his walkaround he noticed that we had a pallet of bees being loaded in the aft cargo pit, and, that it was giving off a 'cloud' in the warm air, but that the bees were all intact. Since the form indicated only 1 package of...bees, I assumed that the bees were actually in the aft cargo pit. I was later told [at destination] that there were bees in both pits.*

At about XA30Z...we got a status message indicating Cargo Aft-4 Loop-A [advisory]... We discussed the situation, which had no additional action required. We had 72 degrees of aft cargo temperature on the ECS [Environmental Control System] page. Approximately 30 minutes later, we got another status message indicating Cargo Aft-4 Loop-B, this with 73 degrees of cargo temperature. This again required no additional action but definitely got our attention...[Then] we got an Aft Cargo Fire Warning...with the associated bell and Master Warning. I silenced the bell, and the Aft Cargo Fire light and EICAS also disappeared. We reviewed the QRC, but, did not activate any switches since the warning had gone out immediately, and a test of the fire warning system showed PASS...

I assigned the flying duties, woke the relief pilots, and called maintenance/dispatch via SATCOM. I notified the purser and asked the aft Flight Attendants to check the floor for hot spots, smoke, or odors—there was none. The aft cargo compartment temperature was at 75 degrees and remained there. After a lengthy discussion with

maintenance and dispatch, we reset the system to 'single loop' and...the Loop B status message went away. We elected to turn off the Aft Cargo Heat switch in an effort to put the bees back into a dormant state. This appeared to work well, however, it took nearly 10 hours to reduce the aft cargo temperature 10 degrees! At 71 degrees of aft cargo temperature we no longer received the intermittent Aft Cargo Fire Warnings (there were a total of 6 which were all momentary, and all showed fire test PASS). At 68 degrees... the status message for Loop A disappeared...The flight continued uneventfully to [destination], with no additional warnings or status messages...

Honey bees emit a number of different compounds which may be interpreted as smoke particulate by unmodified smoke sensors in aircraft cargo compartments. This reporter's company is in the process of replacing its smoke detectors with units designed to differentiate between bee emissions and smoke-related particulate.



Best Performance in a Flight Assist

In this familiar saga of a private pilot anxious to fly in marginal weather conditions, an Approach controller was the star.

■ *I had decided to perform some takeoffs and landings. The weather was marginal VFR with an observed ceiling that looked OK. There was mist in the air. Looking north, I could see the mountains (about 5 miles) in mist. I was taking off to the south. I could see some occasional flashes of blue sky, and the wind was from the south. During climbout the mist became light rain and the visibility was becoming worse. Then the wall of white came and made the airport behind me disappear.*

I had no plan for this event. I was just barely at pattern altitude. I started to turn and was going to descend to try to find the airport but I could already tell that I had my hands full. I was concentrating hard to keep the attitude indicator wings level and I started a slight climb, I now had to reduce climb power to keep the plane under control. By now I was at 2,000 feet, but fighting to keep the attitude indicator under control. My GPS was on, and I could see [another airport] and figured they may be able to help radar me into their airport. I tried to call them but had no reply. (I now know that I must have tuned in the wrong frequency.) Things were not good, I believe I was fighting vertigo...I then retrieved my chart...and was able to tune in Approach and made my call for assistance. They answered! He [the controller] had me enter a transponder code then tune to another frequency. Having someone to talk to was a great help. He gave me the altimeter setting, started giving me instructions, all turns were half standard rate, he kept reminding me to watch the airspeed, altimeter, and would

ASRS Alerts Issued in 2007	
Subject of Alert	No. of Alerts
Aircraft or aircraft equipment	115
Airport facility or procedure	93
ATC procedure, operations or equipment	91
Chart, Publication, or Nav Database	18
Company policy	9
Maintenance procedure or Other	16
TOTAL	342

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February 2008 Report Intake	
Air Carrier/Air Taxi Pilots	2843
General Aviation Pilots	781
Controllers	76
Cabin/Mechanics/Military/Other	283
TOTAL	3983

have me call out when wings level after the turns. At about 1,200 feet I came out of the clouds with the runway in front of me. The total time in IFR was 30 minutes. I normally don't fly in marginal conditions, but by believing that I was just staying in the pattern, I gave myself a false sense of security, and ended up with extreme problems....



Best Solo Performance

A student pilot turned in an “electrifying” performance in what was intended to be a routine action sequence.

■ I was doing my first solo out to the practice area north of the airport. I was doing some ground reference maneuvers and noticed that the GPS and navigation lights were on. I thought that was strange and then noticed the annunciator flash low fuel. I knew there were full tanks because I checked them during preflight. I immediately started looking for an emergency landing site and suddenly noticed flames and smoke coming from the radio stack in the gap between the radios and ADF. The transponder was still on, so I tried to squawk 7600 but when I tried, the transponder failed too, so I turned the avionics master off. I was going to land at a non-controlled airport before I realized I had my cell phone in my bag. I called my flight instructor who I had just dropped off before going to solo and told her I had no communication, so she called the Tower for me and called back to say I could come in to land and to look for light signals. On approach, I noticed the light signals and a fire truck near the runway. At this point I realized all the electrical was out because the electric flaps weren't working, either. I landed [safely] and taxied back to the aviation school.



Best Performance in a Supporting Role

An observant flight attendant turned in a winning performance in support of a B737 flight crew.

■ Landed ZZZ with 17.1 fuel and preparing for the return leg...Conditions clear skies 10 miles visibility, altimeter 30.01, temperature 14/07, winds 160/5. Just prior to boarding, the flight attendant commented that she thought ICE was on the wings. I checked and YES there was frost on the upper surface of the entire wing. With few options, we decided to try to use [the] potable water hose to de-ice the wing. Had the wing been less than full, we could have added warmer fuel and melted the ice, but the wings were full of super-cooled fuel that was causing frost to form with no visible moisture on the ground or encountered during descent or approach. It took about 20 minutes to get the wing root area cleared as that was the point of greatest accumulation (about a dime's thickness), and I did a check with my bare hands to confirm the wing was clear. The rest of the flight was uneventful. At no time did it occur to me or the Captain to look for ice, and a comment by the flight attendant saved the day.



Best Performance in a Medical Drama

A B737 First Officer, flight attendants, and a nurse passenger share the medical drama honors for their skillful use of resources when confronted by a cockpit emergency.

■ En route shortly after we leveled off at our cruise altitude of FL320, the Captain said, do you mind if I take a short break? I said no problem, go ahead, I will fly the airplane and talk to air traffic control. I was the Pilot Flying and the Captain was the Pilot Not Flying. A couple of minutes later I noticed the Captain was pulling out his oxygen mask, and started breathing oxygen. I didn't think anything of it because sometimes if you're a little tired, breathing oxygen helps you feel better. Shortly after that I looked over at him and he was sweating profusely! At that point I knew it was something more serious than just being a little tired, so I asked him if he wanted me to call the flight attendant on the interphone and ask her if we had any qualified medical people on board. He looked at me and said yes. So I immediately called the flight attendant and said, don't be alarmed, but would you do me a favor and ask if we have a doctor, or a nurse, or any qualified medical people on board?...The flight attendant promptly called me back and said yes, we have someone on board. I said good, here is what's going on. The Captain is not feeling well, and he needs medical attention...Shortly after that she called the cockpit and said this person was a nurse practitioner and wanted to talk to the Captain...so I coordinated with the flight attendant to have the nurse come to the cockpit.

When the nurse came to the cockpit she asked if he was on any medication for anything? He said he was taking medication for high blood pressure. After evaluating him the nurse said she wanted the Captain to leave the cockpit and go to the cabin of the aircraft where he could lie down, and she could properly treat him. In the meantime, I contacted Dispatch on ACARS and notified them of the situation, and told them we would possibly have to divert. After I notified Dispatch, I called the flight attendant and we coordinated the procedure for opening the cockpit door, and having the Captain proceed to the cabin of the airplane. I also had one of the flight attendants stay with me in the cockpit because I knew it could get real busy and I might need her help... After talking with the nurse, the flight attendant called the cockpit, and said the nurse indicated that we need to land as soon as possible!...I notified Dispatch of our position, and they indicated if we were going to divert, to go to ZZZ. After that I immediately declared a medical emergency with air traffic control...They immediately gave us a lower altitude, and gave us a heading vector towards the airport...I had the flight attendant help me accomplish the approach, descent checklist, and in the meantime the ATC controller handed us off to Approach Control, who advised us of our landing runway...After we landed, we rolled out, and I exited the runway...Once we arrived at the gate, the ambulance was there waiting for us to tend to the Captain....

I am proud to be associated with a very professional group of flight attendants. They handled the situation extremely well! I am thankful for their help, and for the help of the medical people we had on board with us.