

CALLBACK

From NASA's Aviation Safety Reporting System



Issue 421

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What Would You Have Done?

Once again *CALLBACK* offers the reader a chance to “interact” with the information given in a selection of ASRS reports. In “The First Half of the Story” you will find report excerpts describing the event up to the decision point. You may then use your own judgment to determine the possible courses of action and make a decision regarding the best way to resolve the situation.

The selected ASRS reports may not give all the information you want and you may not be experienced in the type of aircraft involved, but each incident should give you a chance to exercise your aviation decision-making skills. In “The Rest of the Story...” you will find the actions actually taken by reporters in response to each situation. Bear in mind that their decisions may not necessarily represent the best course of action. Our intent is to stimulate thought, discussion, and training related to the type of incidents that were reported.

The First Half of the Story

Situation #1 C172 Pilot's Report

■ *The weather briefing advised my route was VFR and forecast to be so until around 0300 local time.... Enroute the weather quickly deteriorated. I noticed larger cumulonimbus clouds forming around me and a thick cloud deck forming in front of me. I opted to drop my altitude to 3,500 feet to maintain VFR cloud clearance and duck below it. Once the weather opened up I decided to climb to 5,000 feet to get a better look at what was going on around me. I saw that the weather was worse than I thought. It was solid IMC everywhere and deteriorating rapidly....*

I started checking different enroute weather services to get a picture of what was going on. At this point I had 1.3 hours of fuel left and realized that any airport within range was heavy IMC.... I decided to continue towards [my home airport].... I maintained 1,000 feet above the cloud deck for some form of traffic separation, but could not see the ground as it was a solid [layer].

Shortly after, both NAV 1 and NAV 2 failed, but DME was still operational. I then attempted to call Center for vectors and help, but to no avail. It appeared my radio

could receive but not transmit. I then attempted to navigate via my iPad, but the battery died shortly after. At this point the weather had gotten so poor that flying through clouds became unavoidable. I was in complete IMC. I executed an emergency 180 using my turn coordinator and my stopwatch and held that heading for a few minutes. Realizing it wasn't improving, I decided to climb to get above the deck once again for traffic separation. I climbed for approximately 20 minutes and popped out above the deck at 10,000 feet. It was solid overcast as far as the eye could see.... At this point, I was very disoriented as to where I was, and had no way to call for help.

What Would You Have Done?

Situation #2 PA28 Pilot's Report

■ *When the throttle was retarded from full power to cruise after a practice power-off stall recovery maneuver was completed, the throttle cable broke causing the engine to run at full power. I took control from the student while bringing the [throttle] to idle to confirm we couldn't run at any less power. The power continued to read between 2,500 and 2,700 RPM (redline for the prop). I declared an emergency with [the TRACON], whom I was already using for radar services, and diverted to [a nearby airport] with a longer runway than our home base. At this point it became apparent I could not maintain level flight without overspeeding the propeller.*

What Would You Have Done?

Situation #3 CRJ900 Captain's Report

■ *While descending...we entered IMC and icing conditions. We turned on our cowl and wing anti-ice. Shortly thereafter the EICAS indicated a master warning immediately followed by an Anti-Ice Duct Fail message. We then received Left and Right Wing Anti-Ice Fail messages.*

The First Officer and I complied with the appropriate QRH items and informed Approach that we were having issues with our icing system and requested an expedited ILS... and a lower altitude. Shortly thereafter we were out of icing conditions and decided an emergency did not need to be

declared.... We landed, taxied to the gate and contacted Dispatch to initiate a write-up with Maintenance.

We taxied out to a run-up area with Contract Maintenance to do several tests on the system.... Although the system checked out on the ground, the First Officer and I agreed that it still might not be safe. The reasons were several. The conditions within 150 miles were calling for icing from 3000 to 23,000 feet. Since we were limited to FL250 due to single pack operations, this was a serious consideration. It was also night time and a considerable portion of the flight would be over mountainous/remote terrain. While on the ground the aircraft experienced an Ice Detect 2 Fail status message. Simply resetting the system and having the message(s) disappear from the EICAS did not inspire confidence to depart under these conditions.

During a conference call with the company we explained our rationale. We fully understood this would inconvenience holiday passengers and that some might not understand why we did not depart in a plane that was legally signed off. Ultimately we were told that it was solely our decision.

What Would You Have Done?

The Rest of the Story...

Situation #1 C172 Pilot's Report

The Reporter's Action

■ Using my DME, I determined where I was relative to the tuned VOR/DME by flying different headings and observing the DME's reaction. On my sectional chart I drew a line straight from the VOR, and determined I was roughly six miles south of [the departure airport]. I then turned

direct north and held this heading for 10 more minutes to get far north of the field where I knew there were no obstacles while descending from 10,000 down to 2,000. Once [my passenger's] cell phone got signal, I pulled up a computerized satellite map and used that to line myself up with the runway coming from the north. I maintained a slow but steady descent as I continued essentially a poor man's GPS approach. I broke through the clouds at roughly 1,200 feet AGL and landed.

Situation #2 PA28 Pilot's Report

The Reporter's Action

■ I allowed the aircraft to stay in a slow climb, eventually ending up near the airport at [3,500 feet AGL]. While on a very high downwind I contacted Tower, was cleared to land, and elected at that time to pull the mixture back to begin the descent for landing. I briefed the student on how I planned to land, using the mixture to add "bursts" of power if necessary, and asked him to turn off the fuel and mags on my command.

The glide went well. I had the student secure the [engine] once I was sure we'd make the runway and it was an uneventful touchdown.

Situation #3 CRJ900 Captain's Report

The Reporter's Action

■ We elected to do it the next day during daylight and vastly better weather. During the flight we had a master warning immediately followed by an Anti-Ice Duct Fail. This caused our wing anti-ice protection to turn off. We quickly exited icing conditions. All QRH items were complied with and maintenance was given a heads-up via ACARS.

ASRS Alerts Issued in December 2014	
Subject of Alert	No. of Alerts
Aircraft or Aircraft Equipment	4
ATC Equipment or Procedure	5
Other	3
TOTAL	12

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 A Monthly Safety
 Newsletter from
**The NASA
 Aviation Safety
 Reporting System**
 P.O. Box 189,
 Moffett Field, CA
 94035-0189
<http://asrs.arc.nasa.gov>

December 2014 Report Intake	
Air Carrier/Air Taxi Pilots	5,167
General Aviation Pilots	1,061
Controllers	543
Flight Attendants	450
Military/Other	220
Mechanics	188
Dispatchers	125
TOTAL	7,754