

Icing in Southern California

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“M ayday, mayday, mayday. Wolfpack 55”
“Wolfpack 55. Maintain niner thousand. Wolfpack 55. Is there something wrong? Talk to me.”
“Wolfpack 55 going down.”
“Cessna 59er delta. Traffic right above you is an H-53, 6,000 feet, descending. I don’t know what he’s doing; he’s supposed to go east bound at, eh, 9,000. Can you see him right in front of you, 5,400, descending?”
“Affirmative.”
“Cessna 59 delta. Watch him closely. I don’t know what he’s doing; maintain visual separation.”
We had fallen 7,000 feet in three minutes. We were in the goo, and on goggles, eight miles east of home. It was my copilot’s first night flight in the fleet.
It was late January, and we were on a routine training mission in the Yuma area. The plan was to depart from Miramar as a section, separate for single-ship

CALs (confined-area landings), rejoin later for section CALs, and then RTB.

Inclement weather was forecast to move into the area at our takeoff time, so we discussed getting separate instrument departures and joining up in the training area. We were briefed by our ODO that the freezing level was at 8,000 feet.

During startup, we checked ATIS at Miramar and heard AirMet Zulu was valid. Our section lead asked the ODO to look it up, and he said the AirMet indicated the freezing layer went from 8,000 to 22,000 feet. Our interpretation of that statement was our first error. We concluded the freezing level no longer was at 8,000 feet but, rather, had gone up to 22,000 feet. We agreed that was unusual but possible with the passage of a front or an inversion layer.

The weather started to move in. As our section

lead took off, we stayed back to troubleshoot our aircraft. Lead called us after 15 minutes and reported the weather was good over the mountains to the east, and we could depart VFR. An additional 45 minutes went by before we got out of the chocks. Finally, we departed VFR, and as we climbed through 5,000 feet, the weather started to close in around us. We had definite visible moisture, and we checked the OAT; it indicated 11 degrees Celsius. We decided to head back to Miramar and file an IFR flight plan to get us over the mountains and into our training area.

We contacted MCAS Miramar tower, passed our intentions, and they filed our flight plan for us. We remained on deck between the parallel runways at Miramar while waiting for our clearance. We didn't try to contact Miramar metro or get a weather brief from a qualified observer. If we had done so, our misinter-

pretation of the AirMet would have been clear, and we would not have accepted our subsequent clearance to 9,000 feet.

We received our clearance, took off from Miramar, and turned north in accordance with our climb-out instructions. We immediately were cleared to 9,000 feet and continued our climb. We were in the clouds by 3,000 feet and noted our OAT was 12 degrees. We checked our temperature three times during the climb and level off, and it never dropped below 10 degrees.

We were vectored northeast and then east-southeast to intercept our radial off Mission Bay VORTAC. We were level at 9,000 feet, heading 110 degrees at 100 knots, and in the clouds. At level off, we engaged our barometric-altimeter hold and again checked our OAT. I felt a little suspicious about its accuracy; it hadn't moved much since we climbed through 5,000 feet. I

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could not see the gauge from the right seat, and my copilot was on the controls. So I asked our crew chief to come up and tap on the gauge to see if it would respond. As he climbed on the crew seat, my copilot said he thought we were in a rate of descent.

I came on the gauges and initially did not see any rate of descent. I did, however, get the seat-of-the-pants feeling we were gaining airspeed and falling. My copilot put in a bit of aft cyclic to see how the aircraft would respond. I initially saw our VSI fall to 500-fpm descent and then through 2,000 fpm. Our attitude indicator was nose up and rolling left and right. I thought my copilot might have had vertigo and was putting the aircraft into this unusual attitude.

I took the controls and felt what I only can describe as a violent departure from controlled flight. The aircraft pitched up and down and rolled left and right with no response from my cyclic inputs. Over the course of the fall, I remember seeing almost every possible attitude. We remember seeing the bottom of our attitude gyros, which indicated we were 60 degrees nose down and 30 to 40 degrees left wing down.

We rapidly descended through 7,000 feet, and I remember hearing SoCal approach control trying to contact us. I told my copilot to make our mayday call.

During our fall, we tried to troubleshoot our problem. I quickly analyzed which flight-control inputs had an effect and which did not. The cyclic had no effect on our attitude, but the collective was a different story. With the collective up, we would droop turns, but torque remained low. One thought from flight school went through my head: "Turns are life."

With that thought, I announced to the crew I was entering the autorotation. We could preserve Nr, which was all we had control of, and it gave us hope: At least we could pull at the bottom.

We had two things while we were up there: time and altitude. We had a lot of time and plenty of altitude to work with. We could not figure out what the problem was, so we rechecked our engines—they

were all on and seemed to be working. My copilot thought it might be an automatic-flight-control-system (AFCS) problem, so he secured our AFCS servos. That move didn't fix anything, so he quickly turned them back on.

At around 3,000 feet, I realized we had recovered from the unusual attitudes and were wings-level. I tried to nose down the aircraft to get 100 knots for the autorotation. Finally, the aircraft responded. We soon broke out of the clouds at 2,000 feet and saw mountains on three sides of us. We had spiraled down through a bowl of mountains. I asked my copilot to look for a place to land, and he pointed out an airfield at our 1 o'clock. After regaining control of the aircraft, I did another quick analysis of my inputs. We had torque indications as I pulled up on collective, and Nr was around 107 percent. My copilot had pushed our speed-control levers to full forward. We were at 100 knots, and our rate of descent was 500 fpm.

We did a running landing to runway 27R at Gillespie Field. We didn't talk to anyone on the way in, but tower had received a call from SoCal about us heading there. Tower was happy to hear from us when we finally called them from the FBO where we parked. We checked our OAT after landing; it indicated 11 degrees.

We had flown in known and published moderate icing conditions for more than 10 minutes. Our experience is a perfect example of normalization of deviance. In the past, if we were unable to depart VFR, it was a common practice for us to file a flight plan from the aircraft without talking to a qualified forecaster first. According to OPNAV 3710, that is wrong. You need to talk to forecaster, if one is available, before filing any instrument-flight plan.

A combination of mistakes, a faulty gauge, and normalized deviance led to a circumstance that could have killed us. 

Capt. Dan Fitzpatrick and 1stLt. Tim Scherling served with HMH-466 at Al Asad, Iraq, in support of Operation Iraqi Freedom.