

On December 26<sup>th</sup> 2010 my wife & I were ready for our final day of flying on a 39 day trip in our KIS-4 experimental airplane. We would be heading from Cecil Field (Jacksonville, FL - KVQQ) to North Houston Executive airport (9X1) with a stop in Key Field (KMEI) in Meridian Mississippi. Each leg would take about 3hrs so we wanted to start early. We had a big breakfast because we didn't know if the FBO in Meridian, Mississippi was going to be open. We left around 7:30 for the airport and it was cold. I called Flight Service for a briefing and to file a flight plan. According to the briefer, the weather was real bad to the north and east but better along our route of flight. There had been reports of icing conditions about 30 miles north of us from 4,000 to 6,000ft with strong winds and light snow flurries. This didn't seem to be a big deal since we would be at 8,000ft, in clear conditions on top. Meridian was reporting marginal VFR conditions but forecast



Galin with Uncle Orlando and Aunt Mely

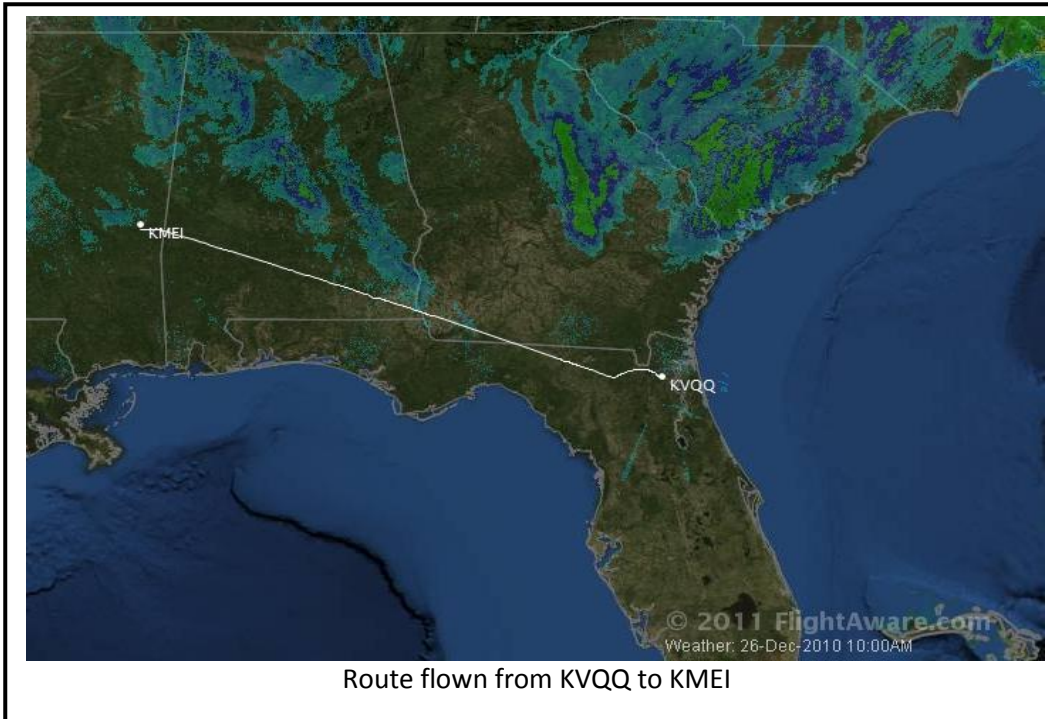
to be completely VFR by the time we arrived in 3hrs with temperatures in the low to mid 40's. With this information in hand, we filed a GPS direct IFR flight plan to Meridian and we got ready to depart. We still had about 5hrs of fuel on board for a 3hr flight so we did not take on any more. Besides, the airplane would be at least 250lbs lighter giving it better performance.

So we got our luggage inside the plane when to our surprise we saw snowflakes coming down. Our first reaction was; "It's snowing in Florida for heaven sakes!" The temperature

was about 38 degrees so the snow was melting immediately upon contact. It was also raining lightly and very windy. We said our goodbyes to my Uncle who had brought us to the airport and climbed into the airplane. The plane took a while to start since it was very cold. Good thing we had a new battery with a full charge on it because our old battery would have never started the engine at that temperature. Once the engine was on, we had to wait quite a while for it to warm up to operating temperature before we taxied away. Since it is such a long runway, I asked for an intersection departure which still provided more than 4,000ft of runway for take-off.

Craig tower gave us our clearance and we took the intersection departure to the northwest. Soon after takeoff, approach cleared us to our cruising altitude of 8,000ft and we entered the clouds at about 4,000ft. Other planes were on frequency saying they were VFR on top and that the clouds ended at about 6,500ft so everything seemed just like the weather briefing said it would be. But at about 5,000ft I noticed that the airplane was not climbing as it normally did. At this weight we should be climbing at about 1,200ft per minute but it was struggling to do 500ft per minute at the same airspeed. I made sure the pitot heat was on so I didn't think this was the problem. Being in the clouds we could not see anything outside so I concentrated on the instruments. After a while we were climbing at only 200ft per minute and I knew something was not right. Just then my wife asked "What's that on the windshield?" We had a book with the en-route charts on the dashboard with a black three ring binder containing the approach plates on top of it so we could not see the lower 3 inches of the windshield. At first I couldn't see anything on the windshield but after a few seconds I saw ice, rime ice, on the windshield. Icing conditions were a lot further south than reported and the worst part was that we had inadvertently entered them.

That explained why the airplane was not performing correctly. We turned to the southwest



Route flown from KVQQ to KMEI

keeping our wings as level as possible and started a descent out of the clouds. I advised the controller we were picking up ice and needed to descend to which the controller said to standby while he coordinated lower for us. Yea, right, like we were going to wait while you

coordinate. By the time he cleared us to 4,000ft we were already there still in the clouds. I told him we needed lower and he cleared us to whatever altitude and heading we needed to get out of the conditions. NOW we are talking as we continued the descent.

We broke out of the clouds at about 3,800ft into VFR conditions and were able to finally see the wings. What we saw took us by surprise. The entire leading edge of the wings as well as the



Ice on the wing

winglets had about  $\frac{3}{4}$ " of ice on them sticking straight out like fingers. We could not see the tail but figured it should be the same if not worse. A few seconds later the ice everywhere started to slowly melt and break off. A quick look showed the outside air temperature to be at 39 degrees. Good, above freezing. We leveled off at 3,500ft letting more ice melt and break off until the windshield was completely ice free. Having a GARMIN 496 GPS with XM weather on board I checked the temperature of a few airports on a heading to Meridian and found they were reporting surface temperatures from the low to mid 40's. To the east, airports were reporting surface temperatures in the low 30's to high 20's. I decided to head west where the temperatures were higher rather than back to the east while staying at 3,500ft. The controller had no problem with this and cleared us direct to Meridian when able. Millie took a picture of the ice on the wing with her cell phone. I also turned on the taxi/landing lights knowing these two 55w halogen lights near each wing tip generate heat. You can see the lights

are on in the picture my wife took.

My wife admitted that in all the flights we've done this was the scariest for her but, trusting me, she kept quiet so he could focus. I later admitted to her my concern when I saw the ice and was about to make a precautionary landing when the ice started melting. After that the airplane performed just fine and wanted to climb back into the clouds. We think everything came out fine probably because we took corrective action in time.

There was a lot of turbulence and, combined with a full stomach it was not fun. We both started to feel queasy. My wife couldn't hold it and had to use a puke bags then hold on to it until we landed at Meridian almost 2 hours later. We wanted this portion of the trip over so we could land. It took us a little over four hours when it should have been only three. The clouds, ice and snow didn't help one bit. Of all the flights we have done, this one from Jacksonville, FL to Meridian, Mississippi was the one that had us worried but it turned out OK.

As soon as we touched down at Meridian, there was a noise from the right side and the airplane shimmied a little. I thought the right main tire had blown so I held it as straight as possible on the 11,000ft runway. Once the airplane stopped I told the tower he thought we had a blown tire. The controller asked if we needed assistance but I told him to standby. I gave a little power and the airplane taxied just fine. So, I told the tower everything was fine and the controller cleared us to the FBO ramp. We think there had been some ice that broke off the tire as soon as we landed making it feel like a blown tire for a second.

When we got out of the airplane, my wife threw the puke bag away and ran to the bathroom. It was the longest bathroom break for her. While there I fueled up the plane for the final leg of our trip. While fueling I saw the very tip of the nose and the front of each wheel boot had some ice on it. It looked like someone had stuck a tiny cup of shaved ice on them. Although it looked real funny, I knew we had been into some real icing conditions and got out of it in time. The entire tail section, both the rudder and elevator, was iced over just like the wings. After only a little while, all the ice had melted off so we took our time having lunch in the warm FBO office.

While sitting in the FBO, a Beech Bonanza landed and parked next to our airplane. This airplane was covered in ice a lot worse than our airplane. The pilot walked into the FBO and asked us where we came from and if we had encountered ice to which I said "Oh yes!" He had come from Memphis, Tennessee was headed to Gulfport, Mississippi to pick up some passengers and was hoping to get a report on what the weather was like further south. Afterwards a Cessna 402 landed also with ice on the wings. He was arriving from New York and had picked up the ice during the descent from 14,000ft. It was not a good day to be flying up high and to the east crossing through the icing area.

The flight from Meridian to Houston was bumpy but uneventful. We got to Houston about 5pm. That night watching the news we saw how the weather had become worse than expected affecting even commercial air travel. There was ice and snow everywhere along the east causing major problems. Many commercial flights had been cancelled during this time. What a time for us to get our first actual, not theoretical, experience with in-flight icing.