

Epitaph to an Austria

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It was the afternoon of March 20, 1966, pretty, warm, and windy. The fresh south wind was strong, averaging about 20 knots on the ground and increasing to about 30 knots or so at soaring altitudes. Visibility was quite good, and a few small cumulus clouds dotted most of the sky around the airport at about 4500-ft. level.

The sailplane was a Shempp-Hirth-built Standard Austria Model S. It was an excellently built machine about three years old, certified in the Standard Airworthiness category, and except for the addition of a small VHF whip radio antenna on the fuselage, its configuration was as received from the factory.

My friend had flown it on the previous day, and since he was taking his turn as tow pilot on this day, he generously offered to let me fly his sailplane again. We had exchanged flights in our sailplanes for a number of years, and by now I had made perhaps a dozen previous flights in his Austria. We had both agreed privately that this model had rather severe stall characteristics for a sailplane licensed in the Standard category and having been awarded the International OSTIV prize for the outstanding Standard Class sailplane in 1960. But we also considered it to be reasonably safe if flown by experienced pilots who were familiar with stalls, spins, and recoveries. When stalled from a turn, the inboard wing would almost always drop rapidly and essentially without warning. In smooth-air conditions some slight stall-warning buffeting may be felt, but this is not detectable in turbulent air. I had found that stall recovery had always been quick and sure upon application of moderate nose down elevator control, and that spin recovery could be similarly effected by full forward elevator followed immediately by full anti-spin rudder.

My flight experience in this machine amounted to approximately 10 to 15 hours total time. I had both stalled and spun the Austria many times on previous flights, although I do not recall ever attempting to maintain the spin for more than one revolution. Normal spin-recovery technique using forward stick followed immediately by full anti-spin rudder had always been successful in terminating the spins without appreciable delay. I had practiced stalls and spins from turns as well as from a wings-level attitude.

We pulled the gleaming-white Austria out of the hangar and to the north end of the runway where I gave it a careful pre-flight inspection. Tail surfaces had their latches in the closed position, and the four brass safety wires were installed. Trim-tab pivots were in their slots and the tail surfaces moved freely on their shafts. Ailerons appeared to be good as did the main wing pins. After entering the cockpit I checked the tail, aileron, and speed brake controls for both cockpit control and control surface movement. All were found to be in order.

The canopy was then installed and a tow was made to 2000 feet AGL behind the 135-hp PA-12 Super Cruiser towplane. The air was quite turbulent in the wind-shear zone up to about 300 feet, but reduced to only moderate turbulence above that altitude. Insufficient lift was found to maintain altitude after releasing from the tow, and a landing was made back on the runway about 12 minutes later. There were no problems, and everything worked as expected.

I stayed in the cockpit and waited for the towplane to return from launching a BG-12 sailplane. In about five minutes my second tow was started. The same moderately heavy turbulence was experienced below 300 feet, and moderate turbulence above that level. Release was again made at 2000 feet above the airport altitude level but several miles west of Rockwall Airport near the Elm Fork of the Trinity River.

Soon after releasing from the towplane turbulent lift was encountered and I proceeded to circle in this thermal and slowly climb. The thermal was moderately rough and broken, due no doubt to the high wind velocity, but I was able to climb at an average rate of about three to four ft/sec. The airspeed fluctuated between about 45 and 55 mph, while a bank angle of approximately 40 degrees was maintained. Occasionally a shallow tip stall would be encountered on the inboard wing, but this was always quickly remedied by a deft forward movement of the control stick—as it always had.

Upon reaching 2200 feet above the airport level, I radioed my position, altitude and climb rate to the airport ground station. They acknowledged and advised me that the BG-12 was about one mile north of the airport and appeared to be roughly 300 feet higher than I was. I looked in the indicated direction, saw the BG-12 about four miles east of me, and acknowledged by radio that he did appear to be about 300 feet higher.

By now my broken thermal had weakened to the extent that I was no longer climbing, so I took up a southerly heading toward some promising small cumulus clouds. I soon encountered broken lift again, circled, and began climbing at about four ft/sec. As with the previous thermal it was broken and moderately rough. I tried to hold the airspeed at about 48 mph but, principally because of the turbulence, the indicated airspeed fluctuated between about 45 and 55 mph. The bank angle was held at a nominal 40 degrees while circling.

As I approached 2700 feet above ground level I radioed Rockwall Airport of my position, climb rate and altitude. Then it happened! Rather innocently, for an Austria, a gust stalled the inboard wing somewhat and the sailplane started to roll into the turn. This is not at all unusual. I had encountered the same condition previously at least a hundred times while thermalling the Austria tightly in rough thermals.