AIRCRAFT ACCIDENT INVESTIGATION
T-37, SERIAL NUMBER (S/N) 67-2241
8 FLYING TRAINING SQUADRON (FTS), VANCE AIR FORCE BASE (AFB), OLKLAHOMA
6 SEPTEMBER 2000

On 6 Sept 00, at approximately 0821 Central Standard Time (CST), the mishap aircraft (MA), a T-37, S/N 67-2241 crashed approaching Vance AFB, approximately 1 mile north of runway 17 left (17L). The mishap pilot (MP), an ensign assigned to the 8 FTS, 71 Flying Training Wing, Vance AFB, Oklahoma, was flying a syllabus directed pattern-only solo sortie in the early phases of Joint Specialized Undergraduate Pilot Training. This was his second solo sortie, his first solo sortie since his initial solo on 29 Aug 00. The MP did not attempt to eject and was pronounced dead at the scene. The MA was destroyed upon impact with the loss valued at approximately $1,000,000.00. The impact area was in a plowed agricultural field. To date, no claims for damage to private property have been filed as a result of this mishap.

Clear and convincing evidence showed that the student was in the final turn for the first touch and go landing of this sortie. The aircraft appeared to be overshooting the inside runway (runway 17L) and the MP rolled into 70-90 degrees of bank to correct the overshoot, significantly exceeding the 45 degree maximum angle of bank allowed by the technical order (AETC Manual 3-3). The nose of the aircraft initially began quickly tracking towards the landing runway, indicating the MP added significant back pressure in an attempt to minimize the pattern overshoot. As a result of excessive bank angle and back pressure combined with low airspeed, the T-37 appeared to stall with a near snap entry into a configured spin. Due to the low altitude of the stall and spin entry, the MP was unable to successfully recover or eject prior to ground impact.

There were two occasions in the sequence of events where the mishap could have been avoided.

- As a result of improper wind analysis (overshooting wind) and/or loss of situational awareness (identifying 17C vice 17L as the landing runway), the MP set up an inside downwind ground track too close to the correct inside runway, 17L. Additionally, he initially used insufficient bank in the final turn to correct for the spacing and the overshooting winds. This resulted in a final turn that overshot runway 17L.
- As a result of the overshoot, the MP should have maintained aircraft control using a maximum of 45 degrees of bank, initiated a go-around, and accepted whatever ground track resulted, relying on the Runway Supervisory Unit (RSU) to direct any conflicting traffic approaching 17C out of his way. Instead the MP rolled into 70-90° of bank and added back pressure in an attempt to maintain the proper ground track, resulting in the stall and subsequent configured spin entry from which no recovery was possible.

There are two categories of factors directly contributing to this accident: human factors and supervision.