

Larry Lee statement regarding PRS 2013 midair, June 13, 2013

I was the pilot of Race #777, an L-39 Albatros Jet, during the afternoon practice session that was scheduled for the jets between 1625 and 1700 on Thursday, June 13th 2013. At approximately 1645 as I approached Pylon 4, Race #99 (same make and model) was right, outside and in front of me as he faded back and up with rising terrain. He then corrected left and down and made contact with my aircraft. Both aircraft to continue to fly and land successfully with the excellent assistance of the chase aircraft flown by RJJ instructor pilot Curt Brown and the tower personnel that included Mike Mangold of RJJ, and the emergency response efforts of the Fire Department's Crash and Rescue Unit.

My racing experience at Reno started with PRS 2012, and I placed 4th overall in the field of 15 aircraft at the September 2012 races. I had just completed the CJAA Fast clinic that preceded PRS at Reno Stead the previous weekend and this was our fourth training period, two the previous day and one earlier on the day of the incident. I have flown, trained, and been licensed in this aircraft for over 7 years.

Another certified racer, race #7 and I briefed this flight and agreed that we would practice passing techniques at a reduced power setting to allow more passing to be experienced. We discussed my observations from the morning session, specifically that he was climbing and going wide at the entry to the corners and how this was slowing his lap time. We agreed that I would demonstrate this to him by flying that wider profile and letting him see the dramatic slowing effect of being wide when viewed from a inside trail position.

As this session started I was cleared for take off on Runway 26 and race control granted a left turn for direct entry to the course, I entered the course near the guide pylon at 1624 and set a power setting to maintain 330kts, settled into an inside line, and waited for Race #7 to approach from behind. Over the next 15 minutes we flew 10 laps and a number of passes were completed when Race 15 (leading a 3 ship formation (15, 707, and 99) of students) called "Pevine, inbound for the chute in 3 minutes", and asked that all certified racer exit the course as prearranged. Race #7, #6, and #777 went to the queue while the students entered the course. Once the students were established, the certified racers were cleared back on the course. Race #6 chose to land, and race #7 and 777 returned to the course.

Race 7 entered first (behind the third student aircraft), and I entered about 90 seconds later in front of the first student aircraft. I returned to the inside line and to the speed I had been using in the earlier part of the flight. I had completed one and a half laps by the time the first student aircraft, race 15, approached and passed. Our order on the track at this time was Race 15, 777, 707, 99, and 7. During the next lap, race 7 passed all the aircraft except #15, and exited the course.

As I approached pylon 9 on this third lap, #707 called "passing" but because he was wide, it took a while and just as I was clearing him Race #99 appeared and called "on your right 777." He was faster and I cleared him in as we came around pylon 3, but he also remained wide and high. It was at this time that race control announced 15 minutes remaining. #99 finally moved ahead as I rounded pylon 5, and by the time I was approaching pylon 6, #99 was 1200 feet in front of me. I was now at the back of the pack where I planned to remain until exiting the course at pylon 5. As I proceeded toward pylon 7, #99 had remained wide and as he approached this turn went even wider and higher, then made a descending turn left turn toward pylon 8. My relative position to #99 closed because of my inside track position, and using throttle, I slowed this closure rate. I checked my power and was concerned about reducing any further than the 92%.

As I rounded the home pylon I continued to gain on #99 even though I was already slow, and estimate I now trailed by only 500 feet. He stayed wide and by Pylon 3 was now in my 1:00 to 1:30 position and 300 feet, while #707 was in my 12:00 position at between 1000 to 1200 feet. As I

passed the guide pylon I began my left bank and at about 1000 feet short of pylon 4 had approximately 45 degrees of bank. I observed race 99 going wide as I increased my bank, but he stayed off my wing tip indicating that he was climbing while fading from my 1:30 to 2:30 position. This got my attention and I realized he might correct and start down as I had just observed on the previous corner. Although race 99 stayed in my 2:30 position, our relative fuselage alignment made my position go from his 8:30 position to his 9:30 position as he dipped down and left.

I keyed my com to transmit, "99 don't descend", but my call was blocked, and Race 99 continued. I was flying the same line that had taken me within a few feet of pylon 4 on the preceding 13 laps and I knew it was less than a second ahead. Pulling left didn't seem a good option and also would present a larger target if I went belly up to this approaching aircraft. Rising terrain discouraged me from descending. I shallowed my bank angle and tried to slide below as I watched #99's nose pass over my right wing tip toward my tail.

There was an impact. The plane became very difficult and unresponsive. My aircraft yawed to the right and started to climb. With severe vibration, my rudder pedals were locked in about a 60% right deflection and as the right yaw continued, the right wing began to drop and the nose continued up. Full left aileron did not arrest the roll, but down pressure on the stick did keep the aircraft from stalling. I had been flying at reduced power, and thought just maybe more thrust would give me some aileron authority so I went to maximum power, which is pretty instantaneous above 90%. Speed increased as I lowered the nose and the additional thrust took effect, and this arrested the roll to the right. With full left aileron, forward pressure on the stick, and max power the aircraft was now in somewhat equilibrium. It was now basically in a skidding right turn with about a 15 degree right bank. The radius of the turn was controllable with power - more power less turn, less power more turn. Straight flight was not possible, and I worked the throttle to get the aircraft headed back toward Stead from the NE.

I climbed slowly to 1000ft AGL while experimenting with power and found that I needed 200kts to have enough aileron to counter the rolling tendency. With fuel critical, and power my only control input, I made the decision that using the remaining fuel to climb and bail out wasn't acceptable. I wanted to get on the ground away from bystanders and houses.

The only control I had was to change the radius of the right turn was throttle. By this time I was over the eastern edge of the airport, almost over rwy 26 and pointing west. I decided to attempt a landing on rwy14 because the wind strong from the west would help me stay aligned with that runway. I knew I would not be able to adjust my position for alignment once on final because of the locked rudder and cross controls. I flew one circuit level without descending and noted my position when heading in the runway direction. Using power I repositioned for a descending turn to final. Still holding full left aileron, straining against force on the left pedal, I now pushed harder forward to start down to my target altitude of 500 ft AGL at the abeam point while staying above 200 kts.

Somewhere just before this point, the chase aircraft was approaching from behind and reminded me of options as he saw them. Because of fuel, control, ejection seat status, unknown unmanned flight path if I bailed, I had already made my decision and proceeded with my plan to land on or near Rwy 14. I continued my descent and continuous turn toward the runway, and as I started thru the last 90 degrees of turn and 300 ft AGL, I selected gear down. Instantly my plane snapped/rolled violently to the right and pitched forward, and I knew "gear" was not a good idea. Selecting gear up while the aircraft continued to rolled through 540 degrees to the right, I heard what I thought was the gear doors snapping shut. I was inverted and less than 200 ft AGL in a 30 degree nose down attitude when the rudder pedals freed. (I later learned from the chase aircraft pilot that the vertical stabilizer that appeared bent horizontal departed the aircraft during this "tumble"). Now with rudder control came aileron authority, and my ability to reverse the controls effectively stopped my cork screw trajectory to the ground. The good news was the ground was no longer coming up, but I was now upside down and still not sure the aircraft would fly below 200 kts. I slowly climbed inverted several

hundred feet and contemplated whether I could survive landing upside down. That thought passed and I slowly rolled upright and continued the right turn toward my third approach to runway 14.

At this point I knew several things. My aircraft didn't want to fly below 200Kts, and I wasn't going to use the gear, and I had minimum rudder authority and didn't want to even try the flaps. I announced I would land gear up on runway 14 and set up to touchdown on the numbers clear at 200kts. At idle power while in ground effect, I deployed the boards that hang out below the fuselage and heard them grind off as the aircraft touched down. I slid about 2000 feet while only slowing to 180, became airborne at a bump in the pavement, flew in ground effect maybe 500 feet, then back on the belly until I reached a point maybe 1000 feet from the departure end of the runway still going 140 kts. I realized that I would not stop before going over the cliff, and if I added power now, I just might be able to stay in ground effect for the 12 seconds it would take the engine to spool up allowing me to pick the spot in the valley beyond to crash.

So I lifted off the runway, stayed low and went over the concrete barrier, the approach lights, and I dove to regain ground effect and speed and waited for impact or spool up. Spool up occurred, and now my attention was focused on getting over or around the building that I was rapidly approaching. As my airspeed came up, I cleared the building to its left side and climbed above the airport elevation while aligning with runway 26.

My original fear of runway 26 remained (that I did not want to end up on the ramp and going through parked aircraft and personnel). The winds remained a problem and would blow me sideways once I slowed down. I positioned my touchdown to the far right side away from the ramp and touched down at 200kts and idle power at about the intersection of the runways 26 and 32. Immediately the aircraft slid toward the centerline heading left so I picked her up and repositioned further to the right hand edge. Again the aircraft slid to the left, now heading toward the hangars near the taxiway. This was unacceptable but so was going off the end and possibly into the housing area beyond the fence. With flying speed remaining, I again added power and lifted into ground effect, the engine came back to life and I climbed high enough to turn right into the west side of the course, the "valley of speed", and descended back into ground effect. I had better control authority in ground effect and had now learned that I could keep the aircraft right side up below 200kts, provided I was within a few feet of the ground. I had now been airborne much longer than originally planned, and my fuel status was unknown, at this high power setting I had exhausted the indicated fuel. The engine remained running and it now looked like I might make it back to runway 14 for another try. I climbed to see the runway threshold environment and turned to align with it. This time although still at 200 kts, when I touched down I held her down encouraged by the chase aircraft, still bumped into the air at the same spot as before, but this time as I went airborne into ground effect I deployed the flaps and settled down to stay and decelerated and stopped on the taxiway adjacent to the departure end of the runway.

I immediately shut down the engine, and as I was turning the electrical master off, the first of the emergency crew was standing outside my cockpit in less than 10 seconds.

Larry Lee