

Joris Nastro

After meeting through a mutual friend, I spoke with Mr. Zach Hughes about a month ago regarding tail-wheel instruction. With my busy schedule, we were finally able to get together on the morning of 01 August 2015.

I arrived at his hangar at Selma (0Q4) at 7:45am. We began our morning by talking about his L-bird, his desires with the airplane, and what his goals were. I was very impressed. Zack is quite professional and knowledgeable.

Our preflight brief lasted an hour. It was a back and forth discussion, and I asked him several scenario-based questions. We discussed conventional gear vs tri gear differences, ground handling, pivot points and CG. We had a long talk about why the control surfaces are the way they are on a tail-wheel equipped aircraft, and what advantages and disadvantages we inherited because of those. We talked through the development of a ground loop: what the causes are and what the fixes are. We discussed airfield surface winds and crosswinds at great length, and how 3-point landings and wheels-landings both have their time and place. We talked through takeoff procedures and forward-visibility restrictions in a tail-wheel aircraft. We discussed the air work we were going to do that morning: turns, steep turns, stalls, slips. At the end we had a very frank discussion about "not accepting trash." If the landing did not look, feel or sound right, we were to go around. Our last portion of the brief covered emergency procedures and best-glide considerations.

The brief was thorough, and it went well.

We were to fly in his L-2. He would be in the front seat with the instrument panel. I was in the back seat. I had a stick, throttle, pitch trim, rudder pedals and brakes.

After the preflight brief we discussed maintenance. We discussed the annual. We discussed aircraft performance. We discussed density altitude. That morning Hanford, CA (HJO) was currently calling 1700' DA. We discussed the aircraft fuel state. We had just over half tanks – about an hour and 45 minutes worth of fuel in a cruise configuration. It was a very safe amount for what we needed for an hour of pattern work. Based on him keeping the aircraft there at Selma, I chose to keep us local for training. I told Zach we would do all full stop landings to a taxi-back for a full-length departure. No touch and go's, no stop and go's.

We discussed his currency (which he was), his checkride (BFR) and his medical status.

Zach conducted a preflight while I followed and watched. It was quite thorough. He knew the aircraft well.

After a brief on hand-propping, we started the engine. Zach was at the controls. I was on the nose. The start event was uneventful.

Once the motor was warm we taxied to the run-up area. I performed a brake check and control check from the back seat. We had another quick brief about the takeoff procedure, and we walked through the takeoff checklist. We would do this for every takeoff of the morning.

At approximately 8:55am our first departure was uneventful. Tail rise was normal. Zach's centerline control was excellent. We lifted off in approximately 650 feet and accelerated slightly nose-up to VX (65 MPH) and began a climb. By the departure end we were approximately 150 to 200' AGL. We made a very slight right turn to avoid the departure-end houses, and climbed to 300' AGL before beginning our left turn.

We climbed up to 2500' MSL over a large farmers field that was adjacent to a crop dusting runway. We were 5 NM from Selma, and this was to be our working space for the next few minutes.

While Zach executed a 360-degree clearing turn to the left, I discussed lookout techniques and how to scan the horizon. I told him that in his OD Green paint, lots of pilots will not be able to see him. He did another full 360-degree clearing turn to the right. All were on altitude, beginning and ending on heading. Following the clearing turns he executed a nice pair of steep turns, both left and right. We talked through a power-off stall, walked through our pre-maneuver and landing checklist, and executed two power-off stalls uneventfully. The power-off stall in the L-2 was characterized by light airframe buffet at approximately 40mph, and the aircraft was controllable in all three axes. At approximately 35mph with full aft stick, there was a light, but distinct longitudinal break. The nose pitched down approximately 2 degrees, airspeed immediately increased and full control authority was regained.

On the descent back to the landing pattern we talked through left and right slips, and the relationship of slips to crosswind landings. Total time performing air-work was 20 minutes.

We arrived at pattern altitude on a 45-degree entry to runway 28. Downwind was flown at 800' AGL. The pattern was normal. Zach set down a very nice 3-point landing. All landings during the flight were 3-point.

We came to a full stop on the runway, turned around and taxied back to the hold short for our debrief. Zach talked through his takeoff checklist again. We took the runway and departed uneventfully back into the landing pattern. The 2nd, 3rd, 4th and 5th trip around the pattern went just like the first. His pattern was predictable, as were his landings and corrections.

Initially, the 6th takeoff was just like the others. Normal power addition. The tail came up maybe a bit slower than the last few, but nothing that was abnormal. The aircraft was airborne within an acceptable distance. As we lifted I realized our pitch was a bit higher than the last takeoffs. The airplane felt good as it did in the past, but

we were not climbing. I pulled myself around his shoulders in front of me to get a good look out the front windscreen. As I did this, the aircraft bounced back on the runway. We went airborne again. I knew we weren't producing lift. Looking out the windscreen I immediately knew I did not have runway left to set it down. There is a very deep (empty) irrigation ditch perpendicular to the end of the runway right at the very end, and I knew we would be in that ditch if I tried landing. I held the throttle full to ensure he did not try to abort at this point. I held the wings level for lift and lowered the nose as much as I could. We rode that attitude in past the ditch, and impacted about 150 feet into the grape vineyard. We impacted wings level in a level attitude. The aircraft turned sharply 90 degrees to the right and slid approximately 30 feet as we came to a stop.

We made sure we were OK, secured the magnetos and the fuel, and I had to kick the door out to get us out of the aircraft. We walked away with very minor bruises.