



Belly Up in Corpus

By *Ens. Christopher J. Huebner*

As I drove onto Naval Air Station Corpus Christi on a warm August morning, I knew I was about to have a one-of-a-kind aviation experience. You see, I was about to embark on my airnav solo with a fellow flight student. I was relaxed and at ease that the rigors of Review Stage finally were over, and that I successfully had completed every graded event in the advanced-maritime syllabus at VT-31.

I was ready to sign for a multi-million-dollar aircraft and gain the invaluable experiences and confidence from navigating the airways without an instructor. Little did I know the confidence gained from this flight would have nothing to do with navigating airways or operating at altitude: I only would make it as high as 2,500 feet and as far as 2.1 miles from NAS Corpus Christi.

I met with the command duty officer (CDO) to discuss which approved airport to go to with my copilot, 1stLt. Jeff Noble, USAF. Based on weather restrictions and traffic at other airports, we settled on Laredo, Texas. Jeff and I went to base ops to flight plan, get a weather brief, and file our flight plan to Laredo. We then went to aircraft issue in our hangar to print out NOTAMs and to review the aircraft-discrepancy book (ADB) for our aircraft. We met with the CDO one final time before he released us for the solo. He discussed the importance of crew-resource management. He also reemphasized using every available resource, inside as well as outside the cockpit, stressing the radios. Not knowing it at the time, his words would prove very important in the next hour.

We completed our preflight and were ready to start

engines at 10:50 a.m. We had an uneventful preflight, taxi and run-up. All our checklists were complete, and everything seemed to be going according to plan. Tower cleared us for takeoff at 11:15 on runway 13L, and we were well on our way to Laredo for lunch, or so we thought.

The takeoff roll was normal, and Jeff called rotate at 91 knots. As I applied backpressure on the yoke, our T-44 Pegasus flew off the deck. The plane felt out of trim right after takeoff, so I took a few extra seconds to apply a little rudder trim before verifying our two positive rates of climb. I then called for the landing gear to be retracted. Jeff flipped the gear handle on his side, and we had three-up-and-locked indications. He then began to make his off-the-deck call to Montana base.

While Jeff was toggled to VHF, I thought I heard our call sign, Navy1G466, over UHF from tower, clearing us for a left downwind. I thought they must have confused their call signs. When Jeff was done with his off report, I asked if he had heard the call from tower. Before he could answer, tower again called and cleared us for an immediate left downwind but did not give an explanation for the call. Jeff responded by saying something to the effect of, "That's a negative for Navy1G466 solo; we are on the Arrow 3 departure going IFR to Laredo."

By now, we were well above pattern altitude. Solo students always are briefed that, if tower tries to clear you for something you are not expecting, or think you shouldn't be doing, simply remind them that you are a solo. Fortunately, what we thought was an error by tower ultimately would save our lives.

Tower came back on UHF and said we were cleared for an immediate left downwind because our port wheel

had departed the aircraft. I initiated my left turn as Jeff told me we had to go back and land because a plane had lost a wheel. That's when I told Jeff I thought tower had said it was our wheel that was gone. Jeff called tower and asked them to verify the tail number of the plane with the missing wheel. Reality hit me when I heard, "Navy1G466 solo—your plane has lost a wheel."

I knew a left downwind was not what we needed. So I had Jeff request a delta pattern for us at 2,500 feet overhead the field. Once tower cleared us for the delta

because, about an hour later, base told us we would have to do a belly landing. Because we already had raised the gear, there was no way we would cycle it for a gear inspection and run the risk of strut problems and worsen our situation. The plane was in a stabilized condition, and we were comfortable with what we had. We reviewed the NATOPS procedures and knew our only time constraint was fuel; we had lots of gas to burn.

Two facts kept running through my head while I looked at the procedures. First, the T-44's landing



Left to right, 1stLt. Jeff Noble, USAF and Ens. Christopher Huebner.

pattern, Jeff called Montana base and told the CDO of our situation. The CDO remained calm on the radio and told us to standby. We then entered a left-hand delta over runway 13L. It eventually would be a 45-minute delta pattern over 13L before a plan was put into place. We were in constant communication with base, which helped put us at ease. If there was any silver lining in having an emergency on a solo flight, it's that it was gear-related. Knowing it was a deferred emergency, we could get things set up in advance.

Circling for nearly an hour gives you a lot of time to think. Ironically, all of the things Jeff and I had discussed now pertained to us. I say this was ironic

gear operates so that, even when the wheels are fully retracted, the bottom rubber of the wheel protrudes from the wheelwell. This fact is important because we could have a visual inspection without cycling the gear and without having another aircraft join on us. Also, by having the rubber on the starboard side, I knew we still would have a slight bit of braking effectiveness. The second fact I recalled was that a former VT-31 IP had made an intentional gear-up pass a year and a half earlier. Our confidence was building.

About an hour after entering the delta, base discussed the possibility of landing on runway 17. This plan worried me because it was a shorter runway than

13R, and I never had landed on 17. The winds in the summer always were right down 13, so that's the only runway I had used. After a few minutes of discussing the winds and other factors, base came back to us and said runway 13R would be ideal. Jeff and I entered a right-hand delta over runway 13R.

We switched VHF radio frequencies from Montana base to Pegasus base (maintenance frequency) to talk with one of our squadron functional-check flight (FCF) pilots. He went over the NATOPS procedures three times with us to make sure we were clear on our responsibilities. He said we would have to fuel chop both engines just as we entered the flare. The plan also included executing the emergency-shutdown procedure once the aircraft came to a stop, and then exiting the plane through the starboard emergency-escape hatch.

The plan was in place; it was time to practice. Tower cleared us down to pattern altitude, and I began working on flying a wider pattern than I was used to. This maneuver would compensate for the faster speed off the 180 because we had less drag without the gear.

It was odd hearing Jeff transmit, "Navy1G466 solo is right 180, three up and locked on purpose, looking for the option 13R."

I made sure to give myself an extended final, so I could have more time to properly set up.

The first approach felt all right, and we executed a waveoff at 200 feet, so we could try another practice with the new power and airspeed parameters. I felt fast on the second approach, and we again executed a waveoff at 200 feet. We now were ready to bring it in for a full-stop on the next pass.

Approaching the 180 position, Jeff called tower and told them we were a full-stop. Speed was tapering off nicely, and we were a little low, possibly because of the extended final. We got back on parameters, and Jeff began to call out airspeed and altitude in increments of 20 feet. The big 13R lettering began to fill my wind-screen, and I was ready to initiate my flare. I began setting a flare attitude and started reducing power to idle. As briefed, I called "chop," and Jeff put both condition levers to the fuel-cutoff position. An eerie silence came over the plane as the props made a sudden woosh and wound down. All I could hear was the sound of the electric trim running to the stops during my auto-flare. The plane seemed to be sitting in a very odd and uncomfort-

able nose-high attitude. Without the wheels under us, we were sitting a lot lower and had a new sight picture.

Then there was dead silence, and it felt like time stood still for a couple of seconds, while I sat there in an unfamiliar position. The belly hit the deck. I heard the antennas and drains scrape across the asphalt. Then the props hit the deck. I used right rudder and brake to help keep us on the runway. The plane came to a screeching halt, and we executed the emergency-shutdown procedure. We left all our belongings in the plane, egressed from the emergency-escape hatch, and cleared the runway to get as far away from the plane as possible. We were rushed to the hospital for the standard mishap tests and exams but only after we had photos taken in front of our slightly mangled bird.

A crucial lesson from this experience was seeing the importance of teamwork. From Jeff and me working together in the cockpit, to the VT-31 instructor pilots talking to us and setting up the emergency-action plan, everyone knew their job and executed it flawlessly. The key play was the two petty officers in the tower who saw the wheel fall off and notified us. If they had not made that catch, no one would have, and we would have gone to Laredo, showing three-down-and-locked because the strut and downlock still were in place. Who knows what would have happened or how tragic it could have been if we had landed on a strut with no wheel.

Besides having a great sea story to tell and gaining a better understanding of crew-resource management, I take away from this experience an appreciation for the training given to student naval aviators. I started with no previous aviation experience, and I was given all the tools necessary to perform under pressure when the situation demanded the most out of me. 

Ens. Huebner now flies with VP-30 at NAS Jacksonville. 2ndLt. Noble now flies with 62nd Airlift Squadron.

The wheel fell off because a conical bearing failed. The wheel is held on the axle by this bearing, which, in turn, is retained by a washer and castellated nut. The inside diameter of the bearing cup is larger than the outside diameter of the washer and nut, so, if the bearing fails, there is nothing to hold the wheel on the axle. The bearing assembly is covered by a small hubcap, which prevents visual detection of impending failure of the bearing during preflight. The design of the wheel assembly since has been changed so that a single-point bearing failure no longer should allow the wheel to depart the aircraft.—Maj. Anthony Taylor, USMC, VT-31 maintenance officer.