The Chinese Approach

I was loafing around, gabbing with the guys the other day when we all turned to watch an Airbus A320 approach for landing. After a faultless touch-down, reverse thrust was smoothly fed in, bringing tons of metal and humanity to a slow gallop. Naturally the discussion turned to approaches and landings.

Which is the best method to use when approaching for landing in a cross-wind? Is it the wing-down method or the crabbing method? This is a frequent question. I have always been at a loss to explain that there really is only one way: the employment of both methods simultaneously. Every bit of literature on the subject describes two separate methods of approach and landing. Let us look at each one separately and then see how we can use the two together. We will take the wing-down method first.

We have been led to believe that when approaching in a cross-wind, say, from the right, then we should keep the nose-straight with rudder and put the right wing down sufficiently to stay on the center-line of the runway while approaching. I refer to this as the Chinese Approach (wun wing lo).

This method has a number of drawbacks. The most important consideration, however, is that the aircraft will now be flying at a relatively low airspeed, near the ground, with crossed controls. Madness! You are almost certain to encounter some turbulence near the ground. The aircraft will be flying at a relatively low airspeed, near the ground, with crossed controls; the aircraft will be out of balance. It is easy to fly an aircraft on to the runway for a flawless touch-down in perfect conditions, but remember that with no wind, you will be touching down at a relatively high ground speed, and this could be dangerous. Let us rewind back to final approach.

As I said earlier, it is desirable to keep the aircraft in balance throughout all phases of normal flight. On final approach, let us presume that we have a cross-wind from the right. To prevent the aircraft drifting off center-line we will have to keep the nose of the aircraft pointing to the right of the runway. The aircraft, however, is still in balance. It is only as we start the flare that we want to cross the controls.

In other words, we only cross the controls once the wheels are a mere few feet from the runway surface. In this case we will now apply sufficient left rudder to get the nose straight, simultaneously lowering the right wing to keep the aircraft on the runway center-line. All the while we will be holding off. In other words, try and glide the aircraft to the end of the runway.

The aircraft will now touch down on the first main, then the left, and then the nose-wheel. As we have flared and landed with crossed controls, by the time the nose-wheel touches down, we will already have aileron deflection into wind for the roll-out. This is a good thing. In fact, as the speed now diminishes during the roll-out we will continue to increase the aileron deflection into wind until we have the control column at full lock. Now apply brakes evenly until the aircraft has slowed to the correct taxi speed.

This is the correct technique and it requires lots of practice. You need to hold off with the elevator, stay on the center-line with aileron, and keep the nose straight with rudder. Remember to expect to touch down with one main wheel first when there is a cross-wind.

Work on the technique first, the finesse will come later. Perhaps we could call this the Chinese Crab Landing.

Now for the crabbing method: This would have us believe that we should continue with a normal approach (that is, with the ball in the center), lay off for wind as required, flare normally, and just before touch-down, kick the nose straight with rudder. I will say one thing: if you want to remove all the tires quickly, or test the structural integrity of the undercarriage, then this is the method to use. I do not think any of us is capable of such split-second timing, every time. We need to have a safe, simple method to use that works every time.

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