

## You Have the Power (to go-around)

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*“A good landing is one you can walk away from...A great landing is one you can not only walk away from, but can use the aircraft again” author unknown.*

The recent FedEx accident at the Narita airport in Japan raises the question about the go-around maneuver (sometimes called the rejected or botched landing) and when should it be executed. As a mishap investigator, we learn not to guess or speculate as to the cause of an accident. Accident reports are based on facts, not speculation. With that said, based on what we know, the consensus of those I have talked with about this accident is that a go-around appeared to be in order. We will not know if this will be a finding in the report, though. Ours is not to judge, but to learn so the same thing does not happen to us or our fellow pilots.

The FAA states that the go-around “is a *normal* maneuver that may at times be used in an emergency situation.” The FAA goes on to state that “The go-around maneuver is not inherently dangerous in itself. It becomes dangerous only when delayed unduly or executed improperly. Delay in initiating the go-around normally stems from two sources: (1) landing expectancy, or set-the anticipatory belief that conditions are not as threatening as they are and that the approach will surely be terminated with a safe landing, and (2) pride-the mistaken belief that the act of going around is an admission of failure-failure to execute the approach properly. The improper execution of the go-around maneuver stems from a lack of familiarity with the three cardinal principles of the procedure: **power, attitude, and configuration.**” 1.

Bounced landings, in particular, are one of several very good reasons one should go-around. A bounced landing could result in a Pilot Induced Oscillation (PIO). This is a condition where the aircraft bounces from the main wheels to the nosewheel and continues as the pilot attempts to stop the motion. Historically, pilots make the problem worse by trying to counter the PIO with the elevator. This will not stop the PIO as the pilot tends to manipulate the elevator out of synch with this bouncing motion exacerbating the situation. The answer is to go-around. Procedurally, the first actions are to add full power and hold the elevator just aft of neutral. How far aft depends on how the aircraft is loaded; aft loading requires less aft elevator. This is to stop the bouncing motion by setting an attitude that will, at the very least, reduce the oscillations from the main wheels to nosewheel. Ensure proper cross wind correction is maintained in case the aircraft touches down again while allowing the aircraft to fly away from the ground as the pilot sets a slight climb attitude until airspeed is adequate to maintain Vy (Best rate of Climb).

When the aircraft becomes airborne due to a big bounce is another reason to go around. Once the aircraft bounces to the degree that it becomes airborne again, you must not **REPEAT, NOT** push the stick forward. **THIS IS TERRIBLY DANGEROUS!**

This is because you now stand the chance of hitting on the nosewheel. The nosewheel is not made to take this stress. Take action by executing the go around maneuver by adding **FULL** power and holding slight aft elevator enough so that if the aircraft touches down again, you land on the main gear, not the Nosewheel.

Although the go-around from the landing flare through touchdown is contentious, as contentious a place in the traffic pattern is the turn from base to final if not properly flown. In our Upset Recovery course, we teach the base-to-final spin entry also called the "Underneath" spin entry. This occurs when one overshoots the final segment of the traffic pattern and incorrectly applies controls to correct the aircraft's flight path to align with final. Our instructors teach us to use only so much bank in the traffic pattern, normally 30°. Pilots who overshoot final have been known to increase the turn rate by using rudder in the direction of turn. This accelerates the outside (raised) wing creating more lift and thus increasing the bank beyond that desired. As a result, the pilot uses opposite aileron to help maintain the desired bank. This crossing of the controls results in a dumping of lift increasing the vertical speed. This is mistakenly handled by increasing back elevator to decrease the rate of sink (rather than adding power and controlling airspeed by adjusting pitch) thus bringing the aircraft closer to a stall and a he possibility of a resultant spin. This is a classic example of a poorly flown traffic pattern and, in this case, a go-around is in order. If you find yourself inputting controls as described (and not intentionally performing a slip) coordinate the controls first, roll wings level even though this may leave you at an angle to final, gain airspeed by simultaneously adding full power, then, and only then, turn to align the aircraft with final as you climb at no slower than  $V_y$ . When you have everything under control, and not before, raise the flaps (of course you would have raised them to or were already at 20° in a Cessna 172SP after you added full power) then tell tower you are "going around". Sounds simple, but you should not be afraid to practice.

When are you allowed to go-around? The answer is simple...whenever you doggone well want to! Tower understands that a go-around is a possibility and should adjust the patterns of other aircraft to accommodate your procedure. The go-around may be initiated from any point in the pattern. Of course we think of the go-around as a maneuver that is initiated on short final or even after touchdown. Let's say you are on downwind and decide that you are not ready to land; for whatever reason (not mentally prepared, increased winds, not comfortable with the traffic pattern, etc.). You may request to fly the remainder of the traffic pattern at traffic pattern altitude. Make sure the tower knows. A call on CTAF at an uncontrolled airfield is also in order. Another option is to request a 360° turn while on downwind which would allow you to better position the aircraft and give you more time to think things through. Just say "(Hanscom) tower, (Cessna 12345) requests a (left or right) 360. They will most likely allow this so long as no one is behind you. Perform the 360 by turning away from the traffic pattern for 90°, of turn, rollout for a few seconds to check for traffic then continue the turn while checking for traffic every subsequent 90° of turn.

Remember that the go-around is free and "is a *normal* maneuver". Practice it and don't be afraid to use it. This is excellent Aeronautical Decision Making on your part.