

Go-around Lesson©

The most common 'emergency' is the go-around. Have the go-around procedure as part of your prelanding list. The "go-around" is one of the best safety procedures in flying. If you are not positioned for a safe landing, go-around. 150 annual go-around mistakes occur every year. Less than 20% are by student pilots. Student pilots do not have the high expectations of landing that many pilots develop in the 100 to 500 hour range. The more experience you get the more you should practice go-arounds.

Request the option but advise the tower that you will be doing a series of go-arounds. Plan to do a series of eight or more. Remember you must anticipate with rudder and yoke the effect caused by a smooth but rapid power application will have. Every change in flap setting and airspeed will require a different amount of anticipation. Failure to anticipate will cause the aircraft to balloon, lose airspeed and make the go-around more difficult to perform. Watch the nose, keep it level. Listen for an increase in airspeed before looking at the indicator. At 60 kts the aircraft will be able to hold altitude while the flaps are raised. Below 60 kts the aircraft will probably sink if flaps are raised all at once. Climb at 65. A speed faster than 65 will not let you climb as well. (C-150)

Begin by configuring your aircraft to land with 10 degrees or no flaps on final, at 60 kts go-around at 200'. The next go-around should be in a 20 degree flap configuration at 55 knots with the go-around at 100'. The next go-around should be with full flaps at 60 knots with the go-around at 50'. The next go-around should be with full flaps at 55 knots with the go-around at 25'. Changing the pattern direction begin the next go-around series in the flare portion of the approach. Begin with no flaps and proceed in gradual flap increments until the go-around is done with full flaps.

Go-Around Instruction

Once stabilized on final, the instructor, will point out a certain 'ground level' altitude at which to commence the go-around. The go-around needs to be well orchestrated to be correctly performed. It may be necessary for the instructor to re-establish the full flap descent at 60 kts to give the student another practice effort. No altitude should ever be lost below 'ground level'. Once established in climb and trimmed the crosswind turn is used to regain the original altitude for another practice pattern. I usually find it advisable to practice both two right and two left full patterns before proceeding to our destination airport.

The go-around requires the student to overcome many instinctive and false ideas. We are not trying to get away from the ground, yet. We are initially gaining airspeed and cleaning up the aircraft for climb. We want to go faster, not up. Established in approach configuration of trim, flaps and power the aircraft is descending. Any time we make a significant increase in power the nose wants to rise. This seems like a great idea but the cost in airspeed can be excessive to fatal. We must hold the nose level. Lock the elbow against the door panel to prevent the yoke and nose from erratic movement.

Remember--The idea that just adding power to an airplane will make it fly slower is another example of a flying contradiction. In every

other situation in life, adding power makes things go faster. This phenomenon is best demonstrated at altitude. Establish the airplane in trimmed low cruise of 70 kts. Add full power with a touch of rudder to hold heading. The nose will rise and the aircraft will slow. Do this again without the use of rudder to note the effect of P-factor.

There is a problem called 'getting-behind-the-power-curve' that arises when the go-around is delayed. A delayed go-around that adds incremental power changes can create this situation were there is no more power available and altitude must be surrendered. If the altitude is not available a go-around is not possible. See material on decelerated approach. When a landing is not going well, go-around. If the aircraft is doing something you don't know how to cope with, go-around.

Go-Around & Low Approach

We have made a series of left and right go-arounds at altitude and are now ready for the real thing. The proximity of the runway and ground creates tensions that affect the student's ability to perform. By agreement, no landings will be made. Much of the psychological pressure is thereby removed if the student knows that NO landing are going to take place. The Instructor actively supervises and coaches the student as required for the first couple of patterns. Since we have agreed not to land, we will be doing go-arounds. First at 200', then at 100', then at 50' and lastly in the flare. The distinction between the go-around procedure at above 60 kts and at below 60 kts is illustrated in the last instance. We will now proceed to do at least four identical low approaches in the opposite pattern before flying home. The errors common to the go-around should be allowed to occur so that they can be brought to the attention of the student.

The instinctive desire to add power abruptly and climb, especially on the lower go-arounds, should be anticipated by the instructor. Smooth throttle operation will give smooth engine operation and allow smoother application of rudder. Most control problems occur in the interval between power application and removal of flaps. The pitch up and left turning of the nose must be ANTICIPATED and corrected BEFORE it occurs. Putting more than one finger behind the yoke on a go-around is a 'probable cause' of over reaction and abrupt control movements.

The go-around procedure varies somewhat in every situation but there are two basic situation the require significantly different control pressures. If the go-around is initiated at approach speed or higher the flaps can be safely brought up immediately after full power is applied with just a momentary pause at 20 degrees to check climb speed and performance.

If the go-around is initiated at less than approach speed the flaps must be 'milked' up while the plane is led in a level attitude and allowed to accelerate to climb speed. At climb speed the flaps are removed. The most common fault is for the student to freeze on the throttle and forget to bring up the flaps. The most dangerous fault is for the student to take off the flaps too quickly at too slow a speed. This causes the plane to sink and perhaps contact the ground. Student control input will be excessive and as an instinctive reaction rather than in anticipation. Raising the nose to stop the sink lowers the speed even more. The more standardized the procedure used in removing the flaps the better the student can anticipate the control pressures

required. The go-around must be practiced until it can be done correctly and safely.

Heard about an instructor who would not teach go-arounds because they were considered dangerous. Like almost any area of flying, the improperly executed go-around can lead to loss of control and/or a stall. If the go-around does not adequately compensate for winds by using a crab angle for the heading the pilot may experience directional control problems. The wing low and opposite rudder is used on final to keep the nose straight with the runway. At the moment of go-around the aircraft is allowed to crab into the wind as required to keep the ground course over the runway regardless of the heading. The stall during the go-around is most likely to occur if the aircraft is not allowed to accelerate in level flight while slowly bringing up the flaps. At approach speeds a rapid removal of flaps will precipitate a stall.