Task VII.H: Go Around/Rejected Landing

Table of Contents

Lesson Overview

Objective

The student should develop knowledge of the elements related to a Go-Around/Rejected Landing. The student will understand the importance of a prompt decision and have the ability to quickly and safely configure the airplane and adjust its attitude to accomplish a go-around. The student will perform the maneuver to the standards prescribed in the ACS/PTS.

Reference

- Airplane Flying Handbook (FAA-H-8083-3B, page(s) 8-12)
- POH/AFM

Elements

1. Situations When a Go-Around may be Necessary
2. Promptly Deciding to Discontinue a Landing
3. Cardinal Principles of the Procedure
4. Control Pressures
5. During the Climb Out
6. Communication

Schedule

1. Discuss Objectives
2. Review material
3. Development
4. Conclusion

Equipment

1. White board and markers
2. References

IP Actions

1. Discuss lesson objectives
2. Present Lecture
3. Ask and Answer Questions
4. Assign homework

SP Actions

1. Participate in discussion
2. Take notes
3. Ask and respond to questions

Completion Standards

The student shows the ability to recognize when a go-around is needed and promptly configures the airplane and adjusts its attitude to safely execute the rejected landing.

Instructor Notes

Attention

There will be times when we have to discontinue a landing and set up for another one. This may be a result of a dangerous situation or may just be necessary to re-establish an approach. Either way, we definitely want to know what we're doing as we're getting closer and closer to the ground.

Overview

Review Objectives and Elements/Key ideas

What

A go-around is the discontinuance of a landing approach in order to make another attempt to land under more favorable conditions (it is an alternative to any approach or landing). The go-around is a normal maneuver that may at times be used in an emergency situation. It is warranted whenever landing conditions are not satisfactory and the landing should be abandoned or re-setup.

Why

> The need to discontinue a landing may arise at any point in the landing process and the ability to safely discontinue the landing is essential, especially due to the close proximity of the ground.

Lesson Details

Introduction

While on short final you may find that your glideslope is too high, and not enough time to be fixed even with a slip. Other situations could come up where you see something on the runway that might cause an unsafe sitation if you try to land.

There is an infinate number of possible reason that could cause you to need to go-around. When your safety during landing is in jeapordy, you must have a plan to terminate the landing and return to safe altitude.

Why

- Pilot
- Plane
- Weather
- Environment
- Unexpected Hazard

Elements of Maneuver

1. What you're doing is aborting the landing
    a. Add full power
    b. Change from landing attitude to climb attitude
    c. Reconfigure
    d. Climb
2. Do all of this while maintaining control of the aircraft.
3. Plane is low and slow to the ground, be deliberate but don't rush and make mistakes.
4. Configuration and attitude changes will require additional right rudder.

The procedure is normal, it's not "messing up"

Every pilot occasionally needs to perform a go-around. This is a routine event and all pilots need to occasionally perform it, simply because many of the issues that can cause a go-around to need to be done are outside of the control of the pilot, such as an animal on the runway or the environmental weather.

Examples of why someone might need to do a go-around

- Pilot becomes distracted by a passenger.

- The plane isn't configured properly, isn't stabalized or the prelanding checklist wasn't done.

- The weather - Winds change drastically as you get closer ot the ground causing a crab upset or an unexpected wind gust.

- Unexpected traffic or obsticals, occasionally ATC will simply ask the pilot to go around for reasons unrelated to the pilot.

- Something unexpected happens and control of the airplane to a safe landing is unsure.

Performance of Procedure

On short-final, the unexpected happens - this is where you begin the menuever. The earlier the decision is made, the easier it is to safely execute the maneuver.

Step 1: Add Full power, smoothly but immediately.

Step 2: Change attitude to straight and level flight - stop the descent - don't touch down but don't try to climb with full flaps down.

- Remain over runway centerline, maintain directional control and proper wind drift correction. The runway is your protected area - don't drift into trees or obsticals to the side of the runway.

- Before the airspeed accelerates above the white arc, retract flaps.

- Establish climb attitude.

- You might choose to trim a little bit to relieve some controll pressure.

Step 3: Reconfigure - quickly glance at the VSI to verify positive rate of climb, then:

- Gear up (if a complex) - select gear up before airspeed exceeds Vlo

- Trim as necessary

- Retract remaining flaps

- Scan for traffic

Step 4: Climb and exit the go-around

- Continue climbing to the pattern altitude.

- Complete the checklist if appropriate

- Re-enter the normal traffic pattern if remaining in the pattern.

It could be that one reason the go-around was executed, was that ATC requested it. It's always an option for a pilot, but it can be requested by ATC by having landing clearance canceled due to sequencing so always be prepared.

Radio Communication during go-around

- Don't feel you have to acknowledge ATC immediately, they are watching and see what you're doing. You are busy and under heavy workload flying slow, and low near the ground. This is an important time to focus on flying the airplane.

- ATC does use different terminolgy for a go around, "execute missed", "cleared for low approach only", but they are all the same thing.

- After the Go-Around is initiated and the plane is under control, talk to ATC and acknowledge any clearance given.

Note the emphasis on aircraft control.

🛑Common Errors🛑

🛑
- Failure to recognize a situation where a go-around/rejected landing is necessary
- Hazards of delaying a decision to perform a go-around/rejected landing
- Improper power application
- Failure to control pitch attitude
- Failure to compensate for torque effect
- Improper trim procedure
- Failure to maintain recommended airspeeds
- Improper wing flaps or landing gear retraction procedure
- Failure to maintain proper track during climb-out
- Failure to remain well clear of obstructions and other traffic

Conclusion

The go-around is a very important maneuver that is essential in an emergency situation. Knowing the procedure to properly perform the maneuver will provide a considerably safer situation. The pilot's first concern is power, followed by the establishing the correct attitude, and configuration.

ACS Requirements

To determine that the applicant:

1. Exhibits instructional knowledge of the elements of a go-around/rejected landing by describing:

    a. Situations where a go-around is necessary.

    b. Importance of making a prompt decision.

    c. Importance of applying takeoff power immediately after the go-around decision is

made.

  d. Importance of establishing proper pitch attitude.

  e. Wing flaps retraction.

  f. Use of trim.

  g. Landing gear retraction.

  h. Proper climb speed.

  i. Proper track and obstruction clearance.

  j. Use of checklist.

2. Exhibits instructional knowledge of common errors related to a go-around/rejected landing by describing:

  a. Failure to recognize a situation where a go-around/rejected landing is necessary.

  b. Hazards of delaying a decision to go-around/rejected landing.

  c. Improper power application.

  d. Failure to control pitch attitude.

  e. Failure to compensate for torque effect.

  f. Improper trim technique.

  g. Failure to maintain recommended airspeeds.

  h. Improper wing flaps or landing gear retraction procedure.

  i. Failure to maintain proper track during climb-out.

  j. Failure to remain well clear of obstructions and other traffic.

3. Demonstrates and simultaneously explains a go-around/rejected landing from an instructional standpoint.

4. Analyzes and corrects simulated common errors related to a go-around/rejected landing.

Private Pilot ACS Skills Standards

Complete the appropriate checklist.

1. Make radio calls as appropriate.

2. Make a timely decision to discontinue the approach to landing.

3. Apply takeoff power immediately and transition to climb pitch attitude for VX or VY as appropriate +10/-5 knots.

4. Retract the flaps, as appropriate.

5. Retract the landing gear after establishing a positive rate of climb.

6. Maneuver to the side of the runway/landing area when necessary to clear and avoid conflicting traffic.

7. Maintain VY +10/-5 knots to a safe maneuvering altitude.

8. Maintain directional control and proper wind-drift correction throughout the climb.

Commercial Pilot ACS Standards

Same as the Private Pilot, except:

1. Configure the airplane after a positive rate of climb has been verified or in accordance with airplane manufacturer's instructions. (Replaces steps 5 & 6)

2. Maintain Vy +/-5 knots to a safe maneuvering altitude.