

Area of Operation **XI** - Task **F**

Secondary Stalls

Content

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Key References:

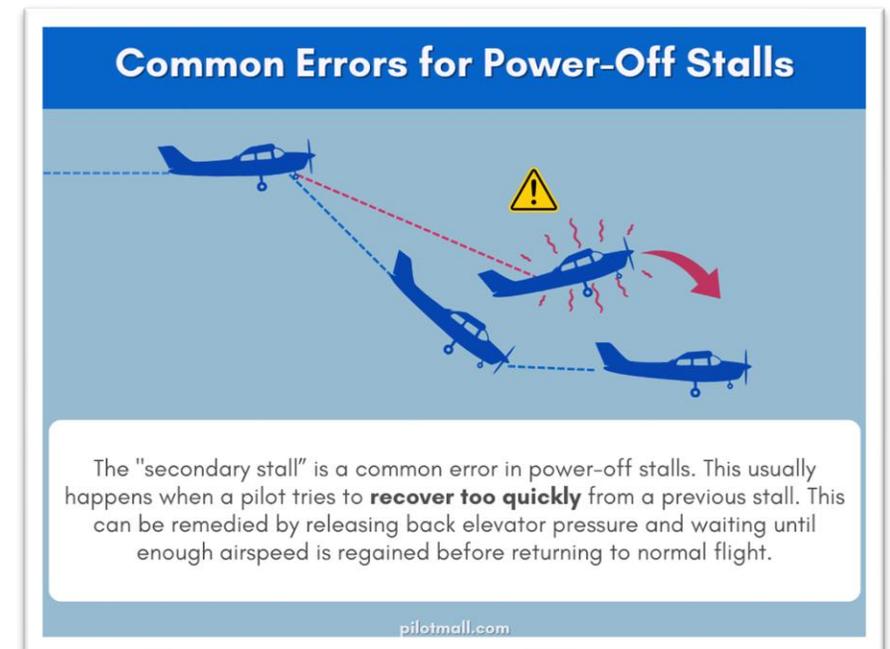
- Airplane Flying Handbook
- Pilot's Handbook of Aeronautical Knowledge
- Stall and Spin Awareness Training (AC 61-67)

1. Introduction

- **What:** A stall that occurs after recovery from a preceding stall
- **Why:** The loss of altitude associated with a single stall can be hazardous. A second stall amplifies the altitude loss and is often more aggressive. This lesson helps the student understand the actions that leads to a 2nd stall
- **Common Scenarios:**
 - Stall recovery close to the ground → to avoid the ground, the pilot may attempt to raise the nose too early
 - An unexpected stall that scares the pilot → can lead to abrupt, overaggressive control movements
 - Attempting to recover using power only or pitch only (if no power or idle)

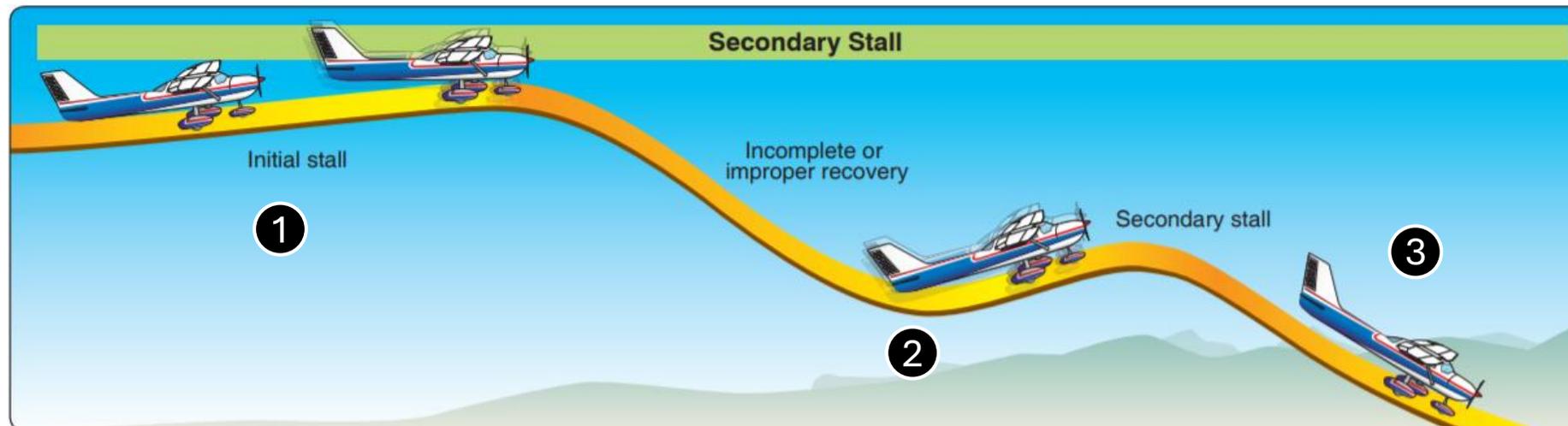
➔ Standard (ACS):

- Demonstration only, not in the Private/Commercial ACS



2. Aerodynamics

- 1 Airplane gets into a stall (see “Power On” or “Power Off” stalls to understand stalls)
- 2 Recovery is made improperly:
 - After reducing AoA, pilot pulls back the yoke again **too much** or **too quickly**, or...
 - After reducing AoA, pilot pulls back the yoke again to level flight **but fail to add power**, or...
 - Pilot adds power immediately **but fail to reduce AoA**
- 3 Airplane gets in a 2nd stall, this time closer to the ground, potentially more uncoordinated (risk of spin), prolonged recovery and additional loads on the airframe due to aggressive inputs



3. Execution

Performing the maneuver in a C172S

1. Perform two 90° clearing turns
2. Select an altitude where recovery can be made above 3000ft AGL
3. **Perform the proper Power-On or Power-Off Stall** (see steps in previous slides)
4. **If Power-On**
 - After recovery from the stall (horn silent) → Increase pitch to induce a secondary stall
5. **If Power-Off**
 - During recovery, reduce AoA but do not add power
 - When horn is silent → increase pitch to induce a secondary stall
6. Recover from the secondary stall by reducing AoA, adding power (if Power-Off), and retracting flaps
7. Cruise checklist

4. Common Errors

1. Failure to establish selected configuration prior to entry
2. Improper or inadequate demonstration of the recognition of, and recovery from a secondary stall
3. Failure to present simulated student instruction that adequately emphasizes the hazards of the poor procedure in recovering from a primary stall

Questions?

