

AC 61-98D – Updating Guidance On Flight Reviews.

In many cases, the requirement to accomplish a flight review every 24 calendar months, has degraded into a routine, let's-get-this-over-with-flight; hasty and superficially performed so a box can be checked.

April 30, 2018, in an effort to lower accident rates, the FAA released [AC 61-98D](#) to help beef up what pilots and instructors cover in their flight reviews. While it doesn't change the regulation and the minimum training requirements of [FAR 61.56](#), it does recommend where pilots should spend their time in the review.

Loss Of Control (LOC) – The Number 1 Cause of GA Fatalities

The image is a poster from the National Transportation Safety Board (NTSB). On the left side, there is a vertical blue bar containing the NTSB seal, which features an eagle with wings spread, holding a shield with the American flag, and the text "NATIONAL TRANSPORTATION SAFETY BOARD" around it. To the right of the seal, the text reads "NTSB MOST WANTED LIST OF TRANSPORTATION SAFETY IMPROVEMENTS 2015" in large blue letters, followed by "CRITICAL CHANGES NEEDED TO REDUCE TRANSPORTATION ACCIDENTS AND SAVE LIVES" in smaller blue letters. Below this, a yellow banner contains the text "PREVENT LOSS OF CONTROL IN FLIGHT IN GENERAL AVIATION" in bold black letters. The main image of the poster shows a small white aircraft flying through a dark, stormy sky with lightning bolts. In the foreground, the wreckage of a similar aircraft is scattered on a snowy, forested ground. At the bottom right of the image, the URL "www.nts.gov/mostwanted" is visible.

According to the FAA, Loss Of Control (LOC) was the number one cause of GA fatalities from 2001 through 2010.

LOC happens when aircraft accidents result from situations when a pilot should have maintained (or should have regained) aircraft control, but failed to do so. Unfortunately, a LOC usually doesn't end well.

Pilot Proficiency and LOC – a Common Problem



RUSTY PILOTS

FAA studies show that LOC is most likely to happen to pilots who lack proficiency. Rusty pilots are more likely to have an accident - not necessarily on a clear, calm day - but when things don't go as planned. So where are the major areas the FAA thinks pilots can improve on during flight reviews? Here are three of the biggest problem areas.

1) Traffic Pattern Operations



Any time you're maneuvering, your risk of LOC increases. When you are maneuvering close to the ground, like you do in the traffic pattern, the risk level goes up.

What should the flight review focus on in the **traffic pattern**?

DEPARTURE STALLS

- **Flight instructors should** emphasize training that ensures that pilots of small single-engine airplanes depart in coordinated flight at the best-rate-of-climb speed (VY) for normal takeoffs, and maintain this speed to the altitude necessary for a safe return to the airport in the event of an emergency. **Flight instructors should** provide training that emphasizes the correct speeds at which light twin-piston aircraft depart the runway.
- **Flight instructors should** emphasize that a departure at the best-angle-of-climb speed (VX) is used for obstacle clearance and short-field takeoff procedures.
- **Flight instructors should** also emphasize the risks and potential consequences of climbing out at speeds less or greater than what is required for a particular type of takeoff.

THE IMPOSSIBLE TURN

Flight instructors should train pilots of single-engine airplanes not to return to the field after an engine failure unless altitude and best glide requirements permit a safe return. Therefore, flight instructors should not routinely train pilots to make a 180-degree turn from a simulated engine failure while climbing. However, this training should occur at a safe altitude. A critical part of conducting this training is for the flight instructor to be fully aware of the need for diligence, the need to perform this maneuver properly, and to avoid any potential for an accelerated stall in the turn. It is essential for a pilot to know the altitude that will be lost in a 180-degree turn, in the specific make and model (M/M) flown, if and when a pilot considers turning back to the departure airport at best glide. During the before-takeoff check, the expected loss of altitude in the turn, plus a sufficient safety factor, should be related to the absolute altitude at which a turnback may be attempted. In addition, the effect of existing winds on the preferred direction of a turnback should be briefed.

2) Unstabilized Approaches can result in LOC

Flight instructors should teach pilots to reject an approach and initiate a go-around when the pilot cannot maintain a stabilized approach.

Here are the areas the FAA recommends for a stabilized approach in a GA aircraft, with minor deviations on final approach. (It's something you can practice on your next flight or flight review!):

- **Glidepath.** The airplane is on the correct flightpath. Typically, the glidepath is 3 degrees to the runway touchdown zone (TDZ) (obstructions permitting).
- **Heading.** The airplane is tracking the extended centerline to the runway with only minor heading/pitch changes necessary to correct for wind or turbulence to maintain alignment.
- **Bank angle.** This should not exceed 15 degrees on final approach.
- **Airspeed.** The pilot maintains a constant target airspeed within +10/-5 knots indicated airspeed (KIAS), which is usually at, but no lower than, the recommended landing

speed specified in the pilot's operating handbook (POH)/Airplane Flight Manual (AFM), approved placards/markings, or 1.3 times the stall speed or minimum steady flight speed at which the airplane is controllable in the landing configuration (VSO), if not specified.

- **Configuration.** The airplane is in the correct landing configuration with flaps as required, landing gear extended, and the airplane in trim.
- **Rate of Descent.** Descent rate is a constant and generally no greater than 500 feet per minute (fpm). If a descent greater than 500 fpm is required due to approach considerations, it should be reduced prior to 300 feet above ground level (AGL) and well before the landing flare and touchdown phase.
- **Power Setting.** Appropriate for the airplane configuration and not below the minimum power for approach as defined by the POH/AFM.
- **Checklists/Briefings.** All briefings and checklists (except the landing checklist) are completed prior to initiating the approach.

3) Instrument Meteorological Conditions (IMC) – LOC



Flying in the clouds is difficult and confusing. When you are “rusty”, the stakes are even higher.

*Vertigo or spatial disorientation has been a significant factor in many aircraft accidents. The common result when a non-instrument-rated pilot inadvertently continues flight into IMC is spatial disorientation and LOC. Pilots who are instrument rated, but not instrument-proficient, are also susceptible. Recovery from LOC in IMC can be nearly impossible without skills and competency. Additionally, instrument-rated pilots maneuvering in IMC who fail to prioritize pilot workload properly and use Crew Resource Management (CRM) or Single Pilot Resource Management (SRM) may become inattentive or distracted and lose situational awareness (SA), which too often can lead to LOC. The GAJSC determined that **pilots and flight instructors need to emphasize effective preflight planning and pilot proficiency to reduce the risk of LOC in IMC.***