



Transition Training

The lack of transition training has been cited as a causal factor in many GA accidents. Although pilots think of transition training as necessary when stepping up to a high performance or complex airplane; or from single-engine to multi-engine; or from tricycle gear to tail wheel, it is also beneficial to pilots who are moving from traditional aircraft to amateur built or light sport flying machines. Whether a pilot is transitioning to a higher- or lower-performance aircraft, or even a different model, a sound transition training program should involve:

Structure

Transition training should be conducted in accordance with a written training syllabus. Think of the syllabus as a checklist for training. As with an aircraft checklist, the syllabus provides a logical, systematic, and comprehensive approach to ensuring that you cover all the basics. It is also helpful to review the applicable certification standards documents like the practical test standards (PTS), or the new airman certification standards (ACS) that will soon replace PTS. These documents list the flight proficiency standards appropriate for the certificate and/or rating that the transitioning pilot holds.

Specifics

Transition training is intended to teach the pilot what is different about the aircraft or its installed equipment (e.g., avionics). The syllabus should thus address basic characteristics of the aircraft's systems (e.g., fuel, electrical, control, hydraulic, avionics, environmental, etc.), but with emphasis on how characteristics of the new aircraft differ from those in aircraft the pilot has already



flown. A good example is with Beechcraft single and multi-engine aircraft. All Beechcraft models prior to 1984 have the position of their flap and landing gear switches reversed from almost all other complex aircraft types. Pilots sometimes inadvertently retract the landing gear when they have recently (or not so recently!) transitioned from other models when they think they are retracting the flaps.

A transition training syllabus should also cover normal, abnormal, and emergency procedures, as well as performance characteristics, including what to expect on takeoff and landing, climb, cruise, descent, and glide. Finally, it must address limitations, such as weight and balance, speeds, wind limits, etc.

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Transition training issues common with the Cessna fleet include the C-182 which tends to have a forward CG when loaded with a pilot and front-seat passenger. The CG can possibly be beyond the forward limit. This results in publications like the *Aviation Consumer Pilot Guide* suggesting that buyers looking at C182s should check for engine firewall damage from landing hard on the nose gear.

Also worth pointing out is that stock Cessna 182s manufactured prior to 1986 come with a Continental, carbureted engine. Those manufactured from 1997 onward come with a Lycoming, fuel-injected engine, and the engine instruments are located in quite different places as well. A pilot who is comfortable in an older 182 will need some training to understand how to start a newer 182, especially if that pilot has never operated a fuel-injected engine before. Furthermore, the newer models have a completely different fuel shutoff setup than the older ones.

Aftermarket modifications can also cause confusion, even for CFIs who are checking you out in a model they are quite familiar with. Things like tip tanks, engine modifications, propeller modifications, and so on, all must be understood thoroughly to not only operate your aircraft safely, but also to operate it efficiently. And it goes without saying that anything unfamiliar must be discussed and trained with until its understood how that item is handled in the event of an emergency.

Qualified Instructor

To get the greatest benefit from your transition training, you need to hire an instructor who is current, qualified, and thoroughly knowledgeable about the airplane and/or equipment you want to master. The instructor should conduct your training in accordance with a comprehensive training syllabus. While it is important to cover all the material, a good instructor will have the ability to



change the arrangement of the subject matter and/or shift the emphasis to fit the qualifications of the transitioning pilot, the characteristics of the aircraft or equipment involved, the circumstances of the training environment, and the goals of the transitioning pilot.

One way to help you find a good instructor to help with transition training is to check out the various manufacturer and type clubs, many of which have websites and online forums that can help with your search, and at the same time improve your knowledge of a particular aircraft.

Can you think of an issue that is specific to the make and model of aircraft that you are most comfortable in? How would you advise or instruct a pilot new to your type/model about this issue? Let us know @FAASafetyBrief on Twitter.

Learn More

- Advisory Circular 90-109, Airmen Transition to Experimental or Unfamiliar Airplanes - <http://go.usa.gov/3XguP>
- Transitioning to Other Airplanes, AOPA Online Course - www.aopa.org/lms/courses/transitioning/
- "Shifting Gears: Tips for Transition Training" page 16, FAA Safety Briefing, March/April 2014 issue - <http://go.usa.gov/xxWdJ>
- GAJSC Loss of Control Work Group Reports <http://www.gajsc.org/document-center/>
- FAA Airplane Flying Handbook, Chapters 11- 15 Transition Training http://www.faa.gov/regulations_policies/handbooks_manuals/aircraft/airplane_handbook/

