Transition Training

The lack of transition training has been cited as a causal factor in many GA accidents. Accidents frequently result from pilots being unprepared for challenges presented by the new, or different, aircraft they are flying. Even when pilots are legally certificated to operate aircraft within a specific category and class, significant differences can exist among different types of aircraft within that category and class — thus necessitating the need for effective transition training.

Background

From 2001–2010, there were 1,250 fatal loss of control accidents. About half of these accidents occurred in the maneuvering and approach phases of flight — think stall/spin/crash.

It's also true that many accidents occur when pilots fly aircraft they're unfamiliar with. In fact, the first 50 to 100 hours in a new aircraft type are particularly dangerous, especially when a formal transition training program isn't followed.

What is Transition Training?

Imagine yourself sitting behind the wheel of a car that has a stick shift, but all you've ever driven is an automatic transmission. Sure it's a car like any other, but if you're driving a car with a stick shift, you'll need to know how to operate the gears and clutch. You'll need transition training from an automatic to the manual transmission.

Similarly, pilots who are transitioning to unfamiliar aircraft require not only stick and rudder development, but also specific training in the new aircraft's systems and with it's operating characteristics to include normal, abnormal, and emergency procedures.

Remember — skills learned in some aircraft don't directly translate to other aircraft. Your new aircraft may look and feel like the one you're used to flying, but subtle differences can exist such as faster or slower performance, higher stall speeds, and variations in handling characteristics that could ultimately affect your reaction time and/or lead to loss of aircraft control in normal, adverse, and emergency conditions.

Transition training is important whenever you're operating an unfamiliar aircraft or avionics system.

Stepping Down and Stepping Up

Transitioning to another aircraft works both ways — stepping down is just as important as stepping up. It's not just about learning how to fly a more complex airplane. It's also about learning to transition from high performance aircraft to aircraft with lower performance and complexity, which can be equally challenging.

The same rules apply when you're operating in unfamiliar environments — you need to train for your new environment as well.

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Transition Training Program

Whether you're transitioning from higher- to lower-performance aircraft, or even to a different model, you should follow these three steps to ensure you have a sound transition training program:

- Hit the books.
- Train with a qualified instructor.
- And practice, practice, practice — twice a week is suggested to yield the best result.

Step 1: Hit the Books

You can get a leg up on your transition if you study the pilot's operating handbook first — especially if you've flown similar aircraft before. Your study topics should include basic characteristics of the aircraft's systems (e.g., fuel, electrical, control, hydraulic, avionics, and environmental) and how characteristics of the new aircraft differ from aircraft you have already flown.

Get a feel for what you can and can't do with the aircraft and focus on normal and abnormal procedures, performance characteristics, and what to expect on takeoff, landing, climb, cruise, descent, and glide. Also address the aircraft's limitations such as weight and balance, speeds, and wind limits. Know your aircraft's emergency procedures, speeds, power setting, and configurations for normal operations.

Step 2: Train with a Qualified Instructor

Finding the right instructor is key. Interview current owners, aircraft type clubs, or pilot organizations. They provide an excellent source of aircraft specific information, and a roster of instructors. Simulation training providers are another good source of information.

Talk to more than one flight instructor. They must be experienced in the make and model of your aircraft. More importantly, they must have recent experience. Let them know about your experience and capabilities as well, and how you intend to use the aircraft.

Assess their communication style. Are they clear and easy to understand? Would they be an effective teacher?

Make sure your instructor uses a syllabus — a training roadmap that should contain training events and schedules, completion standards, and established roles and responsibilities for you and the instructor.

The National Association of Flight Instructors advocates the ACE (***A**nalyze, **C**reate, **E**xecute*) training method. **Analyze** the aircraft's performance. **Create** your list of concerns about the new aircraft. And **Execute** several flights similar to the type of operation you plan to do in the aircraft.

Step 3: Practice, Practice, Practice

It is important to practice with your instructor — twice a week is suggested to yield the best result — and in your operating environment.

Develop personal performance figures and minimums, and develop your personal data at mission weights.

New avionics systems require practice too. Try logging some time on an avionics simulator to practice in a glass cockpit.

Practice slow speed maneuvering at altitude, manage distractions, seek regular refresher training, and document your achievement in the Wings Pilot Proficiency Program!

Learn More

- Advisory Circular 90-109A, *Transition to Unfamiliar Aircraft:* go.usa.gov/xQYf5
- "Shifting Gears: Tips for Transition Training" page 26, *FAA Safety Briefing*, Sept/Oct 2017: go.usa.gov/xQYf6
- Transitioning to Other Airplanes, AOPA Online Course: bit.ly/2IOFjlV
- *FAA Airplane Flying Handbook*, Chapters 11-15 Transition Training: go.usa.gov/xQY7h