

Tuesday, March 25, 2014

Upset Recovery Vs. Aerobatics

How upset do we have to be to get good training?

By Patty Wagstaff

Anyone can do the job when things are going right. In this business, we play for keeps.

—Ernest K. Gann

These days, whenever I pick up an aviation magazine, I catch an article about how important stick-and-rudder skills are in primary flight training. My favorite aviation writers "get it." The consensus seems to be that there's a widening gap between learning good airmanship from the beginning of flight training versus playing catch-up and fixing bad habits later.



For the past few years, "upset recovery training" has become a nice buzzword in the aviation industry. Upset training—recovering from unexpected unusual attitudes—is a good thing, but I've been trying to understand why it isn't all just called aerobatics. Some people, like me, think it's just semantics, but the industry is promoting it as something a little different. Semantics or not, the approach taken by the flight training industry over the past two decades dictates a marketing strategy that appeals to ultra-conservative and safety-conscious attitudes. The word "aerobatics" must seem a little too wild, when in fact, it's precision flying at its best.

My friend Randy Brooks teaches upset training for a living. He has tried to convince me through charts, diagrams and a lot of acronyms that upset training and aerobatics are really two different things, and he makes a lot of good points. Randy is the president and founding member of Upset Training & Recovery Training Association (UPRTA). UPRTA states that the primary objective of aerobatics is "precision maneuvering capability," while upset prevention and recovery is "safe aircraft upset avoidance and recovery." They both lead to the same outcome: "improved manual aircraft handling skills." Randy notes that the biggest difference is the "startle effect," where aerobatics deals with planned outcomes in maneuvers, but upset training deals with unexpected outcomes. In my mind, his best argument is that akro is performed in VMC only, while upset recovery can be done solely by reference to instruments.

The concept of "upset training" gained ground in 2008 when airline industry leaders and safety experts strongly suggested to the FAA that they needed to fix some of the mistakes pilots were making in Loss of Control (LOC) accidents. The prime example was the Colgan Air crash, where the NTSB cited pilot training as one of the leading causes of the accident. Since then, the FAA instituted new rules requiring upset training, remedial training and expanded crosswind training, and raised the total time requirements for pilots on a commercial carrier.

LOC accidents are overwhelmingly the number-one cause of fatalities in worldwide commercial aviation. NTSB Chairman Debra Hersman cited LOC accidents as the primary threat to air safety in 2011. And, let's not ignore the other recent horribly spectacular accident, Air France flight 447, which stalled something like 72 times before crashing into the Atlantic Ocean. The BEA, France's aviation accident investigation bureau, concluded that pilot error was to blame as a result of the crew making inappropriate control inputs that destabilized the flight path, failing to follow appropriate procedures for loss of displayed airspeed information and lacking understanding of the approach to stall, failing to recognize the aircraft had stalled and consequently not making inputs that would have made it possible to recover from the stall. Flight training seems to have gotten so risk adverse that student pilots aren't taught deep stalls, spins or even basic akro. We can't avoid risk completely, but we can train for it. You can't really blame the pilots for these accidents—they completed the FAA Practical Test Standards (PTS) requirements (or equivalent) like everyone else, but you can blame the system. How were they supposed to know what they didn't know about stalls and LOC?

I do have a bone to pick with the FAA on this one. With its new rules, the FAA is trying to take credit for "advancing" flight training by "introducing" upset training to commercial pilots. But the FAA has to take some blame for eliminating spins and more advanced maneuvers from private pilot training in the first place.

How did we get so far away from teaching basic stick-and-rudder skills in primary flight training? Why don't we require private pilots to have spin training, upset recovery/aerobatics and overall good airmanship?

Before and after WWII, student pilots were taught spins and basic aerobatics as part of their basic training curriculum. During WWII, the pre-solo student was trained in forced landing techniques and recovering from stalls and spins. Post-solo, there was training in precision of control, lazy 8s, pylon 8s and chandelles. Before a student earned their pilot's certificate, they were required to perform loops, Immelmans, slow rolls and half rolls, and they were required to make at least 175 landings. This type of basic flight training for most pilots in the U.S. continued into the 1960s, and in my opinion, should still be considered basic training for all student pilots today.

Not everyone was military, but the system pumped out enough pilots into the 1950s so that the training culture permeated to civilian students who benefited from ex-military trained instructors. My dad, who retired from the airlines and ended up back in DC-6s and 7s as a freight-dog, completed his basic training in the late '40s in Stearmans and T-6s. Back then, he considered loops, rolls and spins as no big deal and assumed every pilot was trained for "upsets" that could occur.

I'm a big believer in recurrency training, and no one can argue the new mandate requiring more flight training isn't good. The problem I have with the new FAA "upset rules" isn't that they aren't good; it's that they're trying to fix a symptom and not the cause. If the FAA and the industry in general wanted to fix the cause, they'd throw out the current PTS for all private and commercial certificates, and go back to basics. Why not just train student pilots in stalls, spins and upset training from the very beginning instead of trying to "fix" them later?

There are many pilots out there with the "right stuff," but some people just don't have access to the kind of flight training they deserve. The student is only as good as their instructor. We're taught to obey rules and procedures. If the governing bodies in aviation don't provide us with the best training system, how will student pilots know what they're lacking in terms of good airmanship?

Wikipedia defines airmanship as "not simply a measure of skill or technique, but also a measure of a pilot's awareness of the aircraft, the environment in which it operates, and of his own capabilities." And my favorite: "Discipline is the foundation of airmanship. The complexity of the aviation environment demands a foundation of solid airmanship...and a positive approach to combating pilot error."

The buck has to stop somewhere. Until drones take over the world and we don't have to worry about our feeble behavior, human factors will remain a critical part of the safety chain.

The "law of primacy" in flight instruction states: Things learned first create a strong impression in the mind that's difficult to erase. The FAA is now requiring an ATP certificate and 1,500 hours total to fly a commercial carrier. This is another layer of regulation intended to make things safer, but I'd much rather be sitting in the seat behind a 300-hour first officer who knows the basics of stick-and-rudder flying than a pilot with 10,000 hours but missing these basics.

Throw away the current FAA practical standards and go back to basics—airmanship, stick-and-rudder, real stalls, spins—and aerobatics should play a part in a student pilot's basic and advanced training. Upset training or akro? Take your pick. The accomplished aviator will be good at both. If some instructors can't teach those things, then let's give them remedial training. If the airplanes we train in aren't suitable, then let's build new ones or modify existing ones. Let's insist that flight training gets back to basics of stick-and-rudder skills and understanding angle of attack. It's never too late.



Learn the Job Searching Secrets That 85% of People Don't Follow.



Next Gen solutions for shocking muscle gains



Avoid Bankrupting Your Family and Destroying Their Future With These Simple Tips on Life Insurance



Easy Tips to Reduce Your Cell Phone Bill and Save Thousands Today With a Single Call.

Suggested for you

From around the web

A Long Time Product Tester Reveals the Secrets to Getting FREE Products... SmarterLifestyles

These are the tips your bank doesn't want you to know. Save Thousands in... SmarterLifestyles

The Mandatory Dating Advice You Must Follow to Have a Successful... SmarterLifestyles

Tricks You Can Do to Easily Get the Lowest Hotel Price Possible. SmarterLifestyles

Essential Tricks to Help You Retire Early and With More Money. SmarterLifestyles

Labels: [Columns](#), [People and Places](#), [Aviation Personalities](#), [Pilot Talk](#)

Share this page. [Social media icons]

[top](#)

0 Comments

[Add Comment](#)