

Dear Rich:

Thanks for your review of ASF's report on the role of stall/spin accidents in general aviation. Having an extra voice on the subject - especially from a respected unusual attitude trainer like yourself - can only help in our common mission of educating pilots and improving the GA accident rate.

Reading through your comments, it sounded a bit adversarial in places and yet we agree on many points. In the very first paragraph, you accuse ASF of fabricating a myth [Pilots who believe that aerobatic training will enable a recovery from an inadvertent spin in the traffic pattern are fooling themselves.] solely for this study. To provide a more balanced viewpoint, you might also have quoted the next few sentences "This study is not intended to discount the value of properly conducted aerobatic and spin training. Training in a controlled environment with a trained instructor is beneficial. The most important aspect of the training should be recognition and prevention."

That doesn't sound like we "...essentially missed the point of spin training."

Regarding the myth, I'd suggest that the reason you hadn't heard it is that it exists mostly among the pilots you HAVEN'T been associating with - those who haven't sought out spin training, and who aren't professional spin or aerobatic instructors. The pilots who subscribe to this myth are among many all over this country who pick up much incorrect information in the process of hangar flying. They may be a minority, but minorities are precisely the ones who make the accident statistics, but let's get to some of your key points.

"The study claims that this myth ("watch your airspeed, or you're going to stall this airplane") is largely propagated by flight instructors...."

We agree that it IS largely propagated by flight instructors. It was nice of you to add that many of those instructors are low-time, under-trained and/or under-informed, but that's something we've agreed upon in the past and continue to do so. We also clearly laid out the true path to safety lies in the angle of attack.

"AOPA has been known to disseminate stall/spin mythology as well."

We did explore the possibility of proving (or disproving) the statement that more pilots were killed in spin training accidents than in real emergencies. That information was provided by several FAA officials, who believed that to be the case. We couldn't prove that, either way, if the "more" was correct. There were certainly training accidents, however. Older NTSB records were only recently made available online, and even then only back to 1962.

Again, you left out context by not quoting the sentence preceding, " Because of improved aerodynamics and an emphasis on avoidance, the number of spin-related accidents has dropped significantly."

"I believe... however, that... in exchange for relaxing spin training and aircraft spin certification requirements, manufacturers were to develop more spin resistant designs. Manufacturers have largely failed to live up to their end of the bargain."

We agree again and it's right there in the ASF study: "Officials at the time also reasoned that if there was no spin requirement for private pilots, then aircraft manufacturers would also be encouraged to produce aircraft with greater spin-resistant characteristics." In addition, ASF's new premier live seminar on Maneuvering Flight (which will debut at AOPA Expo in October and will run through the first half of 2004 nationwide) uses a NASA study and other evidence to clearly establish that not everything possible has been done through aircraft engineering to minimize stall/spin accidents.

There is some movement in that direction recently with the certification of spin resistant aircraft and your own point, that one reason for the drop in accidents was that newer aircraft introduced in the 50's and beyond were somewhat more spin resistant. So technology does make a difference, perhaps more reliably than other methods. By the way, in the seminar we recommend that if pilots elect to take unusual attitude and spin training, that they go to professionals like you who have the expertise and the equipment to do the job safely.

"Of interest is AOPA's conclusion that "it appears that ATP's are generally the most experienced and knowledgeable pilots, while students are under very close supervision to ensure their safety."

The additional study of ATP stall/spin accident rates in your report certainly is interesting, but it only confirms ASF's original conclusion that private and commercial pilots were the groups most in danger of a stall/spin accident. We did NOT look at aerobatic involvement.

"If the reason Student pilots have a 4 percent stall/spin fatality rate is due to "very close supervision to ensure their safety" as concluded in the AOPA study, then wouldn't it follow that flight instructors would also have a comparably low stall/spin fatality rate?"

Students, by regulation, are required to have very close supervision in all phases of training leading up to the private pilot certificate. Regarding CFI's being as safe, No, not necessarily. It is the CFI's doing the supervising for solo students and they appear to apply different standards to themselves when in a dual flight situation. As the ASF study points out, the numbers

involved are fairly small: a total of only 44 fatal stall/spin accidents in an instructional setting over a 10-year period. That the majority (91%) happened with CFIs on board may very well be due to insufficient spin training of CFIs today, as those CFIs provide dual instruction in some of the most risk-prone corners of the flight envelope.

"(The decrease in stall/spin accidents after 1949) myth attempts to create a non-existent cause-and-effect relationship."

Not quite sure what you're saying here, but there is no myth that spin accidents when down, coincident with the deletion of the spin demo requirement. We absolutely agree this was also influenced by multiple factors previously mentioned.

Aviation accident investigation and reporting not only isn't an exact science, but (as we all agree) has changed and evolved over the years. Your report on the ASF study points out quite correctly that many factors could be involved in the decrease in the number of stall/spin accidents since deletion of the spin requirement from the private pilot certificate in 1949, including changes in training and testing, training methodologies, aircraft engineering and other things. Even definitions of accident causes have evolved over the years, further muddying the water. But on its most essential level, NTSB accident reports clearly show that GA accidents due to stalls and spins have indisputably decreased over the years.

"The discussion of altitude losses during stalls and spins referenced in the AOPA study lacks context; the information as provided, therefore, is misleading."

No, all the context is there, including the sources for data ASF used in the study. In the case of average altitude loss during stalls, we used the best available information from the manufacturers. Most pilots understand that professional test pilots using new aircraft conduct these tests, and that the individual pilot's mileage may vary, usually in the direction of more, rather than less, altitude loss. Is there a CFI anywhere who has not warned students, "give yourself some margin when calculating aircraft performance?"

For other aspects of altitude losses, we used the best available data from extensive FAA and NASA tests, as well as an in-depth study of our own GA Accident Database. Bottom line - the numbers in the POH are the basis upon additional decisions should be made. You have to start somewhere and this conversation proves our point - recovery from a low altitude spin is unlikely.

"Here, too, the AOPA study misleads readers regarding so-called significant differences between Tomahawk and Cessna 150/152 spin behavior."

We've been down this road before, and our conclusion that the Piper Tomahawk is NOT a particularly dangerous airplane when properly flown stands. It does have *spin* behavior that - while meeting FAA certification standards - *is* not as docile as most, other training aircraft, but that in itself doesn't make it dangerous. As with many aviation safety issues, it's the pilot who makes the difference, especially when dealing with matters of aircraft design.

Since our last go-around on this issue, we've been watching the accident record for Piper Tomahawks very carefully to see if your concerns about the design could be validated. So far, they can't: the last stall/spin accident involving a Tomahawk was in 1999, near Warrensburg, Illinois. The aircraft had been loaded nearly 100 pounds over its maximum gross weight, which the NTSB cited as a contributing factor. If there was a systemic problem I believe we'd see more than one accident in 4 years. Will there be another PA38 spin accident in the future? Probably, which will raise all the old arguments but pilots do have to understand the nature of their machines. Occasional individual failures, as tragic as they may be, do not show non-compliance with certification rules. It shows that some aircraft are not as docile as others in certain flight regimes. Your original position, as I recall was that the Tomahawk was a dangerous aircraft. ASF's consistent position is that this aircraft, like many, that has some different traits that pilots should be aware of.

We'd also direct your readers to my feature article that appeared in February '03 [AOPA Pilot](http://www.aopa.org/asf/asfarticles/2003/sp0302.html) - Spinning In - <http://www.aopa.org/asf/asfarticles/2003/sp0302.html>. It reviews some of this history, interesting NASA research and of the challenges of educating pilots in spin resistant aircraft. Like any airplane, they shouldn't be flown contrary to explicit warnings in the POH.

Rich, I'd like to thank you for your analysis of the ASF study, because it provides solid additional information that - for the most part - reinforces the conclusions in the ASF study. There are some points that were taken out of context, but generally, we agree. I also remind your readers that we are proponents of quality unusual attitude training as stated in the opening paragraph of the study.

Safe Flights,

Bruce Landsberg
Executive Director
AOPA Air Safety Foundation