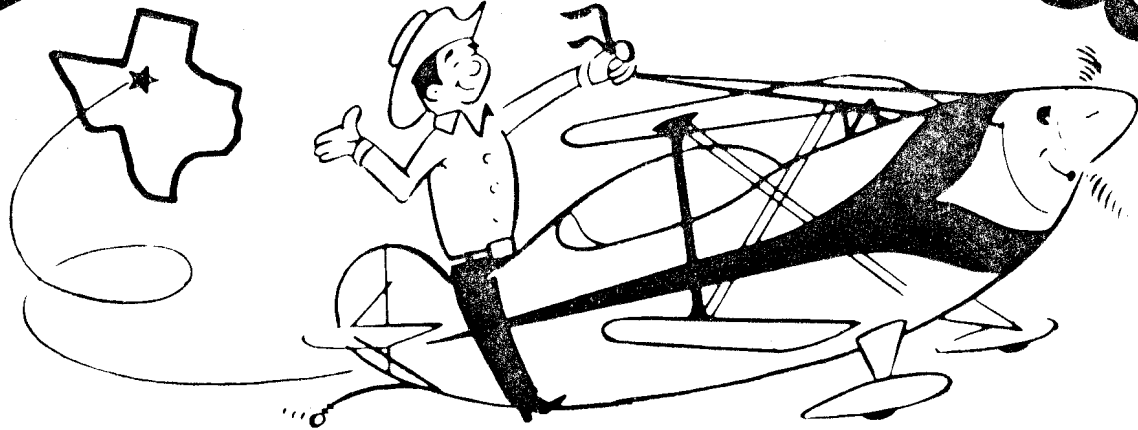


AEROBATICS WITH BEGGS!



OUT SPINNING WITH GENE BEGGS Part II

In the February 1984 issue of SPORT AEROBATICS, I outlined an easy, simple and foolproof method of spin recovery that would enable you to recover quickly and easily from **any** spin that could be encountered in a Pitts or Eagle type aircraft. I further stated that it wasn't even necessary for you to know what type of spin you were in. Upright or inverted, left or right, normal or flat, the recovery was the same, regardless. The method was as follows:

FOR EMERGENCY SPIN RECOVERY

1. Cut power.
2. Take your hands completely off the stick.
3. Apply **full** opposite rudder till the spin stops (The one that gives you the most resistance or the "heavy" rudder.)
4. Neutralize the rudders and pull out of the dive.

In addition to this article in SPORT AEROBATICS, I also mailed out a brochure and letter to all owners of a Pitts or Eagle aircraft.

To say that this campaign has stirred up a "hornet's nest," would be putting it mildly. I have literally been flooded by calls from pilots wanting to know if I have completely taken leave of my senses.

I have also been swamped by pilots who want to take this spin training as soon as possible!

Since May of 1983, I have taught this advanced spin training course to dozens and dozens of pilots from all over the country. All graduates of the course have been very happy and enthusiastic about what they have learned and are busy helping me spread the word about this life-saving method of emergency spin recovery.

I have been challenged by some skeptical pilots who have called wanting to know just exactly what kind of a hoax I am trying to promote here. Many think I am just trying to make a buck by this campaign; but believe me, my reason for this promotion is to save lives.

When your friends are dying at an alarming rate, and you have discovered why, and you have discovered a simple, foolproof method of spin recovery that would prevent all such accidents from ever happening again, it is very difficult to be quiet about it even though meeting with a lot of resistance and skepticism.

This "new" method of emergency spin recovery is really not new at all! It is the method used back in 1912 by Lieut. Parke, R.N., of "Park's Dive," fame who made history by recording the first recovery from an accidental spin!

This method of spin recovery is quite different from the methods commonly found in aircraft flight manuals and widely taught by flight instructors the world over. The old concepts and ideas on spins and spin recoverys have been with us for over sixty years or so. It is very difficult to overcome these deeply entrenched beliefs with a radically different and seemingly too good to be true method. We have all been led to believe for years that we had to memorize a complex set of control movements in order to recover from a flat spin and further more, we also had to be able to recognize what kind of spin we were in before we would know which one of several different combinations of control movements to use in order to recover. This just asks too much of a panic stricken pilot who is already in trouble. The chances of him using the correct recovery procedure the first time are slim.

Now we know that you can recover from **any** type of spin that can be done in a Pitts or Eagle type aircraft by using the simple, easy to understand method of spin recovery outlined at the beginning of this article. Furthermore it is not even necessary for you to know what type of spin it is. The recovery procedure is the same regardless! It also eliminates the possibility of first using the wrong combination of control movements and wasting precious altitude in the process.

Any experienced aerobatic pilot, who has flown a Pitts or Eagle type aircraft up thru the categories of competition, can tell you some horror stories about times when he has had the wits scared out of him by a spin that got out of hand. Some will tell you about it and some will not for fear that they will lose face by admitting that they were momentarily out of control and did not know just where the aircraft was or what it was doing.

I have found that newcomers to the sport are much more receptive to this new method of spin recovery because they have no preconceived and deeply entrenched beliefs about spins.

With all of the false advertising and "B.S.," that we are constantly bombarded with by those claiming to be the best and who claim to have something new and better, we have all come to be very skeptical and wary. Just how does

one separate the facts from fiction? From my own experiences, I have learned to first consider the source and then ask for references and phone numbers of people who have recently done business with that company and if a product is involved, I want to see some recent examples of their work.

BACK TO SPINS

Well, enough of my philosophy! Back to spins!

In the past few months, I have been bombarded by questions regarding this new method of emergency spin recovery and I would like to take the most often asked and answer them for you.

Without a doubt, this one is the most common one of all. It sometimes is worded very tactfully but the message conveyed is always the same.

- (Q). "Hey Beggs, have you completely gone crazy?"
- (A). No! I assure you, I am of sound mind and body and those in the psychiatric and medical professions have confirmed that to be true!
- (Q). "OK Beggs, just what kind of scheme are you up to? Everybody knows that this is just not the way to get out of a flat spin! Is this just some kind of money-making hoax that you have come up with?"
- (A). No! Most people sort of believe that this is just another money-making hoax that I am trying to promote and don't really think that there is anything to it. If you are one of those individuals, I sure feel sorry for you because it proves that your mind is closed and you are passing up a golden opportunity to learn something that could save your life and possibly the life of someone you love if you fly a two-place aerobatic airplane. My primary purpose with this program is to save lives! I have spent a tremendous amount of time, effort and money on this spin program and it is very doubtful if I will even be able to recover my costs, let alone make a sackfull of money out of it.
- (Q). "Hey Beggs, what makes you think you know all the answers to this spin thing anyway?"
- (A). I don't! I would never be so naive as to state that I know everything about anything! I am convinced, however, that this new concept of spin recovery is the answer to one of the greatest dangers in our sport, inadvertent spins. I base my opinions not on hearsay and theory, but on many years of experience, a lot of research and many, many hours of in-flight testing in various aerobatic aircraft including the Cessna Aerobat, Citabria, Decathlon, Taylorcraft, all models of the Pitts, the Christen Eagle II, various models of Cessnas that are approved for spins, the Beechcraft Skipper, and several that I have probably omitted. I believe that my advanced spin training course represents the latest, state-of-the-art in spin training and I believe that all areas are thoroughly covered.
- (Q). "Have you really tested this all out or is most of this just theory?"
- (A). You better believe I have tested it all out! I would never teach anything that I had not proven for myself beyond any shadow of a doubt.
- (Q). "Have you computed your weight and balance with all of these spins?"
- (A). Certainly.
- (Q). "Have you proved all this out with the Christen Eagle II, which is purported to have a CG which is further aft than the Pitts S2A?"
- (A). Yes! I used an Eagle II extensively in my flight tests. I have put it thru the entire spin program

with the CG from one end to the other and have flown it solo with as little as five gallons in it with a little weight in the baggage compartment. I found it very easy to recover from any spin using this method. Even under the most extreme conditions of CG in the inverted and upright flat spins to the left, the aircraft would always recover within one additional turn from the point at which I applied full opposite rudder.

- (Q). "Have you tested the Pitts S2S which is also rumored to have an aft CG compared to other aircraft?"
- (A). Yes! The same results were obtained with the S2S as were obtained with the Eagle II described above.
- (Q). "Is this simple, foolproof method of spin recovery you refer to in your brochure, simply to let go of everything? If that's all there is to it, I already know that!"
- (A). No, that's not all there is to it! I have found that simply letting go of the controls will not always recover from spins, particularly the accelerated spins that I refer to in part one of this series of articles. This method of emergency spin recovery that I teach is indeed simple and foolproof if used exactly as described. Anyone can be taught to use it blindfolded, but you must use it exactly as described. The power must be completely off; you must completely take your hand off the stick so it is free to go exactly where it needs to go without any interference from your hand; and then you must press **full** opposite rudder (the one that gives you the most resistance) until the spin rotation stops, which will occur almost abruptly as the stick snaps into the true neutral position all on its own as if by magic. All that remains is to neutralize the rudders and pull out of the dive.
- (Q). "Will this method work if my aircraft is equipped with aileron spades?"
- (A). Yes, it will. The installation of the Pitts type spades has no effect on this method of spin recovery as long as they are installed correctly and rigged properly so that the stick has no "stick snatch." The S2A that I use in my school has the symmetrical ailerons with spades.
- (Q). "Does the position of the elevator trim tab control have any effect on the spin recovery using this method?"
- (A). No! Believe it or not, I have found no difference in the spin itself or the recovery using this method, regardless of the position of the elevator trim tab. I have tested this carefully from one extreme to the other and the aircraft always spins and recovers the same. The only thing that I have found that is affected is the stick pressure during the pullout from the ensuing dive after recovery takes place.
- (Q). "OK Beggs, let's just say that this does work exactly as you describe, and everything you say is indeed true; but tell me, how much altitude do you lose using this method as compared to the more conventional methods of recovery?"
- (A). This is a good question and one that I knew would be asked often. I did a very careful series of spins in an S2S to determine this very thing. I found that in every case, I was always able to recover with less altitude loss using my method than when using the more conventional method of using full aileron in the direction of the spin etc. For example, I would put the S2S into an inverted flat spin to the left at

10,000 mean sea level (MSL), and let it wrap up and spin down until the altimeter read 9000 feet MSL. At this point I would cut the power, take my hand off the stick, and push full opposite rudder. When the aircraft recovered from the spin, (typically within one-half to three-quarters of a turn and never more than one additional turn), I would neutralize the rudders and smoothly pull out of the dive. Time after time, I was recovering with the altimeter reading 8000 ft MSL, which is a thousand foot altitude loss from the point (9000 ft) at which I was saying to myself, "now recover."

With the commonly accepted method of recovering from a flat spin, I conducted the same series of spins from the same altitude. The best results that I was ever able to achieve with that method was a 1100 foot altitude loss. Another thing that has come to my attention regarding the conventional method of recovery which uses full aileron in the direction of the spin before initiating a normal spin recovery is that when the ailerons are still deflected when the aircraft recovers from the spin, it will continue to rotate in the form of roll until the ailerons are neutralized. This could easily be mistaken for a continued spin and would result in a considerable altitude loss until the pilot realized what was happening, because the airspeed would be increasing rapidly.

The pilot must also realize that after a prolonged spin, he will be quite dizzy as he recovers to straight and level flight and must rely completely on visual cues rather than what he feels like he is doing because for a few moments after rotation stops, his inner ear semi-circular canals will still be in motion.

When using the method of recovery that I teach in this course, there is no tendency for the aircraft to continue "rolling" after recovery. Because with your hand completely off the stick when recovery takes place, the slight amount of "in spin" aileron that you get when you release the stick while the aircraft is spinning will automatically be eliminated when the stick snaps to the true neutral position as the stall breaks and the aircraft recovers from the spin.

I know the answer to the question has been long and drawn out, but I wanted to make a few points clear while I still had my train of thought going. You have to realize that writing is completely out of my usual element, so bear with me.

In conclusion, I would like to say that, based on my tests, I have found that this method of hands-off, opposite-rudder method of spin recovery will consistently enable you to recover from any spin with less altitude loss than any other means of recovery. It also has the added advantages of being simple, and easy to remember and use. It does not require to first recognize what kind of spin you are in.

Whether the spin is upright or inverted, left or right, flat, or otherwise, the recovery is the same. After cutting power and taking his hand off the stick, the pilot has only two choices to make, either left or right rudder. The out-spin rudder can easily be determined by the pressure. The out-spin rudder is the one that is the hardest to push! The pilot can also determine which rudder to push very easily by looking straight down the engine cowling to determine the true direction of yaw. He will then

instinctly use the correct rudder because he will not be confused by the visual mis-cues caused by looking behind the spin axis if the spin is an inverted spin.

- (Q). "Have you tried this method with inverted and upright flat spins in the Pitts S-1-S?"
- (A). Yes. The results were the same as with all of the other models of the Pitts and Eagles.
- (Q). "Just what do you mean by the term 'Accelerated Spin'?"
- (A). These were described in detail in part one of this series of articles which was printed in the February '84 issue of SPORT AEROBATICS. I have never found this type of spin referred to in any of the aircraft flight manuals or texts that I have studied. I use the term "accelerated spin" to describe the type of spin that will result from the pilot relaxing the elevator pressure and going slowly toward the neutral position while the aircraft is spinning. The rate of rotation will increase dramatically. I use this term for want of something better to call them. After a pilot has been in this type of spin, there will be no doubt in his mind as to why I chose to refer to them as accelerated spins!
- (Q). "Can you provide the names and phone numbers of your most recent graduates of this training?"
- (A). Yes! I will be happy to do so.
- (Q). "When can I come and take this training?"
- (A). I work on an appointment basis with a first come, first serve basis. The response to this method has been overwhelming, but I will do my best to accommodate anyone who wants to take the course. You will need to plan on about three days — flying two sessions for two days and one session on the other day. We can cover the complete course in five lessons, plus the ground briefings and de-briefings.
- (Q). "How can I help you in spreading the word of this and getting this more widely known and accepted?"
- (A). By telling all of your friends and associates who fly this type of aircraft and by writing letters to the editors of the various aviation magazines. Encourage those pilots who have not had formal training in spins to do so.

Before I close, I would like to say that during the past few months, I have had the pleasure and good fortune of having many pleasant, interesting and informative conversations with Frank Christensen of Hollister, California. Frank has given us the Christen Eagle series of aircraft and now owns all production rights to the Pitts series of aircraft. He has been very helpful, cooperative, and supportive of my efforts with this spin research and flight testing. He is a man that is very concerned about the safety of the people that fly this type of aircraft. His attention to detail and knowledge of his products and aircraft never ceases to amaze me.

Frank's spin manual for the Eagle II series of aircraft, which was re-printed in the June '82 issue of SPORT AEROBATICS, was the most thorough and informative manual on spins for the Pitts and Eagle type aircraft that has been printed to this date. It represented all of the knowledge that was known at that time about spins in this type aircraft. Much has been learned since that printing.

Although every single word in that manual was true and every procedure that was described would work exactly as described, some of it was unnecessarily complicated and confusing to most pilots. I have had the pleas-

ure of working with Frank on the revisions and updates to this manual to include this new concept of emergency spin recovery. The new manuals will be much less complicated and easier to understand.

For those of you who are still a little bit skeptical about the reliability of this "new" method of power-off, hands-off, opposite-rudder spin recovery, I have a little demonstration which you can do yourself that will convince you of how well it works. It is as follows!

If you fly any model of the Pitts or Eagle aircraft, take it up to a safe altitude (5000 AGL), and place the aircraft in a normal, upright spin in either direction. Power completely off, stick full back and full right or left rudder.

After the aircraft has completed one revolution of rotation with the stick full back, begin to slowly relax the back pressure and go slowly toward the neutral position of the elevator with the rudder pressure still full deflection. You will immediately notice a dramatic increase in the rate of rotation. Now release the stick completely and you will see that the stick will remain in the aft position and the aircraft will continue to spin all on its own.

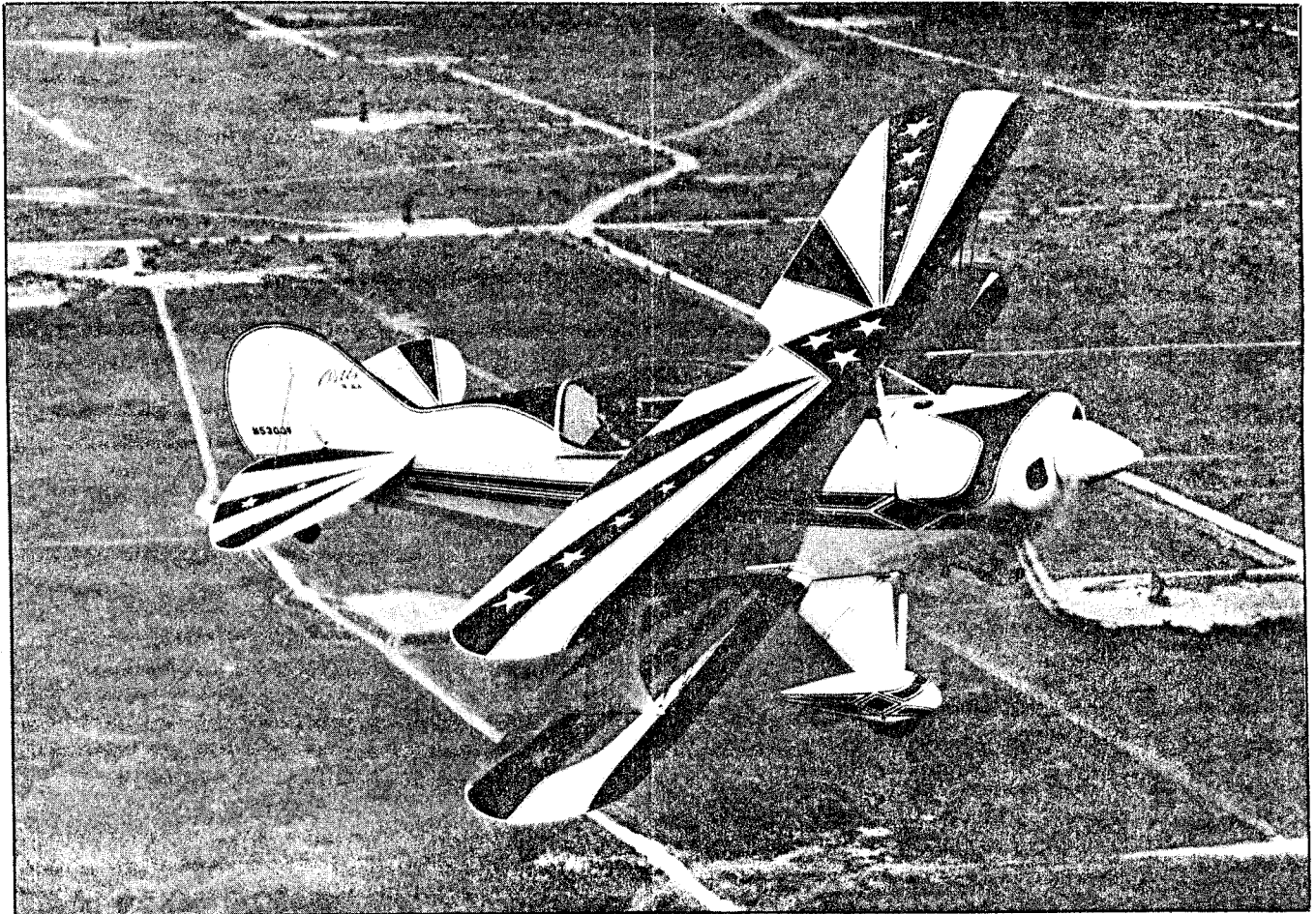
Now, with your hand completely off the stick apply full opposite rudder and you will notice that within about one-half to three-quarters of a turn, the spin will stop abruptly; and the stick will move right to the true, neutral position of the elevator as if by magic. You are out of the spin! All that remains is to neutralize the rudders and take hold of the stick and pull out of the dive to straight and level.

After this little demonstration, most pilots are convinced of the reliability of this method of emergency spin recovery. I can't help but wonder why we have not discovered it before! If widely-known and accepted, this simple, foolproof method of spin recovery will save a lot of lives in the future. I personally did not discover it until I read Eric's article on spins in the November 1981 issue of SPORT AEROBATICS. It was after several months of testing that I would believe in it and trust it to get me out of **any** spin.

After about eighteen months of intensive spin testing, I finally convinced myself that this wonderful method of spin recovery would indeed enable me to recover from absolutely **any** spin that I could produce in a Pitts or Eagle type aircraft. I only hope that none of our readers will be as hard headed as I was! Believe me, it really is **that** simple!

Next month, I am going to share with you a method of spin prevention that I have used to good advantage during the past few years. It has kept me out of trouble on several occasions and I think you will find it helpful. I am also going to describe in detail, the content of each lesson in the advanced spin training course that I am presently teaching.

In the meantime, I encourage you to go out and try the little demonstration that I described above. I think you will find it very interesting.



(Photo by Mahan & Associates, Inc. Photography of Odessa, TX)

Gene Beggs of Midland, Texas, skims through the air over a scarcely populated area in one of many types of planes (here a Pitts S2A) in which he has tested his "foolproof" method of spin recovery. An aerobatic instructor at Midland Regional Air Terminal, Beggs is also a member of the International Aerobatic Club (IAC) and a member of the 1984 U.S. World Aerobatic Team. He will be competing with the team in August at the World Championships in Hungary.