APRIL 2008

Sport Aerobatics

OFFICIAL MAGAZINE OF THE INTERNATIO BATIC CLUB

- Chapter Liability
- Smooth Technique Tips
- Winning Secrets

Two Brothers, Four Wings

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Paul and Duayne Muhle pilot their Pitts over AirVenture 2007. (Photo by Mike Steineke)

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Judson Bartlett

LETTER from the EDITOR

by Scott Westover

"Smooth Awards" are getting attention

In the February issue of *Sport Aerobatics* we featured an introduction to the Smooth Awards program. This is an IAC recognition program that allows members to earn formal designations in each category. It's not a new idea, but it is one of the latest places where the International Aerobatic Club has invested resources to update our offerings and programs. As is often the case, with an updated package and some renewed excitement, a proven program gets a second look from those who have seen it before and a long first look from people who take notice for the first time.

For some pilots, the Smooth Awards are an alternative to contest flying that allows them to be competitive with themselves as they work toward a specific goal. Rich Stowell was kind enough to offer an introduction to the program and also to author a series of instructional pieces to prepare *Sport Aerobatic* reader-fliers to earn the Primary Smooth Award. The first installment of flying tips to help pilots earn their award appears in this issue of the magazine.

I can always tell when the magazine begins to arrive because the e-mails start rolling in. When the February issue began to invade living rooms and hangars, readers were quick to send me some of their thoughts about the Smooth Awards program. While I always enjoy hearing from our members, what struck me about these responses was that they were positive without exception. The common sentiment was, "This is a great way for me to get involved and fly better." As I mentioned in the piece that introduced the program, the Smooth Awards provide an opportunity to fly with a purpose, and it appears that many IAC members will rise to the challenge this season.

If you or a friend has been thinking about taking aerobatic instruction from a qualified instructor, Rich's article and the Smooth Awards are great conversation starters. Bring a copy of this magazine to the conversation with a potential certificated flight instructor. That way the instructor can see what you want to accomplish and offer ideas about how to get you there. This is an opportunity to talk about your flying goals and to get a sense of how that particular instructor would approach achieving them.

As our members (perhaps you) work toward the goal of flying for recognition, I hope they do not keep their aspirations secret. The IAC community is full of people who want to share excellent advice and instruction, and when a pilot makes it known that he or she is working toward a specific goal, people will come forward to help that person reach it. That has always been what impresses me most about the aerobatic community. It is not about chasing trophies—or even patches and pins—it is about sharing a passion for extreme excitement and personal challenge with other people who "get it."

Please continue to let us know what you think about your magazine and the programs and stories that fill its pages. It helps us strengthen the publication and the sport…and keeps you looking forward to a monthly mailbox fly-in. Fly safely!

***Sport Aerobatics* is your magazine. To submit news, comments, articles, or article ideas, please send them to: IAC, P.O. Box 3086, Oshkosh, WI 54903-3086; or email them to *tookyflyer@tds.net*.**

PRESIDENT'S PAGE

by Vicki Cruse • IAC 22968
E-mail: vcruse@earthlink.net

The IAC Aircraft Insurance Plan

Coverage, technology, & customer service—The dawn of a new day

One of the missions of the IAC administration in the last two and a half years has been to remain open to member feedback and to use the data constructively. We've surveyed the membership on more than one occasion, with some surveys being more general and others being very specific. One of the most important surveys IAC has conducted recently centered on the IAC Aircraft Insurance Plan. In late 2007, we conducted a survey of pilots who competed in 2005 or 2006, asking a variety of questions concerning aircraft insurance. We singled out competition pilots since we know the majority own their aircraft.

We sent the survey to 515 IAC members, and 148 of you responded. The results told us a lot about this program. The most revealing piece of information was that, incredibly, almost 67 percent of you were not using the IAC plan. Among the reasons given were that the cost was too high, members were happy with the insurance they currently had through another company, customer service wasn't satisfactory, and the program didn't offer the coverage members wanted. Of those using the plan, 58 percent were satisfied, 25 percent were unsatisfied, and the remaining 17 percent were neither satisfied nor unsatisfied. This information, coupled with the fact that most of you weren't using the plan, told us there was room for improvement. We asked you what additional services and products you would like offered through the IAC Aircraft Insurance Plan. Your top priorities included coverage to fly a friend's aircraft, flight-school coverage, radial engine aircraft coverage, coverage for instruction, rental insurance, and coverage for aircraft outside the United States.

Armed with this information, IAC went looking for a program that would provide everything the IAC needed in an aircraft insurance plan (competition, air shows, radial engines, dual instruction, etc.). Our primary goal was to find an insurance carrier that offered one-stop shopping for the coverages you wanted, not separate policies and insurance underwriters for each type of coverage. We also needed a company that truly understood customer service, including easy access to quotes. We believe we have found all of these things in Northwest Insurance Group Inc., of Hillsboro, Oregon, which has partnered with Berkley Aviation LLC of Santa Barbara, California.

Northwest Insurance Group has been in business since 1993 and has an excellent reputation in the aviation insurance industry. The company is also an experienced aviation broker to competition and air show pilots, so it truly understands our needs as IAC members. Berkley Aviation is an extremely progressive underwriter that is backed by the exceptional financial security of its parent company, W.R. Berkley Corporation. Berkley Aviation underwrites insurance internationally for the airline industry, industrial helicopters, corporate aviation, and other premium segments of the aviation insurance industry. The partnership with IAC officially began on April 1 and was announced at Sun 'n Fun.

The technology provided by Berkley Aviation is like nothing the aviation insurance consumer has ever seen. IAC members can go to a website using their member numbers and basic information. Here they can fill out an electronic application indicating their flight experience and aircraft type. They can also choose the coverage they want: liability, hull, air show, dual instruction, etc. As these choices are filled in, the coverage premium will appear at the bottom of the page. If you don't know what coverage you want, Northwest is a phone call away. If you are happy with the coverage you've chosen, a click of a button will request the binding of your insurance policy, and you can even pay online with a credit card. Your policy will be available within two days online, and a paper package will be sent to you inside of two weeks.

Your policy will remain online in case you find yourself needing a copy of it or your certificate of insurance for a contest. If you forget this document, simply access it online and download or print it for the registrar at the contest. Berkley will also be adding features to the application that will trigger a call to you if you try to over insure or under insure your aircraft.

In the coming months, Ryan Birr, head of Northwest Insurance Group, will be providing additional information on the program in *Sport Aerobatics*, including available coverages and features. IAC has asked him to address a number of recurring myths about coverage and claims, such as misconceptions about adding people to your insurance plan. This information will be beneficial to all members.

In the 11 years that I have been an IAC member, this is the third iteration of our aircraft insurance program. This time I think we finally have all the elements to make it a true *program* designed to meet the specific needs of IAC members. IAC will be on the cutting edge of insurance technology, thanks to the innovation of Berkley Aviation. We look forward to a long and successful relationship.

NEWSBRIEFS

Two Earn Master CFI-Aerobatic

The National Association of Flight Instructors (NAFI) and the International Aerobatic Club (IAC) take pride in announcing that Bill Finagin and Gordon Penner have recently earned their Master CFI-Aerobatic accreditations.

Bill owns Dent-Air at Cambridge Airport (CGE) where he specializes in spin, aerobatic, and emergency recovery training. A retired U.S. Navy officer and dentist, he is also an air show competency evaluator as well as an air show performer, contestant, and judge.

Gordon is an independent flight instructor specializing in aerobatic, tailwheel, and glider instruction at Stewart Airfield (40I) and Caesar Creek Gliderport (2OH9). He also serves as president of the International Aerobatic Club's Chapter 34 in Waynesville, Ohio.

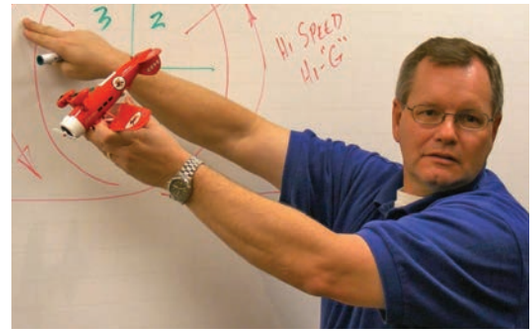
To put this achievement in perspective, there are approximately 91,000 CFIs in the United States. Fewer than 600 of them have achieved this distinction thus far. The last 13 national Flight Instructors of the Year were Master CFIs. In the words of former FAA Administrator Marion Blakey, "The flight instructor is where the rubber meets the runway. The Master Instructor accreditation singles out the best that the right seat has to offer."

To publicly recognize these individuals and their noteworthy accomplishments, NAFI will be hosting its Meet the Masters breakfasts, to which Bill and Gordon will be invited, during EAA AirVenture Oshkosh and the Sun 'n Fun Fly-In at Lakeland, Florida. Any support will be appreciated.

For more information about the Master Instructor program visit *www.NAFIMasters.org*.

Courtesy NAFI

Bill Finagin, MCFI-A



Courtesy NAFI

Gordon Penner, MCFI-A

Nominations Sought for IAC Nonflying Awards

Each year at the U.S. Nationals, the IAC presents four special nonflying awards. The nomination period is now open for IAC members to submit nominations for the Robert L. Heuer Judges Award (judging excellence), the Frank Price Cup (outstanding individual in aerobatics), the Harold E. Neumann Award (excellence as a chief judge), and the Kathy Jaffe Volunteer Award. These four prestigious awards will be presented at the U.S. Nationals awards banquet. Nominations are based on the significant contribution of individuals for their achievements according to the criteria of the award in the previous contest year (2007).

A complete history of each award may be found on the IAC website (*www.IAC.org/trophies/nonflying_awards.html*), along with the list of past recipients, pictures of the master trophies, and the nomination petition. Nominations are welcome from either individual members or collectively as a chapter. Chapter meetings are good places to discuss potential candidates. The nomination deadline is June 15. For more information, please visit the above website or contact awards chairman Loren Smith at *LS@IAC78.org*.

Bochnovic Crowned 2007 Collegiate Champion

The 2007 Collegiate National Champion in the IAC Collegiate Program is Andrew Bochnovic from Southern Illinois University (SIU) with a three-contest percentage of 86.87 percent. The 2007 Collegiate National Championship Team Award goes to SIU with an overall score of 85.68 percent. This is SIU's sixth win since the program began in 2001. Embry-Riddle Aeronautical University, Daytona Beach, Florida, is the only team to steal the award from SIU, winning in 2003. Claiming second place in the 2007 team competition is UND with 82.56 percent. Third place goes to USAFA with 79.01 percent. Winners receive Eagle Collegiate Team Awards sponsored by Klein Tools.

The purpose of the Eagle Collegiate National Championship Team Award is to recognize the highest-scoring U.S. collegiate team. The Eagle Individual Collegiate National Champion Award recognizes the top three highest-scoring individual collegiate competitors in the Sportsman or higher category. For complete IAC Collegiate Program results and program rules, visit *www.IAC.org/programs/collegiate_program.html*.

IAC Announces Official Results of the 2007 Regional Series

The complete final results for the 2007 regional series competition are available at *www.IAC.org*. Forty-two competitors out of 65 total series participants received awards. Fifty-two pilots successfully competed at the three or more contests needed to qualify for the series in their respective regions. To be eligible, a pilot must fly at least three contests during the year (two for the Northwest Region due to unavailability of contest sites) and one contest may include the U.S. Nationals. If more than three contests are flown, the highest scores are used to arrive at each participant's total percentage. First-, second-, and third-place trophies are awarded to qualified participants in each category (Primary-Unlimited) in each of the six regions.

NAME	CATEGORY	REGION	PP
Joe Haycraft	Sportsman	Mid-America	89.87
Robert Butts	Intermediate	Mid-America	83.14
Ashley Messenger	Advanced	Mid-America	77.32
Hugo Ritzenthaler	Unlimited	Mid-America	74.62
Adam Cope	Sportsman	Northeast	80.25
Scott Francis	Intermediate	Northeast	83.48
William Allen	Advanced	Northeast	83.07
William Finagin	Sportsman	Northwest	82.16
John Smutny	Intermediate	Northwest	73.04
Doug Sowder	Advanced	Northwest	76.92
Gregory Howard	Unlimited	Northwest	82.23
A.J. Stockhausen	Sportsman	South Central	85.76
William Denton	Intermediate	South Central	87.92
Joe Haycraft	Sportsman	Southeast	88.05
Erica Hoagland	Intermediate	Southeast	81.09
Nick Galyon	Advanced	Southeast	83.19
Michael Montgomery	Sportsman	Southwest	85.89
Randy Owens	Intermediate	Southwest	85.79
Malcolm Pond	Advanced	Southwest	82.32
Todd Whitmer	Unlimited	Southwest	79.36

Editor's Note: The second of a four part series that aids preparation for the Primary Smooth Award flight. Thanks again Rich! – SW

Rich Stowell, MCFI-A

Part 1 in the Primary Smooth miniseries proved just how accessible and fulfilling this achievement award can be. High-end aerobatic airplanes and lots of flying experience are not necessary. All that's required is a commitment to learn four maneuvers to standards set forth in the IAC Official Contest Rules. We've previously discussed precision and discipline as they relate to competition aerobatics. These two mainstays will take on even more significance now. Our maneuvers, for instance, will soon be judged on the precision of specific lines, angles, and headings. Consistency of roll rates will be an issue now, too.

As for discipline, each of the maneuvers requires focusing on the correct control inputs at the appropriate times. An odd new discipline must be developed as well: not correcting errors. This is completely contrary to everything pilots have been taught to do in an airplane, but once a deviation has occurred during the execution of one of these maneuvers, you shouldn't fix it. Acquiring this peculiar form of self-control offers several advantages. When practicing, for example, not automatically fixing a deviation allows you to see exactly how far off you were from the target line, angle, or heading. With this valuable information you can diagnose why the error occurred in the first place and adjust accordingly during the next attempt. Overall precision will improve as a result. When being judged, correcting a mistake telegraphs exactly how far off you were, showing the judge precisely how many points to subtract from your score. Although judges generally are nice folks, it's in their job description to take points away from you for every little fault. Don't make their job easier by revealing the full extent of your errors!

Getting to Work on the First Two Maneuvers

Maneuver 1: The Turn

The rules insist that banking and turning actions be distinctly separate from each other. The bank angle must be at least 60 degrees and must remain constant once it has been set. Roll rates shouldn't vary when banking into and out of the turn. Altitude and turn rate must not fluctuate. And the turn must end precisely 270 degrees from the starting heading. Deviations from these standards will result in your score being downgraded.

The turn happens to be the only maneuver where the pilot has discretion when setting an angle. Angles in other judged maneuvers are clearly specified: Vertical lines must be vertical, 45-degree lines must be 45 degrees, and point rolls must hit their target bank angles. But as long as the minimum requirement of 60 degrees is met, you have some leeway when choosing the bank angle for your turn. This might seem to be to your benefit, but it really is not. Rule writers and judges are hoping you'll take the bait and crank the airplane into the steepest turn possible. Don't fall for this trap! More is not better. You don't get any extra credit for exceeding 60 degrees; however, your workload and the potential for botching the turn will rise exponentially with increasing bank angle.

Instead, let's calibrate ourselves to the bank angle that requires a steady 2-1/2*g* pull to sustain level flight. You'll be banked about 66 degrees in this case—10 percent beyond the qualifying angle, clearly satisfying the criterion.

The sequence of control movements for the entire maneuver goes like this: Roll. Stop! Turn. Stop! Roll. Stop! The maneuver has two key reference points. One is the starting heading; the other is the exit heading. For a left turn, select the exit point by sighting down the right wing before you start and vice versa for a right turn.

"Roll" means apply coordinated aileron and rudder inputs. Start the maneuver with smooth but crisp control actions—left aileron and left rudder, or right aileron and right rudder. Likewise, finish the maneuver on your exit point with equally crisp aileron and rudder movements. Don't be shy here. We want the rolling to be obvious; thus, make the entry and exit bank changes as rapidly as possible. Focus on the aileron input, however, even though rudder is also being applied.

Rich Stowell, MCFI-A

"Stop" means to instantly release the applied input(s). At the start of the maneuver, for example, snap both the aileron and rudder to neutral the instant you hit the target bank angle. Upon reaching the exit heading later in the turn, unload the back elevator pressure all at once to glue the nose of the airplane to your reference point. And upon returning to wings-level flight at the end of the maneuver, be sure to snap the aileron and rudder to neutral again. The stops in the turn sequence provide obvious separation between the other actions. In fact, pausing for a beat before applying the next action makes for a snappier presentation.

Sight picture as a Decathlon approaches 60 degrees of bank.

"Turn" means pull the nose around the horizon to the exit heading. Initiate the heading change with a smooth but positive pull straight back on the stick/yoke. Watch the nose of the airplane traverse the horizon as 2-1/2*g* continuously presses you into your seat.

Be on the lookout for these problem areas: dragging the inside rudder during the turn; leaning your upper body away from the turn; allowing the bank to increase during the turn; not getting a clean, distinct stop between roll and turn inputs; reverting to the normal flying habit of rolling out of the turn without first pushing forward to stop on heading; and underutilizing the aileron and/or rudder when rolling out.

Maneuver 2: The Spin

The rules require that spin entry occur from level flight, and the entry must be characterized by a perceptible, nose-down pitch change. Rotation must stop precisely on the starting heading as well. Upon exiting the spin, a vertical line of perceptible length must be established prior to returning to level flight. Deviations, of course, will be downgraded.

Last year we devoted an entire article not only to the mechanics of the normal, upright spin, but also to the visual, discipline, and precision aspects (see "Normal Upright Spins," *Sport Aerobatics*, April 2007). We'll recap key points from that article as we proceed, but the caveats and warnings made then apply equally now. We'll modify our entry and exit to satisfy the judging criteria as well. Even so, the basic sequencing of rudder and elevator movements remains the same.

Similar to the turn, recall that our one-turn spin has two key ground references—the first one representing the entry/exit heading and the other representing the lead point where we'll apply opposite rudder. The lead point varies depending on the airplane and how it's loaded. For example, opposite rudder could be needed as early as 180 degrees prior to the exit heading in a Zlin 242L, or 90 degrees ahead in a Decathlon, or just 20-odd degrees ahead in an Aerobat. Be sure to choose your key points before every spin. The lead point in particular should be a prominent ground object very close to the airplane.

With the power idle and the ailerons neutral, you've now got three things to do: (1) hold altitude, (2) bleed off airspeed, and (3) stay on heading with the wings level. You must be proactive with the elevator and rudder without hurrying. Move the elevator control progressively aft while ever so lightly wiggling the rudder to keep the wings level and the nose perfectly on heading. It's important to point out that spin entry "from level flight" does not mean from a level pitch attitude. The pitch attitude has to change as you decelerate toward the wings-level stall.

We have to enter our achievement award spin at the stall break. Hence, the instant the nose of the airplane pitches downward, briskly and fully push the rudder pedal to the firewall. Immediately pin the elevator control against its aft stop, too, and hold these control positions firmly in place. Keep your head locked forward. Project your vision beyond the nose to the ground below and expect to see your lead point twist into view.

Just as the nose slashes through the lead point, promptly swing the rudder fully opposite and hold it. Don't move the elevator control. Keep the stick/yoke firmly aft until the nose reaches the exit heading. The judging criteria permit us to stop the spin and establish the vertical downline as two separate actions. However, we'll combine this into one action for several reasons, including:

1. The transition from spin to downline shows better.

2. As soon as the spin stops, airspeed, trim pressure, and the

Rule writers and judges are hoping you'll take the bait and crank the airplane into the steepest turn possible. Don't fall for this trap! More is not better.

airplane's natural tendency to seek level flight all increase. Consequently, delay or tentativeness in the push makes it more difficult to lock onto the vertical downline. The potential is greater as well for losing more altitude and attaining higher exit speeds and *g*-loads.

3. We're making it easier for the judge to see where the downline actually begins. (That's a good thing.)

Remember, you're still holding full opposite rudder. The moment the nose hits the exit heading, your brain must now command your body to move the stick/yoke to the vertical downline position. The elevator input during a normal spin recovery typically ranges from minimal forward displacement to as far forward as the neutral position. The attitude during a normal recovery is also on the order of 60 to 70 degrees nose-down. In this spin, though, we're not only moving the elevator control to terminate rotation, but also to increase our nose-down attitude another 20 to 30 degrees. You must move the stick/yoke from its full aft position to a spot somewhere forward of neutral. And you must accomplish this feat in the blink of an eye.

Later in your aerobatic career, you might learn to steal a quick glance down the wing as a self-check of the downline's verticality. But for the Primary award, we'll establish the vertical by learning precise elevator control placement. You definitely won't be pushing the stick/yoke all the way forward here. Nevertheless, you should feel yourself lift out of your seat a little when you've reached the correct location. If not, you'll be short of the vertical. This is where dual comes in as your instructor can help you zero in on the vertical down control position. Repeated practice then develops the muscle memory to hit that mark consistently.

Recall from the normal spin that once rotation stops we must actively neutralize the rudder to prevent the nose from swinging off heading. The same applies when exiting the Primary Smooth spin, except now we need to neutralize the rudder as (or just before) the elevator control reaches the vertical down position. Positively move the rudder to neutral and

Primary Smooth Turn

TURN ENTRY: With the area clear & reference points chosen:
Roll. Crisply apply aileron and coordinating rudder to roll to about 66 degrees of bank.
Stop. Snap the aileron and rudder back to neutral.
Turn. Smoothly pull 2-1/2*g* all the way to the exit heading.

TURN EXIT:
Stop. Push forward to lock the nose onto your exit point.
Roll. Crisply apply aileron and coordinating rudder to level the wings.
Stop. Snap the aileron and rudder back to neutral.

The normal spin recovery attitude can be quite shallow; push to establish the required vertical downline after the spin.

prevent the nose from yawing off heading as the airplane accelerates on the downline. The moment you're stabilized on the downline, count "one-one thousand, two-one thousand" to draw the line, then pull smoothly to level flight.

Be on the lookout for these problem areas: climbing or sinking prior to spin entry; too much delay between sensing the stall break and applying spin entry inputs; moving your head or leaning your body during the spin; correcting to the exit heading with ailerons; neutralizing the opposite rudder too soon, or forgetting to neutralize it altogether when setting the downline; consistently being short of the vertical (judge's parlance: "positive down"); and rushing to level flight/forgetting to count during the downline.

As always, get some instruction before attempting these maneuvers on your own, especially since we've modified the normal spin to meet judging standards. Visualize the steps in each maneuver before taking to the air. It's not a bad idea to take along an annotated sequence card on your flights either. Clear the area and choose your reference points before starting each maneuver. Practice your turns and spins in both directions and give yourself plenty of altitude to work with.

We'll map out the remaining Primary Smooth maneuvers next time.

Rich Stowell is a Master Instructor-Aerobatics and author of *The Light Airplane Pilot's Guide to Stall/Spin Awareness*. E-mail your thoughts and ideas to *rich@richstowell.com*.

Just as the nose slashes through the lead point, promptly swing the rudder fully opposite and hold it.

Primary Smooth Spin

Pre-Spin (area clear and reference points chosen):

- Power idle.
- Ailerons neutral.
- Hold altitude, heading, and wings-level; steadily pull to the stall.

Spin Entry (instant the nose pitches downward):

- Rudder briskly full in.
- Elevator rapidly full aft.
- Hold these inputs!

Spin Exit (at the lead point):

- Rudder briskly full opposite and hold.
- Elevator continue to hold full aft.

On the Exit Heading:

- Elevator straight forward to the vertical down position.
- Rudder actively neutralized.

Post-Spin:

- Downline, count "one-one thousand, two-one thousand."
- Smoothly pull about 3*g* to level flight.
- Stop. Push to set level flight, add power.

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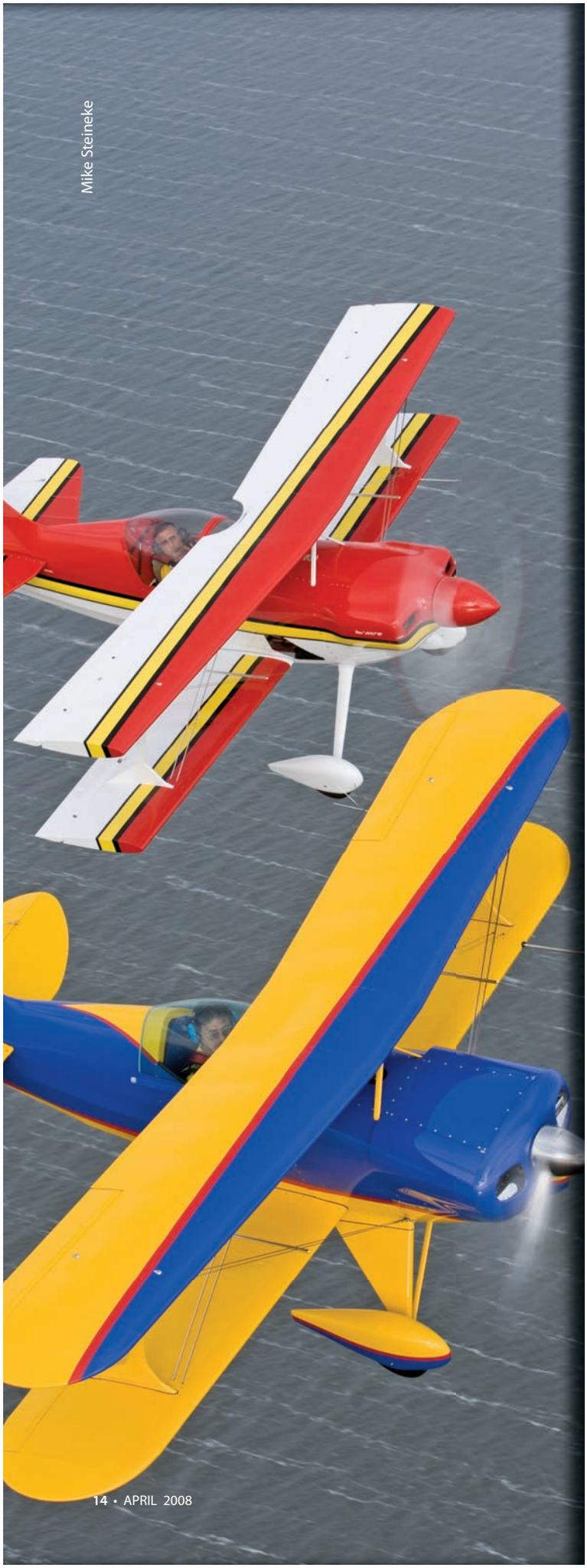
A visit with Duayne & Paul Muhle



Seeing the Muhle brothers unpack themselves from the cockpits of their two small Pitts biplanes conjures up thoughts of an air mattress regaining its shape as it inflates. After watching the duo, it's obvious these two pilots know each other well. Without wasting words and with efficient movements, they help each other maneuver and secure their aircraft. Once the aircraft are situated, their attention turns to unpacking a few personal items, and on this particular trip to Wittman Field, perhaps the most precious cargo is their collection of fresh rags and cleaning supplies. Before wandering off in search of nourishment, both Pitts are shining in the sun and beginning to draw attention from spectators and favor from judges.

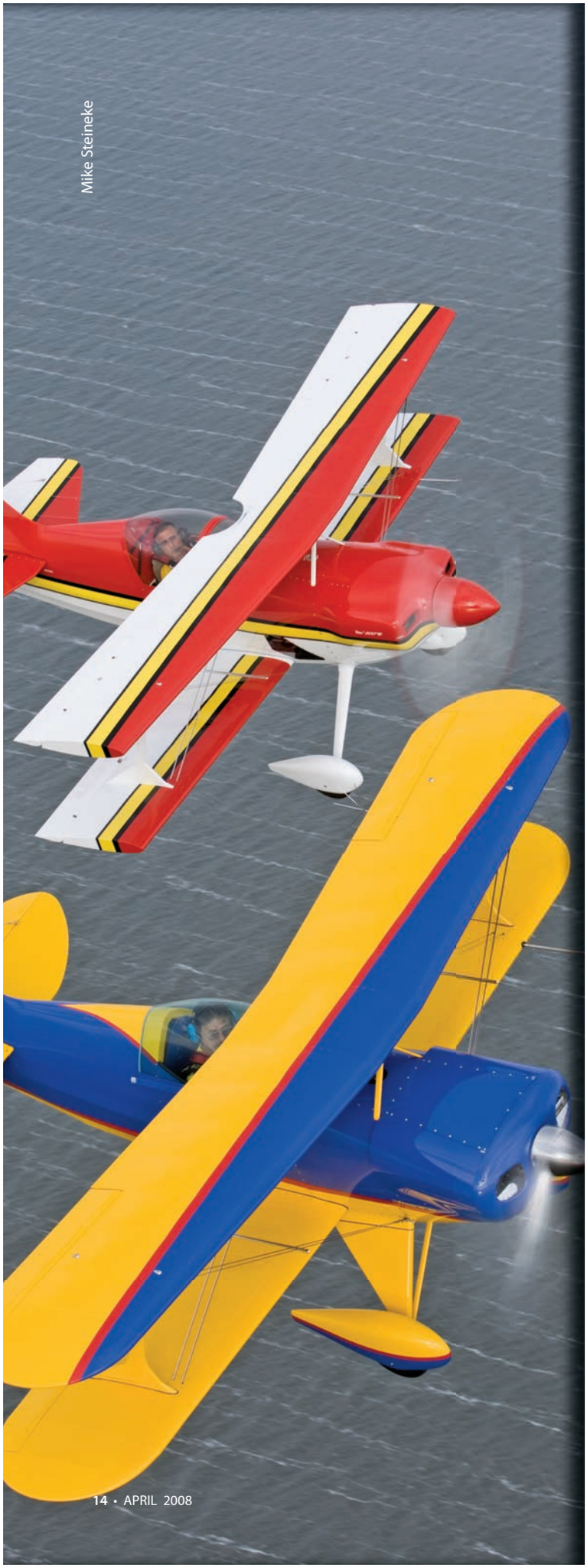
The scene takes place at AirVenture 2007, and the brothers are Paul and Duayne Muhle. Their aircraft are a pair of Pitts S-1Ss. Paul pilots a scratch built bird that grew wings only 43 hours before landing in Wisconsin. Duayne flies one built by Edward Fleet in 1996. Duayne first flew his Pitts to Oshkosh in 2005 and, after that trip, he began the process of improving and rebuilding by adding an electrical system and other accessories. As a builder himself, Duayne honors the original fabricator by keeping his name on the airplane. "That's only fair," Duayne said.

Duayne honed his building skills by overhauling an Acro Sport. That project allowed him to move up to this current mount. He is also building an RV-4, which is structurally complete and which he hopes to debut at AirVenture 2009. Every builder has a part of the airplane that he likes working on the most, and Duayne says his favorite is the fuselage. "It is the most complex, and the combination of wiring and mechanical components keeps things interesting," he said. He also recommends that builders resist the temptation to look at the entire airplane as one daunting project. Instead, he recommends breaking the overall project into several smaller mini-projects. By working on, and completing, the smaller projects, the builder is more likely to remain motivated.

Duayne also offers advice to fellow aviators who are thinking about launching into a building or refurbishment project. "When someone starts thinking about building an airplane, he should ask specific questions about what kind of flying he wants to do," said Duayne. "Is he building for aerobatics, IFR, or long cross-country trips?" He points out that determining what kind of flying you are going to be involved with influences your thinking beyond identifying what kind of airplane you will build. "It makes you think about the kind of flight training you need for the airplane you are building," said Duayne.

Building an airplane and actually flying it are two very different things. For Duayne, the Pitts represented a real step up in performance: "I was surprised and impressed at how much more responsive the Pitts is as compared to the Acro Sport. While the Acro Sport was responsive, the Pitts is another level higher, and landing is more challenging. It is truly the sports car of the air."

An enthusiast with an appreciation of fine craftsmanship can easily see that Paul's Pitts is a plans-built masterpiece. The pilot and the machine clearly fit together. As you get to know Paul, you recognize that his precise manner and appreciation for efficiency have been built



Seeing the Muhle brothers unpack themselves from the cockpits of their two small Pitts biplanes conjures up thoughts of an air mattress regaining its shape as it inflates. After watching the duo, it's obvious these two pilots know each other well. Without wasting words and with efficient movements, they help each other maneuver and secure their aircraft. Once the aircraft are situated, their attention turns to unpacking a few personal items, and on this particular trip to Wittman Field, perhaps the most precious cargo is their collection of fresh rags and cleaning supplies. Before wandering off in search of nourishment, both Pitts are shining in the sun and beginning to draw attention from spectators and favor from judges.

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into the airplane. His Pitts also boasts some design modifications. "I was trying to give the Pitts a more modern look than the original nostalgic look," explained Paul. "The airplane has Super Stinker wings that I modified by clipping the bow of the tip and squaring it off. I changed the tail section by squaring the elevator off, and the rudder is more like that of a One Design. The fuselage is stretched 2 inches on the tail post and 2 inches were added on the motor mount, which incorporates an RV-3 landing gear."

In addition, Paul modified the cockpit area by reclining the seat 5 inches and moving the instrument panel back 2-1/2 inches. He brought the canopy down to the top of the longerons to improve visibility and make it easier getting in and out of the airplane. The canopy was custom-blown by Airplane Plastics, and the engine is an ECI IO-360 built by Central Cylinders that provides better than 200 hp.

Paul's design liberties include performance and common-sense elements that he has come to appreciate in other airplanes, including his One Design. Many IACers will remember that the One Design was created by Dan Rihn in an effort to provide a relatively economical ship for pilots wishing to fly Basic through Advanced aerobatics. Paul currently flies his One Design in Intermediate. "I love it. I'm not good at it, but I enjoy it, and that is what it is all about," he said.

Anyone who has walked the dizzying flightline at Oshkosh would agree that details make the difference. Every airplane and every pilot at AirVenture has a story to share. Champions are those who tell that story without uttering a word. This is the case with the Muhles' Pitts. They reflect the passion of builders who have spent time with their hands on both flight controls and tools—and mastered both. For the trip home, Paul and Duayne were probably wishing they had considered more cargo space. Paul was packing his trophy for Grand Champion Plans Built 2007 and the Gold Lindy Award, and Duayne was looking for space to pack his third-place Lindy Award.

Paul got his start building with an Acro Sport II he completed in 1992, and in 1995 he started to build the One Design. His sense of humor simmers on the surface as he describes the five years it took to build the Pitts. It's clear that good humor and storytelling are prerequisites for membership in the Muhle family. Our conversation drifted easily as stories were shared, and eventually we arrived at the "What is your favorite part of the airplane?" question I had previously asked Duayne. While his brother favors pulling wires and getting the most out of mechanical components, Paul offered that he loves the welding. He reasoned that it was probably because it was new to him and not something he did every day. His professional experience allowed him to work with wood more than metal, and he found the change to be exciting.

"In fact, the wood was my least favorite part on this project," he said. "I think about the wood elements as simple, light spruce cabinets. I am familiar with how to make those, so it was not as much of a challenge."

Even as he confesses that the wood was not his favorite, it is clear that every part of this airplane received Paul's full attention and talent at the appropriate times.

While both brothers are clearly accomplished builders, their enthusiasm covers both fabrication and flying. "My favorite thing about flying the Pitts is that I do not foresee a time when I will ever stop learning to fly it," said Duayne. "It is a very honest airplane and very responsive. It does exactly what you tell it to do. And learning what you are telling it to do is something you learn in aerobatic training." While he is not yet competing, Duayne thinks that he is ready to consider participating in the IAC Smooth Award program.

As our conversation wound down, I got the courage to ask the question that anyone who is reading this article and who has a brother must be thinking: "Has there ever been a time when it would have been easier to not be flying together or to have your brother for a partner in an airplane?" It was the only moment during our conversation that both Muhle smiles disappeared. Without so much as a glance between them, the brothers responded with a short and unified "no." They are far too polite to tell me that it was a stupid question, which it clearly was. "It's great to have a brother to share your interest with," offered Paul as the smile returned. Duayne quickly agreed. "I'm real comfortable flying with Paul," he said. "He's better at it than I am. I guess what I am saying is that if I fly lead, then he can fly closer and we'll still be within our safety envelope." Paul instinctively deflected the compliment. "I'm glad he knows it because I don't," he said with a laugh. The humor had been restored and my question was forgotten.

Listening to these guys is motivational. Both brothers were in their late 20s when they learned to fly in the '70s. They credit their father for their love of flying. Standing next to his airplane, older brother Duayne joked that his father must be the world's oldest student pilot. While their father may not have earned a paper certificate, he clearly earned his wings and helped his sons to earn theirs. By any measure, the elder Muhle is an aviator, and the relationship that he helped his sons to cultivate captures the essence of AirVenture—pure love of flight, respect for outstanding craftsmanship, and a desire to share knowledge and learn from others. Duayne offered some parting advice for those aviators among us who think that the time for acting on their passion has passed them by: "It's never too late. As long as you have your health, go do it."

Mike Steineke

Muhle Aviation Works, LLC

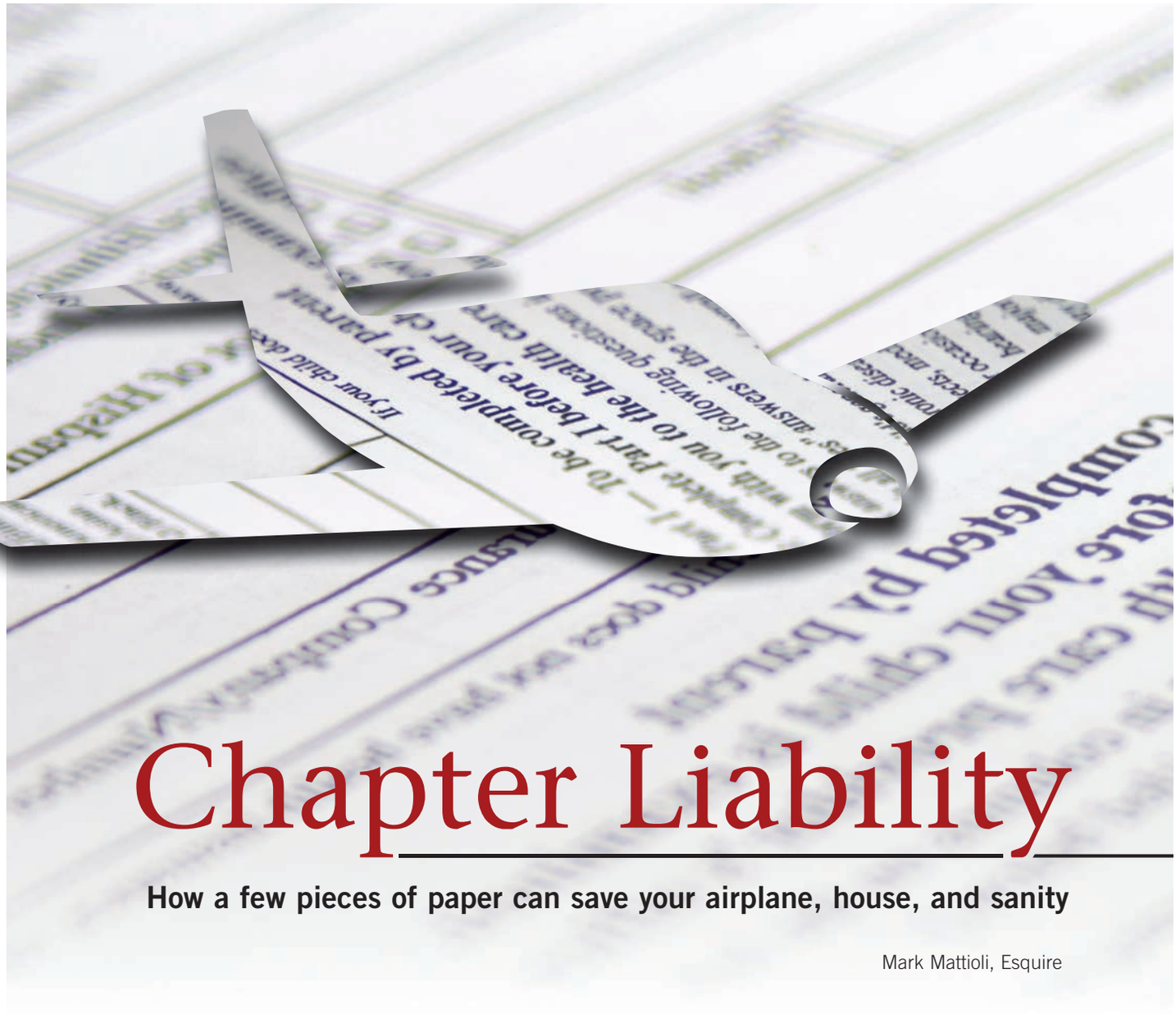
After I put away my notebook at AirVenture, Paul and Duayne and I continued to share stories about airplanes. Eventually we were discussing what the flying future might hold for each of us. Paul had a very clear idea in his head. "I want to start a business that caters to enthusiasts interested in show-quality aircraft," he said. He even had a name for the venture. "Muhle Aviation Works—that's what I'm going to call it."

That conversation came before the results were known for the AirVenture 2007 judging. I remember giving Paul a hard time about making sure his airplane was spotless so that he could win an award and use it in his marketing materials. When this article was getting ready to go to press, the memory of our sun-drenched conversation at AirVenture 2007 seemed far away in snowy New Hampshire, so I called Paul to make sure I had my story straight. I dialed his cell phone, and when he answered I heard the familiar sound of a power tool winding down behind him.

He was talking to me from the world headquarters of, you guessed it, the newly opened Muhle Aviation Works LLC. The company is located at Columbus Municipal Airport (OLU) in Columbus, Nebraska. Paul excitedly gave me the update. "We have a 6,500-square-foot heated hangar with an attached office. We focus on the restoration of different types of aircraft, and I get to pay great attention to the details. It's all about delivering show-quality workmanship." Paul continues to love welding as well as the sheet metal, wood, fabric, and painting work. The hangar is co-owned by Frank Cuba, who runs his own business, Lite Wings, from the facility.

It's no surprise that Paul did exactly what he said he was going to do, and I have a feeling that his craftsmanship will result in several more AirVenture victories. You can write to Muhle Aviation Works at 1442 Bill Babka Drive, Columbus, NE 68601, or contact Paul directly at 402-276-2589. When he picks up, just wait a couple of seconds for the whirring to stop or for the mask to come off so he can take the call. I guarantee the conversation will be worth the wait. Good luck, Paul.


The Spirit of
a kid seeing a Mustang for the first time.
The Spirit of
old friends hanging out under an airplane wing.
The Spirit of
hundreds of thousands of people all loving the same thing.
The Spirit of Aviation.
Oshkosh. 2008. July 28–August 3.
EAA
AirVenture.org



Chapter Liability

How a few pieces of paper can save your airplane, house, and sanity

Mark Mattioli, Esquire

Your worst nightmare as a contest official has come true. The sun is shining and you thought you would fly the entire Advanced Free Program and move to the Intermediate Unknown in time to have a cold one at the bar and relax. That is not to be.

You did not see what happened, but you recall talking to the pilot during lunch. It seems that he heard there was an aerobatic competition at the airport and flew in to watch. During lunch he told you how it had taken him six years to build his aircraft, that during this time his wife became ill and he had to take a year off, but that he was proud of the airplane and named it after his wife. He asked about competition and whether his aircraft would be competitive. You explained to him the various levels of competition and gave him contact information to pursue further training. As always happens, you were called away to attend to some other contest function and did not have an opportunity to say goodbye.

With great excitement and a good bit of adrenaline pumping from watching the Unlimited Free Program and most of the Advanced Free Program, he climbed into his aircraft, added power, pulled it into ground effect, and in an imitation of the takeoffs practiced by various aerobatic aircraft pilots, pulled harder than he usually did—too hard, in fact. The plane stalled and, with insufficient altitude to recover, crashed. The post-impact fire probably took his life.

That night, your head still swimming from the events of the day, and the whole thing still seeming like some very bad dream, you begin to wonder whether there was anything you could have done to prevent this tragedy. You told him that aerobatics should be flown only after receiving appropriate training and that any maneuver close to the ground is extremely dangerous and should be left to air show pilots.

After a year, you receive a knock at the door. The local sheriff has some documents he needs to give you. The

The opinions contained in this article are general, do not constitute legal advice, and cannot be relied upon regarding any specific legal issue that may be faced by a reader. In such cases, the reader is directed to seek appropriate legal advice.

summons advises you that you have 20 days to answer the complaint or a default can be taken against you. The complaint names you personally, as well as your chapter, the airport, and the International Aerobatic Club.

If you are thinking this sounds unrealistic and reads like the final exam question of a law school tort class, understand that reality is often more creative than fiction. The facts of this case are based, loosely, upon an actual incident.

Real-World Scenario

In *Allen v. Experimental Aircraft Association*, the family of the deceased pilot brought suit for wrongful death against the EAA, the airport, and the local chapter that was involved in coordinating a fly-in at Arlington Municipal Airport on July 7, 1999. The theory behind the case was that the defendants were negligent in failing to provide appropriate fire and rescue services during the fly-in. First, let us take a look at the facts contained in the report of the incident by the National Transportation Safety Board.[1]

According to the report, on July 7, 1999, an experimental RV-6A crashed during takeoff from Arlington Municipal Airport, Arlington, Washington. The pilot received fatal injuries when the aircraft was destroyed in a post-impact fire.

On the day of the accident, the pilot landed at Arlington Municipal Airport to attend a fly-in sponsored by the EAA. After landing, he proceeded to the various vendor displays and, according to witnesses, obtained information. He returned to his aircraft that afternoon prior to the time the field was scheduled to be closed for the air show. According to witnesses, the pilot laid a plastic bag containing the information he had accumulated at the fly-in on the aircraft's right seat and quickly prepared his ship for departure. While preflighting the aircraft, he talked with another pilot who also owned an RV-6 series aircraft. According to the NTSB report, this witness reported that, although the pilot was in a hurry to leave before the field was closed, he appeared otherwise normal, and

Kate DeBaun

Minimizing risk before a contest begins allows organizers and pilots to focus on the business at hand.

the other pilot did not observe anything about the mishap aircraft that seemed unusual.

The mishap pilot started the airplane and informed the temporary tower that he wanted to take off to the north using Runway 34. Because of other traffic, the tower advised him that he would need to take off on Runway 16 (to the south). The NTSB report states that the pilot seemed confused about what taxi route to take to get to Runway 16, and he eventually ended up where Runway 34 and 29 nearly meet at the south end of the airfield. As his was the last aircraft waiting to depart, the controller cleared him to back-taxi north on Runway 34 until he was adjacent to Taxiway Bravo 2. After taxiing north on Runway 34 to the Bravo 2 intersection, the pilot performed a 180-degree turn on the runway and started his takeoff roll.

Some witnesses reported that the pilot appeared to apply full power very rapidly and that the engine "coughed" as the power was initially applied, but then seemed to produce smooth, full power. The aircraft performed what was described as a very short takeoff roll and then lifted abruptly into the air. Immediately after leaving the ground, the aircraft entered into a "very steep" climb at "an extreme angle of attack." It apparently continued to climb very steeply until it reached a height that was estimated to be between 75 and 100 feet above the ground. At that point, its airspeed slowed significantly and it slowly began to roll to the left. The nose of the aircraft then pitched down, and it descended into a parallel taxiway near the east side of the runway. Numerous witnesses reported that it sounded like the aircraft's engine was operating at full power from the time the pilot started the takeoff roll until the aircraft hit the ground. After it hit the surface, the aircraft slid across the taxiway and came to rest on a grassy area just off the east side of the taxiway surface.

Almost immediately after sliding off the taxiway, the aircraft burst into flames. As the fire grew, some of the witnesses tried to pull the pilot out of the aircraft while at the same time other bystanders attempted to put the fire out with dry chemical fire extinguishers. The limited capacity of the portable fire extinguishers was not enough to put out the fire, and because the pilot's leg was jammed in the wreckage, witnesses were unable to pull him free before the heat from the fire became too intense for further rescue attempts. Within a minute after the aircraft impacted the ground, the volunteer fire truck arrived at the scene. After pulling out the necessary equipment and completing the hookup of their respirator system, the firefighters applied water on the flaming wreckage. Within a minute to a minute and a half after their arrival, the fire was extinguished.

The pilot had about 137 hours total time and about seven and a half hours in the RV-6, of which about four hours were solo. Although not listed as a factor, two witnesses told the NTSB investigators that they remember seeing the right seat belt had been looped around the front of the right control stick, and the stick seemed to be pulled nearly to the full-back position. One of the witnesses said that he had observed the seat belt in this position as the pilot hurriedly prepared the aircraft for departure just prior to the air show.

The NTSB found the following causes of the accident:

1. Proper Climb Rate - Exceeded - Pilot in Command

2. Airspeed (V_S) - Not Maintained - Pilot in Command

3. Lack of Total Experience in Type of Aircraft - Pilot in Command

4. Stall/Mush - Inadvertent - Pilot In Command

The NTSB concluded that the accident was caused by "the pilot's excessive climb rate, which led to his failure to maintain an airspeed above stalling speed (V_S)." A factor included "the pilot's lack of total experience in the aircraft make and model." The NTSB's conclusions are not admissible in court.[2]

The civil complaint filed on June 11, 2002, alleged that the defendants failed to have proper fire and rescue services on site during the fly-in. Of note, the complaint alleged that after the accident, several bystanders attempted to assist the plaintiff from the aircraft when it started to catch fire, and that although they attempted to put out the fire with hand extinguishers, these extinguishers were soon depleted. The sole fire truck was at the end of the airport property. Due to delays and not having the proper equipment, the firefighters' ability to quickly control the fire was allegedly compromised.

As a business invitee of the fly-in, the complaint contended that

the defendants owed the plaintiff adequate fire and emergency services. The complaint contended further that such fly-ins had a history of accidents. Importantly, the complaint stated that the fly-in was operated as a joint-venture enterprise for which the organizers charged admission to both fly-in participants and the public. In addition, the organizers charged vendors for the ability to set up tents and other promotional displays. The public was invited to the fly-in. A jury found against EAA and the local EAA chapter in the amount of $10.5 million.


Kate DeBaun

Managing risk and protecting yourself in the process is an important part of running a contest.

Corporate Versus Individual Responsibility

Fortunately, in the above circumstance, the plaintiff did not seek to hold individuals responsible for the incident. Rather, the individually incorporated chapter was named. The chapter was thankfully incorporated, and presumably the corporation was in good standing. What does this mean and why is it so important?

All chapters are required by the IAC to be separately incorporated. Indeed, upon chapter renewal, the various officers of the chapters are required to certify to EAA that their corporations are in good standing. In general, this means that the members of the chapter cannot be held individually liable for the acts of the corporation. As to IAC chapters, most would (or should) be incorporated as not-for-profit member entities, with the members taking the place of the shareholders in a for-profit corporation. If properly incorporated, the corporate status of the chapter

Following liability checklists make chapter fly-ins a great way to introduce pilots to aerobatics.

Judges, contest directors and volunteers should have confidence that organizers have taken care of chapter liability issues.

should prevent a potential party from suing the individual members of the chapter. Nevertheless, even if a chapter is incorporated, it must still act as a corporation or it risks having a potential plaintiff "pierce the corporate veil." If a party is able to "pierce the veil," the courts will disregard the corporate status and the parties can seek to hold the individual officers or members directly liable.

A corporate veil may be pierced in several ways, most notably by the treatment of corporate assets as personal assets. State law governs in this case, and each chapter is subject to the vagaries of the state where it is incorporated. Since Chapter 52 is incorporated in New York, we will use New York as our default jurisdiction.

New York law holds that a corporation is a separate legal entity from its owners and subsidiaries, and as such the owners (in our case members) are not liable for the torts (wrong acts) committed by the corporation. Indeed, this principle was set forth by the late Justice Benjamin Cardozo in 1926, who is to many the Leo Loudenslager of the legal world. The above holds true provided that the corporation is not a "decoy or a blind," so long as it possessed more than "unsubstantial or minimal assets," so long as it was actually operated as a corporation, and so long as its purpose was not to work a "fraud upon the law."[3] Let us explore this in a little more detail.

First, the corporation must not merely be the "alter ego" of some other corporation or of an individual. This is not usually a problem with most IAC chapters. Scenarios under which this might become a problem would be if a flight school creates an IAC chapter and there is little distinguishing between the chapter and the flight school. That is, for all intents and purposes the chapter is the flight school and the flight school is the chapter. This requires more than a mere association or close working relationship between the school and the chapter. Indicia of such an interrelationship would be the commingling of funds and absolute control over the chapter by the flight school. Nevertheless, there must be complete control and domination over the corporation. This test is easy to state, but it is quite difficult for a potential plaintiff, at least in New York, to pierce the corporate veil under this argument.

The next issue is whether the corporation is at least "minimally" funded. In looking at the assets of my own chapter, one could initially say that we have minimal assets. Nevertheless, the issue of adequate funding really relates to whether the corporation has the ability to fund the activities it undertakes. For example, if my chapter decided to purchase a brand-new Pitts S-2C to be used by the members and was able to secure financing for the purchase when the chapter was in default, a good argument could be made that the corporation was underfunded for the purpose of purchasing an aircraft since there was no way that the chapter itself could afford such a purchase. In such cases, the financing company would likely seek to hold the individual members liable for the debt.

The final test is whether the corporation is being utilized to perpetrate some fraud upon the law. This is the most ambiguous of the tests and has sometimes been interpreted as a corporation's failing to maintain corporate formalities. It is relatively easy to maintain corporate formalities, and this factor should not be an issue. Nevertheless, it is critically important, and some decisions from the District of Columbia suggest that merely failing to follow corporate formalities can result in the piercing of the corporate veil.[4] Unfortunately, it may be more of an issue than some might think. With regard to my own chapter, until recently we were unsure of our corporate status, and no one had reviewed the articles of incorporation or the bylaws for some time. In my discussion with other chapters, this may not be atypical, as

most chapters are formed because of a passion for flying, not because the chapter members have an insatiable desire to draft corporate documents. Indeed, as discussed above, documenting that your chapter is following corporate formalities is relatively easy. So easy, in fact, that some may wonder whether it raises form over substance. It does, but that is the very point of incorporation. In reality, your bylaws and organizational documents should guide you. You have read your bylaws, haven't you? If not, there is no time like the present to check your documentation.

Before the contest season heats up, it may be worth your time to check your corporate documents:

Articles of Incorporation: These are the documents that create the corporation and state the purpose of the corporation. Most IAC chapters qualify as not-for-profit corporations under the laws of the state where incorporated. Not-for-profit corporations can be member entities (i.e., have members) and nonmember entities. IAC chapters should fit under the member-entity classification. If your chapter is not incorporated as a not-for-profit, you may want to reincorporate.

Annual Statements/Registration: Some states require that corporations file annual registration statements. If your chapter was formed some time ago, the address may be incorrect and the forms may have been mailed to an incorrect address. To change the address, you must file the appropriate paperwork with your state's bureau of corporations.

Bylaws: These are the procedural rules of the organization. They govern who is eligible to become an officer or director, define the duties of the officers and directors, set meetings, and provide for the governance of the organization. EAA has specific rules that govern bylaws. If you are planning to seek recognition as a tax-exempt organization, the bylaws need to contain specific language.

Minutes: These are more than merely notes of meetings. They document that your chapter is following corporate formalities. Some bylaws state that meetings of the members must occur once every year. The minutes are the official records of the meetings.

Resolutions: When the governing body of the chapter takes formal action, it should do so with a formal resolution. Examples of things requiring resolutions would be the appointment of officers. (In Chapter 52, officers are appointed by the board of directors for a one-year term.)

Tax Returns: Your chapter may be required to file tax returns in your state even if you are a not-for-profit corporation. This varies by state. In addition, your chapter may be required to file a federal return, such

Be sure to address liability issues as part of contest planning.

as an IRS Form 990. If you have any questions in this regard, you need to clarify this with an accountant or tax attorney. The documents are not difficult to complete and, for most chapters, may simply be an income statement.

Different states will have different requirements. In addition, each state may differ with regard to what is required to pierce the corporate veil. In some states, such as California, it may be easier to pierce the corporate veil. New York, Michigan, and Nevada are states where it is tougher to pierce the veil. So if it is difficult to pierce the corporate veil, does that mean that individuals cannot have any responsibility and, therefore, cannot be named as parties? The simple answer is no.

While the corporate form protects members, including officers and directors, from liability solely because they are members (or officers and directors), it does not shield them from liability for individual acts. Unfortunately, some aircraft owners are under the belief that corporate ownership of their aircraft will prevent personal liability for their own negligent acts. This is not true, as the individual can still be liable for his or her own actions.[5] The good news, however, is that EAA insurance policies provide coverage for the chapter and its officers, directors, and members. My recommendation is to purchase the maximum amount of coverage possible. As a litigator, when given a choice, it is better to point the finger at a corporation than to blame individuals. Most good plaintiff's attorneys know this and will only seek to hold the individual liable when necessary. If the corporation has sufficient insurance, from a strategic standpoint a plaintiffs' attorney may be less inclined to name the individuals. The cost of the EAA chapter insurance is fairly minimal when compared to the risk. Hence, buying the additional coverage is a must as far as I am concerned.

Chapters may be liable for the actions of non-aerobatic pilots at IAC contests.

Unique airplanes draw crowds. Be ready to manage people on the ramp to limit risk.

Tax-Exempt Status

One more bit of clarification while we are on the topic is what it means to be a not-for-profit corporation. Does this mean that the chapter does not have to pay income tax or file income tax returns? The answer is probably not. While your chapter may be incorporated as a not-for-profit corporation, it does not mean that the IRS will recognize you as such. In most cases, chapters do not have any income and probably operate at a loss, so the issue is moot. However, you still need to determine whether your organization is required to file tax returns and whether it is exempt for purposes of state or federal income taxation.

The most typical tax-exempt organization is a 501(c)(3) charitable organization. While this type of organization has distinct advantages, it does come with some administrative hurdles. First and foremost, a chapter wishing to rely upon this exemption needs to file an application to be recognized as a tax-exempt organization by the IRS. To qualify, the organization must be formed for an exempt purpose. These include charities and educational organizations, but also included in the definition of a 501(c)(3) organization is an organization that fosters national or international amateur sports competitions. Most IAC chapters that hold competitions or sponsor educational safety seminars should fall under this category. To seek acknowledgment from the IRS, the organization needs to file a Form 1023 application for recognition of its tax-exempt status. This application can be filed retroactively

within 27 months of incorporation. If the application is not filed within that time period, there are a variety of tests that look at whether the organization had annual gross receipts of more than $5,000 for the three-year period preceding the application. The rules are technical and are beyond the scope of this article.

The benefits of obtaining IRS Section 501(c)(3) status are that donations are tax-deductible. This does not mean, however, that dues and contest fees are also deductible. There are naturally some conditions. First, the organization must not be organized or operated for the benefit of private interests, and no part of a section 501(c)(3) organization's net earnings may inure to the benefit of any private shareholder or individual. In other words, individual members cannot benefit. In addition, exempt organizations are restricted in their ability to lobby the government or engage in political activity. These are not typically problems for most IAC chapters.

As many of these issues involve a detailed analysis of the individual chapter, you should seek the advice of an individual knowledgeable in these areas to determine whether your organization will qualify. Unfortunately, IAC does not allow chapters to seek recognition under a group exemption. Hence, each chapter must seek independent recognition from the IRS.

You now wake after having read more about liability issues than you had ever cared to read. While this was all a dream, your first order of business is to make sure the chapter in which you are a member is complying with its corporate obligations. Once this is done, I recommend that you go flying. Just don't key the mike as you are cursing the lawyers while taxiing out.

FOOTNOTES

1 NTSB Factual Report, File ID SEA99FA105 (Occurrence Date July 7, 1999).

2 49 U.S.C. §1154(b).

3 *Berkey v. Third Ave. Ry. Co.,* 244 .N.Y. 84, 155 N.E. 58 (1926).

4 *Labadie Coal Co. v. Black,* 672 F.2d 92 (D.C. Cir. 1982).

5 *Village at Camelback Property Owners Ass'n Inc. v. Carr,* 371 Pa. Super 452, 538 A.2d 528 (1938).


Laurie Zaleski, Art-Z Graphics.

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Courtesy Chandy Clanton

IS THERE A SECRET TO WINNING?

CONFIDENCE MAY BE THE KEY TO SUCCESS

Chandy Clanton

The 2007 Nebraska women's volleyball team was the best team in the nation, but it lost in the NCAA Regional. Michelle Kwan, the most decorated figure skater in U.S. history, won nine U.S. championships and five world championships, but she never won an Olympic gold medal. David Duval was the top-ranked professional golfer in the world in 1999 but dropped to 211th on the money list by 2003. Most recently, the world tuned in to watch Tom Brady and the New England Patriots top off their perfect season and take their place in history, only to be upset by the underdog New York Giants. Why is winning so elusive, and what does it take to be a winner?

I am intrigued and perplexed by the notion of winning; I have tasted just enough success in my 14 years of competitive aerobatics to be dissatisfied with my personal results. I wonder what I am doing wrong, what I am not doing enough of, and I sometimes find myself wondering, "Do I have what it takes to be a winner in this sport?" So I asked some friends to give me their insight into what makes a winner.

John Morrissey, former U.S. Aerobatic Team trainer, succinctly responded to my "What makes a winner" question with the following: "The one who scores the most points." While the answer came during our usual comic banter, John speaks the honest truth. In order to win you have to figure out how to score more points than the rest of the field. The path to victory is most definitely not the same for everyone. While there is a host of important factors, such as coaching, equipment, training, fitness, desire, and mental preparation, how much time and effort an individual pilot puts into each depends on the pilot.

For reigning 4-Minute Free world champion Zach Heffley, winning is a result of his passion for the sport. He notes that while "everything has to line up," mental and physical preparation along with his trust in God and strong family support made winning on the international level possible. Vicki Cruse continues to be surprised with her recent national championship. She credits her win to desire, training, and a little luck. Hannes Arch, a competitor from Austria, sees things a little differently. He downplays any notion of luck, citing coaching, the best equipment, and strong team support.

Whatever contributes to winning in this sport, the psychology of winning may trump any physical factor. In the foreword to Fred DeLacerda's book *Peak Performance for Aerobatics*, Patty Wagstaff explains that "winning is a process of eliminating weak points and enhancing strengths." Considering that she has won three national championships, I was curious to know what was different about the years in which she did not win the title. It was not training, her airplane, or the weather. Instead, Patty believes that the "lack of confidence kept me from winning when I wanted to." Knowing what you have to do to achieve confidence is crucial, and eliminating your weak points is paramount to winning. However, human nature often prevents us from doing just that.

I spent many months thinking about this article. In fact, the first words were written shortly after I

Courtesy Chandy Clanton

Chandy Clanton is a three-time member of the US Aerobatic Team.

went from first to nearly last at the 2007 World Aerobatic Championships in Spain. My experience took me back to my collegiate swimming days when I was always a better practice swimmer than a meet swimmer. How frustrating it was to beat the conference's best swimmers in practice, only to lose miserably to them in races. Then my team's sports psychologist suggested I reassess my abilities and redefine my goals. In other words, stop trying to win a national championship when you are a conference-level swimmer. So I became the best conference-level swimmer I possibly could. I was able to find success, and this new sense of accomplishment gave me confidence.

Confidence may be the most important psychological factor determining performance. In his book, DeLacerda also points to the use of self-talk, or an inner voice, to guide an athlete to peak performance. DeLacerda suggests using self-talk to rid a pilot's mind of the negatives, allowing him or her to focus on pleasant and positive thoughts. DeLacerda says self-talk is a learned behavior; this method of channeling positive memories and thoughts must be practiced every time a flight is made. He explains that "systematic use of self-talk in practice allows a response to become automatic under competition conditions." Allowing positive memories, which come from past accomplishments, to envelop your mind during both training and competition flights will help you to build confidence.

When I think about confidence, Kirby Chambliss immediately comes to mind. I asked Kirby if he knew he would win a contest before the contest even started. Of Kirby's five national championships, he said it was only the first win that surprised him. He remarked, "There were too many great aerobatic pilots at the Nationals to show up and know I was going to win, but I knew before I had arrived that if I flew as I was capable of flying, I could win."

Another confident pilot is Goody Thomas. Goody is the most talented pilot I have ever seen fly, and he has taken many good runs at winning the U.S. Nationals. While Goody has yet to win a national or world championship, his perspective on winning is insightful. He said, "Confidence is the backbone of being successful. You have to believe in your abilities and know that every move you make is the best with no hesitation." Goody went on to point out that confidence comes from preparation and dedication.

While winning may come as a surprise to some champions, I have never seen an insecure or unconfident winner. Purposeful goal setting with attainable benchmarks will give the competitive pilot the confidence to win, whatever winning might mean. Winning may mean securing the actual championship, but winning might also mean flying a clean Unknown program, or finding satisfaction in a productive training camp. Furthermore, there is often more gained by a loss than a win. Sometimes the experience taken away from training, traveling, and competing is more important than the contest itself. Your final results may be a springboard to a world championship or into life's next adventure.

LETTERS to the EDITOR

Dear Editor:

I would like to offer congratulations to Michael Flynn ("Control Linkage Failure," January 2008 *Sport Aerobatics*) on a nice piece of flying. Few things can end up more catastrophic than a control system malfunction, but if the pilot has some time and keeps a cool head as Michael did, they may indeed find a workable solution. It is a matter of being willing to discard what no longer works, and embrace what still does work.

I would like to reinforce one point that Michael made, and elaborate just a bit. Please do not hesitate for one second to declare an emergency with the appropriate air traffic control facility. As Michael found, it places emergency assets such as firefighting equipment at your disposal, but it also does one other important thing. It allows the pilot in command to deviate from any rule to the extent required to meet that emergency, which could be of great value. If you penetrate Class B, compromise cloud clearance or minimum safe altitudes, run your fuel below legal VFR reserves, well the list is almost endless; however, emergency authority provides some relief. It is not carte blanche to run amok, but it sure takes a little worry away at a time when you need all the peace of mind you can get!

He is also correct that you are likely not to hear from any agency, especially if the outcome of the event is successful (and the emergency did not result from a willful previous violation of CFR). And if the FSDO does call, they may very well be only interested in how well emergency services responded for you. In my experience, they have been proactive in helping to make sure all the details were covered, such as NTSB reports.

All in all, there is just no good reason to not avail yourself of all the aid you can in such situations. Declaring the emergency is just another valuable tool in the toolbox.

Ashley Messenger
IAC 21889

Dear Editor:

I read with interest Mike Flynn's riveting story of his successful landing in his S-1S with the jammed pitch control problem. Nothing succeeds like success. He did a great job of getting his plane safely on the ground. He deserves a big "atta boy."

That having been said, I would have jumped. And that decision was made a long time ago well before the situation happened in the air.

I'd like to say something about emergencies like Mike's without impugning his success in any way. Everything I have learned about surviving in airplanes over the last 50 years has confirmed and reconfirmed Rule 1A: Any time one has an aircraft emergency that involves a fire, control jam, a major electrical problem, a massive fuel leak, or any other issue that can bring your aircraft out of the sky, start climbing while you think if that is an option. We climb because no one has ever collided with the sky. We climb because it gives us more time for rational thought and mature risk management. And we climb because it stacks the risk management equation in favor of the pilot, especially if he or she is wearing a parachute. I know that this climbing

business may not be one's natural reaction. We want to be safely on the ground and out of harm's way. But sometimes we have to realize that the solution to our problem may require a nylon letdown.

In 1965 I watched a Vietnamese pilot of a bomb-laden A-1 lose a cylinder from that big radial right at liftoff. His engine burned brightly with flames lapping the forward cockpit area, but his Skyraider continued to run well enough for him to climb. Instead of using his 3,000 hours of combat flying experience to jettison his bombs and climb wings-level while evaluating the situation, he unexplainably placed his burning and mortally wounded A-1 in a low, tight, closed pattern to the left and attempted a landing. The results were not pretty. He got it back on the runway with the gear up and flames completely engulfing his cockpit. The ensuing detonation of his ordnance mercifully finished the job the fire had started. In later years I watched my son as he tried to land an S-2S with a jammed pitch control system. I asked him to climb and perform a controllability check prior to making the "jump or land" decision, but the urge to get the plane on the ground was just too great. He made it down safely, but it could have easily gone the other way.

The point is—give yourself a break. Make this decision now when you are in total control of your thought process. Stack the odds in your favor! And if the chute does not open, the end game will be considerably less painful than being trapped in a burning cockpit.

John Morrissey

Thank you to everyone who shared their reaction to Michael's article. It takes courage to share experiences as openly as he did, and the reactions from readers echoed strong support for his personal "hindsight" decision that bailing out would have been best. It is natural for pilots to hesitate before declaring an emergency, especially at busy airports. Declaration should be practiced as part of emergency procedures, and as pilots we need to remember that emergency crews are there to save lives. They can do their job only if they know a life might need saving—and don't forget that they are also there to help the innocent people on the ground who might become involved.

Letters to the editor are always welcome and may be sent directly to me at tookyflyer@tds.net. – *SW*

Ask Allen

A master rigger answers your questions about parachutes.

By Allen Silver, IAC 431160

Q: *What does the word "hope" have to do with flying?*

A: I just finished reading an article about "hope" in the February 2008 issue of *AOPA Pilot* magazine involving an accident, and I saw a direct correlation between that and a successful bailout. Hope is a wonderful word. I *hope* you have a wonderful marriage. I *hope* you have a wonderful life. The words *I hope* in aviation can be a double-edged sword, just like two other famous last words: Watch this! Like those two words, *I hope* are words you do not want to hear when the going gets tough.

I hope I have enough time and altitude to successfully bail out. No matter how many rabbit's feet you may carry, nothing works better than proper planning. You need to know the flight characteristics of your aircraft so you can make quick and sound decisions. This is especially true in stressful situations, such as an emergency bailout.

Each aircraft comes with a pilot operating handbook that was based on countless hours of testing so you won't have to say, "I hope this works." What does all this have to do with the parachute you hope you never have to use? It's called planning and preflighting your aircraft and parachute, and reviewing your emergency procedures with a dose of common sense. When I captained a parachute team, I realized that sometimes (mainly due to weather) a good jump was sometimes no jump. Sometimes a good flight is no flight, especially when you're not feeling 100 percent and the chance of making poor choices and decisions increases dramatically. This is where the word "hope" is likely to enter your vocabulary. Attend a bailout seminar or at least have your parachute rigger go over everything with you. I would love to come to your area if you or your group has trouble finding someone qualified to give you instruction. You can also call me, and I will go over any concerns you may have.

Always go over your bailout procedures before and after each flight. Plan to have your parachute rigger run you through a drill, ending with you actually pulling the rip cord when your parachute is due for its next repack. I hope all this makes sense, and I sure hope you never have to deploy your parachute for real.

Q: *Why am I having trouble finding someone to pack my 20-something-year-old parachute?*

A: There are no hard and fast rules in the United States about packing your old parachute as there are in most European countries, Australia, and New Zealand. Those countries require the same U.S.-manufactured parachutes you're using to be removed from service in fifteen years. Your parachute could have been hermetically sealed for fourteen years and eleven months in an airtight container, and by law you could only use it for one month. The reason is that your parachute, including the harness/container, is a petroleum-based product and will weaken and gradually deteriorate over time.

At present in the United States we have no such laws. About ten years ago I attended a meeting with most of the major manufacturers of pilot emergency parachutes, and most agreed that some time limit should be placed on equipment. The general opinion was that fifteen years was too short and twenty-five years too long. Ultimately, the manufacturers settled on twenty years. Most felt that almost all the problems with parachutes failing inspection over time due to sources such as ultraviolet ray exposure, constant use, and just lying around occurred after twenty-five years. I have to agree with this. Every parachute I have encountered that has failed nondestructive pull tests was over twenty-five years of age. Does this mean a newer parachute cannot fail? That almost always depends on how you use, abuse, and take care of your parachute. Of course, the liability issue comes into play, and not too many parachute riggers want to challenge the manufacturers' recommendations even though it's legal, but in my opinion you shouldn't tempt fate.

With proper care you should be able to get a full twenty years of service out of your lifesaving piece of insurance. You don't want to gamble on this. For peace of mind, and at today's prices for a new parachute, that amounts to about ninety dollars worth of life insurance a year.

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CALENDAR

For the most complete and up-to-date listings, visit ***www.IAC.org.*** If your chapter is hosting a contest, be sure to let the world know by posting it there.

BORREGO MINIFEST (Southwest)
Saturday, April 12
Practice/Registration: Friday, April 11
Power: Primary and Sportsman
Site: Borrego Valley Airport (L08): Borrego Springs, CA
Contest Directors: Gray Brandt and Randy Owens
Phone: 970-948-0816; E-mail: *webmaster@iac36.org*
Website: ***www.IAC36.org***

CHUCK ALLEY CAJUN AEROBATIC CONTEST (South Central)
Thursday, April 24 - Sunday, April 27, 2008
Practice/Registration: Thursday, April 24
Rain/Weather: Sunday, April 27
Power: Primary through Unlimited
Location: Le Gros Memorial Airport (3R2): Estherwood, LA
Contest Director: Bubba Vidrine
Phone: 337-886-7822; E-mail: *bubba26m@vaslic.net*

1ST CAROLINA BOOGIE (Northeast)
Friday, April 25 - Sunday, April 27, 2008
Practice/Registration: Thursday, April 24 - Friday, April 25
Power: Primary through Unlimited
Site: Lumberton Municipal Airport (LBT): Lumberton, NC
Contest Director: Bryan Taylor
Phone: 910-862-2980; E-mail: *RandTAviation@ec.rr.com*
Website: ***www.IAC19.org***

57TH SEBRING AEROBATIC CHAMPIONSHIPS (Southeast)
Thursday, May 1 - Saturday, May 3, 2008
Practice/Registration: Saturday, April 26 - Wednesday, April 30
Power: Primary through Unlimited
Site: Sebring Regional Airport (SEF): Sebring, FL
Contest Directors: Hubie Tolson and Alan Bush
E-mail: *htolson@nccoxmail.com*

LOS ANGELES GOLD CUP (Southwest)
Friday, May 2 - Saturday, May 3, 2008
Practice/Registration: Thursday, May 1
Rain/Weather: Sunday, May 4
Power: Primary through Unlimited
Site: Apple Valley Airport (APV): Apple Valley, CA
Contest Director: Patrick Dugan
Phone: 805-612-0976; E-mail: *patrick.dugan@yahoo.com*
Website: ***www.Groups.Google.com/group/laac***

APPLE CUP (Northwest)
Friday, May 23 - Saturday, May 24, 2008
Practice/Registration: Thursday, May 22
Power: Primary through Unlimited
Site: Ephrata Municipal Airport (EPH): Ephrata, WA
Contest Directors: Ann Marie Ward and Carol Burch
Phone: 206-579-6866
E-mail: *amward@relparts.com*
Website: ***www.IAC67.org***

SOUTHEASTERN AEROBATIC OPEN (Southeast)
Friday, May 30 - Saturday, May 31, 2008
Practice/Registration: Thursday, May 29
Rain/Weather: Sunday, June 1
Power: Primary through Unlimited
Site: Clayton County Airport - Tara Field (4A7): Hampton, GA
Contest Director: TBD Phone: 770-461-3421
E-mail: *bobh19@bellsouth.net* Website: ***www.IAC3.org***

PENNSYLVANIA AEROBATIC CHAMPIONSHIPS (Northeast)
Saturday, May 31 - Sunday, June 1, 2008
Practice/Registration: Friday, May 30
Glider: Intermediate Power: Primary through Unlimited
Location: Donegal Springs Airpark (N71): Maytown, PA
Contest Director: Jeffrey D. Johnson
Phone: 215-526-2300; E-mail: *jjohnson@iac58.org*
Website: ***www.IAC58.org***

HEUER CLASSIC (Mid-America)
Thursday, June 5 - Sunday, June 8, 2008
Practice/Registration: Friday, June 6
Power: Primary through Unlimited
Site: Illinois Valley Reg. Airport - Walter A. Duncan Field (VYS): Peru, IL
Contest Director: Doug Bartlett
Phone: 847-875-3339; E-mail: *dbartlett@bartlettmfg.com*
Website: ***http://IACChapter1.com***

LONESTAR AEROBATIC CONTEST (South Central)
Friday, June 6 - Saturday, June 7, 2008
Practice/Registration: Thursday, June 5
Power: Primary through Unlimited
Site: Grayson County Airport (GYI): Denison, TX
Contest Director: Bud Judy Phone: 817-559-4522
E-mail: *judyranch@alltel.net* Website: ***www.IAC24.org***

NORTHERN CALIFORNIA CONFERENCE ON INTENSE G-FORCE ADDICTION (Southwest)
Friday, June 6 - Saturday, June 7, 2008
Practice/Registration: Thursday, June 5
Rain/Weather: Sunday, June 8
Power: Primary through Unlimited
Location: Paso Robles Municipal Airport (PRB): Paso Robles, CA
Contest Director: Tom Myers Phone: 650-328-2141
E-mail: *tom.myers@stanfordalumni.org* Website: ***www.IAC38.org***

BEAVER STATE REGIONAL CHAMPIONSHIP (Northwest)
Friday, June 20 - Saturday, June 21, 2008
Practice/Registration: Thursday, June 19
Rain/Weather: Sunday, June 22
Power: Primary through Unlimited
Site: Eastern Oregon Reg. Airport at Pendleton (PDT): Pendleton, OR
Contest Director: Robert Toppel and Robert Harris
Phone: 503-292-6630; E-mail: *rboydt@comcast.net*
Website: ***www.IAC77.org***

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