

SPORT **Aerobatics**

June 2012

OFFICIAL MAGAZINE of the INTERNATIONAL AEROBATIC CLUB

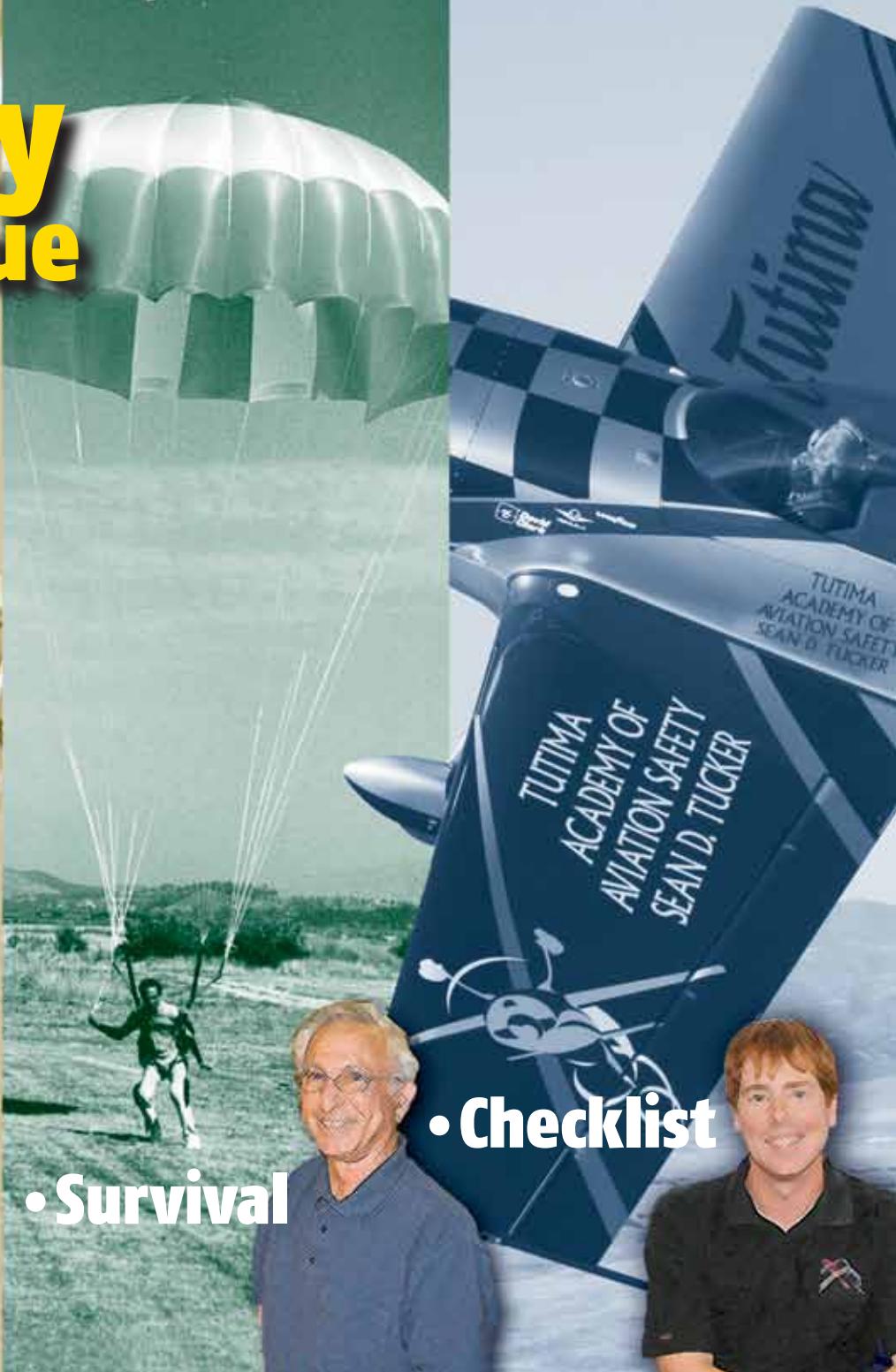
Safety Issue



- Crashes



- Survival



- Checklist

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We can hedge our safety by sticking to normal procedures.

—Greg Koontz

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BONNIE KRATZ



THE COVER

Our safety issue features three of our regular contributors, Greg Koontz, Allen Silver and Ben Freelove.

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REGGIE PAULK

COMMENTARY / EDITOR'S LOG

Closing One Chapter

Opening a new one

DOUG BARTLETT HAS BEEN THE
president of the IAC for three years. In just a couple of months, he'll be stepping down from his role and handing the reigns over to the capable hands of Doug Sowder. I'm going to miss him.

For the last three years,
he has demonstrated
an impressive set of
leadership skills the
likes of which I've
rarely had the privilege
to witness.

I began work on this magazine in the fall of 2008, under the guidance of Vicki Cruse. I worked very closely with her over the next year as I became familiar with the magazine and this wonderful organization. The news of her untimely passing knocked the wind out of my sails, and I almost gave up the magazine. But Doug changed my mind.

Vicki had been grooming Doug to lead the IAC for some time, and he stepped gracefully into the role after having been shocked just as deeply as everyone else at the time. For the last

three years, he has demonstrated an impressive set of leadership skills the likes of which I've rarely had the privilege to witness.

I've had the good fortune to sit in on a board meeting the IAC recently held. It was awe-inspiring to watch Doug take this group of intelligent, opinionated and strong-willed individuals along a well-defined pathway that lead to positive outcomes for the organization without getting derailed.

One characteristic I admire is he will tell you exactly what he thinks. He pulls no punches, and leaves nothing to the imagination. I learned if I wasn't hearing from him, things were probably going well. But he was always accessible whenever situations did arise where his assistance was needed.

At the end of the day, the IAC is a better organization for having had his leadership, and I for one am honored to have been able to work with such a skilled leader. Thank you, sir, for all of your hard work over these last three years.

You'll notice this issue is focused on safety. May is usually the safety issue, but we ran Hall of Fame inductee Tony LeVier instead. Let's let June be safety month for the year 2012, and please keep safety at the top of your priority list the whole year.

For this issue, I asked Greg Koontz, Allen Silver and Ben Frelove if they'd be so kind as to contribute a piece with their unique perspectives on safety. I'd like to personally thank them for taking the time and making the effort to write their articles. I hope you enjoy reading them as much as I did.

IAC

Please submit news, comments, articles, or suggestions to: reggie.paultk@gmail.com



DOUG BARTLETT

COMMENTARY / PRESIDENT'S PAGE

A New Insurance Program

And a President's Wrap-up

I WOULD LIKE TO TAKE THIS opportunity to announce an IAC/EAA joint effort to provide an insurance program through EAA Aircraft Insurance. This program is designed to meet the needs of IAC members regardless of which aircraft you fly or the type of flying you do. Insurance coverage is available all the way from a new aerobatic competitor through a seasoned air show pilot including aerobatic flight schools. Your support of this program helps to support all of the activities of the IAC. Please give EAA Aircraft Insurance a call prior to your next renewal. Their information is available on the IAC website, in our magazine advertisements, or call (866) 647-4322.

Ballots are in the mail for the annual election of IAC officers and directors. With only about 15% of our members voting, each vote carries a greater weight for the individuals you choose to represent you. Please take the time to review the agendas and minutes from past board meetings to evaluate the performance of candidates running for reelection. Also, please take the time to contact the new candidates and ask them their opinion on topics you feel are important to the future of the IAC. The new officers and directors will take their seats during the annual membership meeting at AirVenture 2012.

At AirVenture, I will be stepping down as your president. It has been a wonderful six years being able to represent the membership first as your treasurer then as president. Over the years I have had the opportunity to

work with many organizations from small town groups to national associations. No group, in my opinion, has come close to the quality of members that fill the ranks of the IAC. Flying aerobatics and being able to represent such a fine group of people are two of the best events of my life. Of course this does not happen without the help of many wonderful people, many of which I can now call good friends. I would like to start thanking some of them here and continue on until the annual meeting.

Jimmy "Jett" Jackson, my high school coach, lifelong teacher and great friend got me started in aerobatics in 1971. Although we did not know it then, it was this time as a gymnast twisting and flipping on the trampoline that started it all. "Buzz" McDonald, another gymnast and flying friend introduced me to Bill Bruns, an aerobatic instructor and IAC member. Bill turned me upside down in an airplane for the first time in my life and it changed me forever. I can still hear him clapping and cheering me on from the back seat of his Decathlon. It was Bill Bruns who told me about the IAC. Jett, Buzz and Billy, thank you for getting me started.

My first day in the IAC was in mid July of 2003 at the Salem, Illinois contest. This day I met Bob Hart who I now proudly call a close friend. The number of training flights, critiques and aerobatic discussions with Bob seems endless. We competed together, ran regional contest together, lead IAC Chapter 1 together and now

both serve the IAC at the national level. Thank you, Bob, for all of your help and support over the years.

In 2003, the IAC President, Gerry Molidor and CIVA Representative, Howie Stock happened to live in my home town. Sometimes in your life you just get lucky! Almost from day one in the IAC, Gerry and Howie guided me on a path to become an unlimited competition pilot. Beyond that they introduced me to two additional IAC'ers that would become good friends and mentors along with an awesome airplane: John Morrissey, Nick Timofeev and the Sukhoi 29. Gerry and Howie, thank you for your hundreds of hours of support.

Nick Timofeev taught me how to fly and snap the Sukhoi. John Morrissey and his wife Linda taught me just about everything else I know in regards to competition flying. Having this great team of friends and coaches made flying fun and exciting. Nick, John and Linda, thank you for teaching me the art of precision aerobatics.

Norm DeWitt has been a wonderful advisor for me during my time as president of the IAC. There have been so many helpful people to consult with but Norm was always the best at simplifying and assisting me through the most difficult tasks. Thank you Norm. It was Norm DeWitt, Gerry Molidor, and Howie Stock that got together to convince Vicki Cruse they had a candidate to be her successor. Gentlemen thank you for believing in me and to all IAC members, thank you for your support; it was a pleasure to serve!

IAC



CP Aviation Emergency Maneuver Training, EMT® Scholarship in Memory of Vicki Cruse



This scholarship aims to promote aviation safety through unusual attitude and aerobatic training. The scholarship includes three

modules of the EMT® course which includes Stall/Spin Awareness, In-flight Emergencies, and Basic Aerobatics. The course will be taught in a Citabria and Decathlon.

CP Aviation is a family-owned business located in Santa Paula, California. CP currently maintains a fleet of aerobatic airplanes ranging from a Citabria to a Pitts S-2B, and numerous Cessnas. CP is also home to two of the country's Master CFI-Aerobatic instructors, Rich Stowell and Judy Phelps. For more information about CP Aviation please visit www.cpaviation.com

Qualifications: The recipient must be a member of IAC and hold a private pilot certificate. **Scholarship Amount:** \$2,300 (no cash value). Download the application form at: www.iac.org/programs/scholarships/iac_cp_app.doc Follow the submission instructions on the application form carefully. Return completed applications to: iac@eaa.org. Applications received by June 30th are considered for this year's award.

WAC 2013 to be Held in Texas!

May 11, 2012 - The WAC 2013 will be held at North Texas Regional Airport in Grayson County Texas where the US Nationals have been held for over 40 years. The dates are October 9th - 20th, 2013.

Call for Photos

May 2, 2012 - We're looking for a bunch of cool photos to adorn the pages of the new and improved IAC web site -- check out the mockup page at <http://mockup.iac.org> These are not for a gallery—they'll be displayed in the top area of each page on the site. Colorful, action-oriented pictures are preferred. The available space is about 2.5 times wider than it is tall, sort of a landscape or panorama format. Don't worry about cropping or resizing, we'll handle that. Email your best pics to Laurie Zaleski artzgraphics@comcast.net along with the date, location, and names of people if possible.

Annual Non-Flying Award Nominations

Each year the membership of the IAC nominates outstanding volunteers to be recognized for their contribution to the sport of aerobatics. Nomination deadline for this year's Kathy Jaffe Volunteer Award is June 30th. Please help us to recognize our unsung heroes by filling out the nomination form here <http://www.surveymonkey.com/s/3QHkw9H>



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Crashes

It ain't always just one thing

BY GREG KOONTZ

**Like most
pilots,
I have my
“there I was”
stories.**

I KNOW YOU'VE HEARD IT BEFORE: An accident is a series of errors. It's true, you know. You might have to trace it back to when you got up that morning. You might have to go back as far as your conception; who knows. But you can always say, "If I hadn't done this, or if I hadn't gone there, I wouldn't have done this or been here." Whatever. Like those seven levels of separation, you can trace it back.

Like most really active pilots, I have my "there I was" stories. They vary from the cute to the scary and are consistent in one easy-to-figure way; they were all avoidable. Some were just obviously dumb, some should have been detected along the way, and a few really snuck up on me. It's just the way it happens. I don't know why I survived it all. So we share the stories, take the lumps for being such a chump, and hope someone learns from

the experience.

So, there I was . . . a former student of mine called me up.

"Hi, Greg, it's Heinz from Louisiana. Have you ever flown a Skybolt?"

"Well, sure, a few times. They're a kind of older design, but they have their following. I've flown them with 180s, 200s, and one with an IO-540. I liked the 200 hp best," I said. "You flying one?"

"No, I bought one. It's got the 260 in it," he said.

Heinz was a fun student. He owns a Cessna 182, has a medical practice and a lovely family, and is always up and happy. I was remembering how much fun we had when he came for his initial aerobatic training.

"You bought one without a checkout?" I replied.

"I flew it some," he said. "I was on my

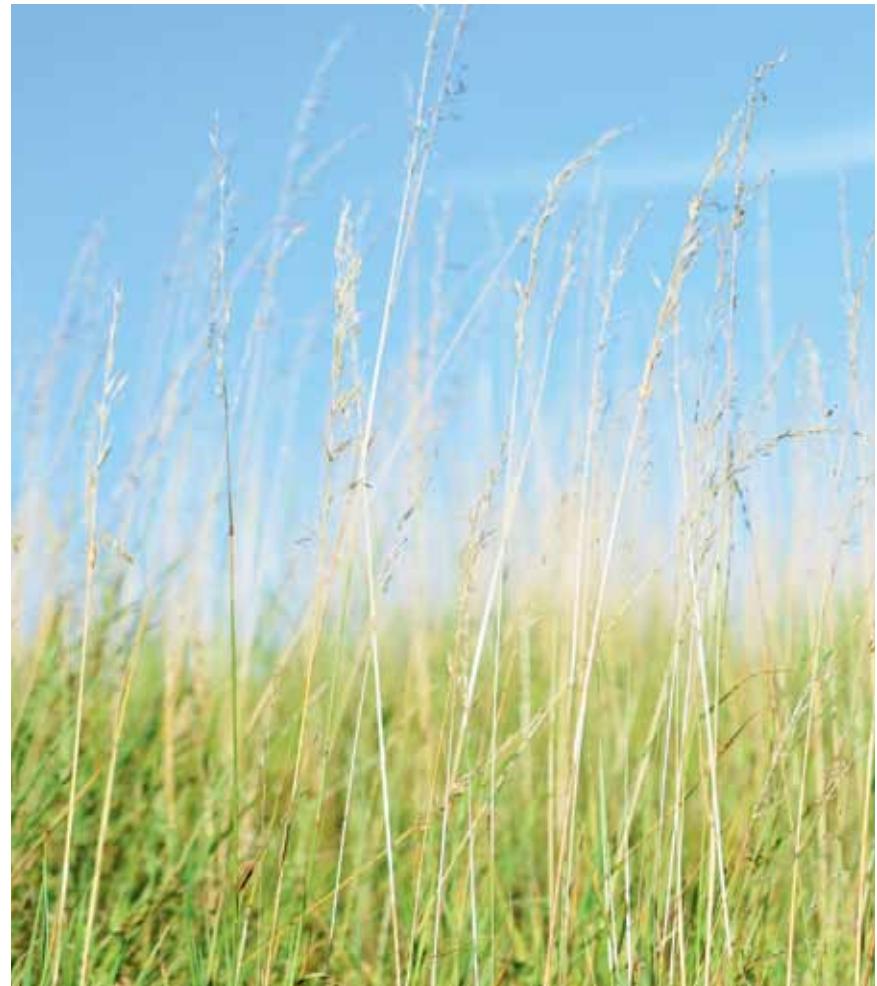
way home with the ferry pilot when we had oil temperature problems. It's fixed and sitting in Columbus, Mississippi. If you'll go get it and take it to your place, I'll come over, finish my checkout with you, and fly it home."

This "get checked out and fly it home" stuff always runs a red flag up the pole. So what happens if he takes a couple days off, travels all the way to Alabama, but doesn't finish his checkout? It just adds a level of pressure on top of the pressure a checkout like this causes by itself. But Heinz was certainly a good student before, good-natured enough to bear any lumps and in need of some help here. Little did I know this wasn't the sign of trouble I should have seen.

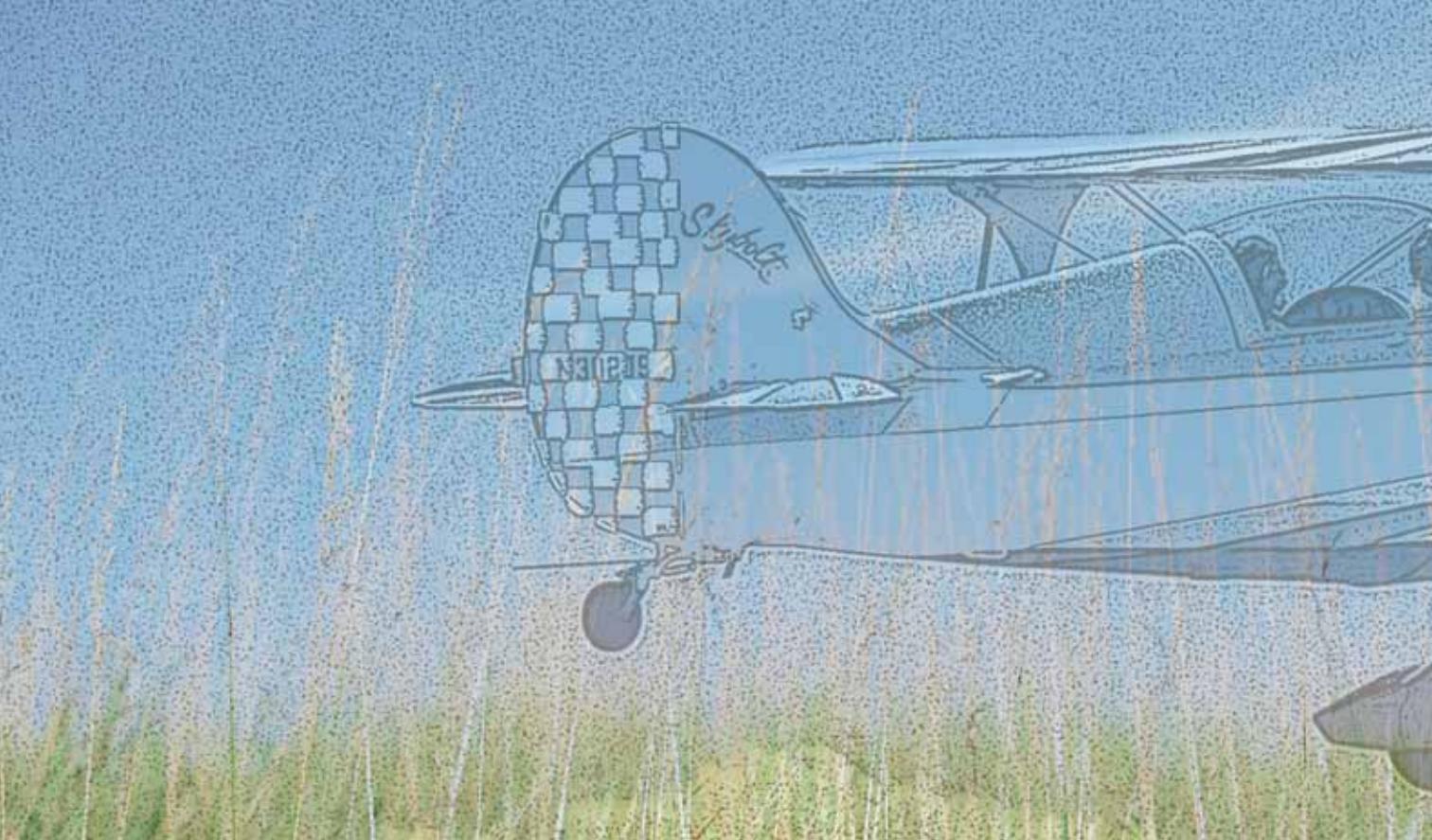
My right-hand man and crew chief, Steven Smith, flew me to Mississippi in the Super Decathlon to get this beast. It was beautiful! A bit overly finished out (and surely heavy), we found it sitting pretty in a hangar in Columbus. We fueled it, cranked it, and took it up. The trim was a bit of a problem, but otherwise going back to my little grass strip at home was uneventful. En route I tried out the fuel system for kinks. It had a big main tank to feed the thirsty IO-540 and a wing tank that wasn't approved for acro but helped with the engine's appetite on cross-counties. I was sure to make my first-ever switch to and from the wing tank over airports. Those wing tanks get neglected in planes that fly mostly local flights, so I wanted a good shakedown. Not to my surprise, it all went well.

A week or so later Heinz showed up in his car with his wife. She would drive the car home so he could fly home. We started with air work and went on to touch-and-goes on the grass at the house. The 260-hp Skybolt ain't no Cessna! Poor visibility, heavy controls, lots of P-factor, and loads of sink rate gave Heinz some real challenges. But he was up to the task, and soon we decided to test out pavement landings the next morning when all would be calm.

This was June in Alabama, so an early flight sounded pretty cool (literally). This Skybolt was equipped with the bubble canopy so you could roast a turkey in there by noon. We had been nursing some pretty high oil temps that Skybolts



This was June in Alabama, so an early flight sounded pretty cool (literally).



are famous for on our afternoon flights. Heinz, myself, and the plane all saw an early morning flight as a blessing. For our first venture to the grabby pavement, I decided to take the back seat (for the brakes), the pilot seat in the Skybolt. That was a good and bad thing as events were about to prove.

The flight started in the practice area for some warm-up maneuvering. Heinz

was getting over the hump of this training, and I figured we were going to get to some aerobatics right after he mastered the landings. With this in mind, I was concerned about getting rid of a stash of fuel still lingering in the upper wing. So, unbeknownst to Heinz, I switched to the wing tank for our air work. When we headed down for the paved runway, I switched us back.

The landings were going well. Heinz flew us around the pattern at this nearby airport while I monitored his progress and critiquing. All the while I was changing to the wing tank for every trip along the downwind leg and back to the main for takeoff and landing. I figured I was being pretty clever. This little effort was going to save me a siphoning job this afternoon. I was quite pleased with myself.

When I figured we had left enough rubber on the local runway, I suggested we break out of the pattern and head for home. It's a 9.8 mile commute, so it just wasn't worth climbing to anything more than pattern altitude for the ride (you're not thinking ahead of me here, are you?). This was my last chance to suck a little more fuel from the wing, so I switched to it one more time. This was going to be Heinz's first grass landing from the front, so I gave him a heading for a big ol' long base leg to my westbound runway, and he confirmed he had the strip in sight. Right then I reached down and reset the fuel selector to the main tank.

That's where the excitement began. Heinz had just idled back to adjust speed and altitude, so I didn't notice a thing at first. I didn't realize until later that even that throttle reduction played a small

Heinz had just idled back to adjust speed and altitude, so I didn't notice a thing at first.



part. Something didn't feel quite right, so I advanced the throttle just a little. Nothing happened. Not a thing. It was running, but it didn't gain any power.

I have previously had 13 engine failures in single-engine aircraft, which resulted in forced landings. [If that sounds like bragging to you, then your mind is as warped as mine.] Anyway, if I have learned anything in those experiences (besides being more careful in my choice of aircraft to fly), it's a good procedure. Most of this learning was a slow progression. My first forced landing was a comedy of errors that resulted in a good landing with no help from me! But now I had found myself at number 14, and the experience from the last 13 was surely an asset.

Without thought or hesitation I took the controls and reduced the speed to 80. While that was taking place I was realizing that my runway was a little too far away so I turned toward the only choice available, and a miserable choice it was. This field was too short, overgrown, unleveled, and full of ditches, stumps, and rocks. I pointed the nose at the only approach without trees, but we still had power lines to cross. But, as the rules of forced landings go, the decision was made.

En route I had the landing plan (for what it was worth) in place so I went to the restart. Fuel pump on. Fuel selector to the last tank. Pump throttle. No luck. Fuel back to the main tank; pump throttle. It would idle, but every time I opened the throttle all I got was sputters. It was clearly a vapor lock. But in any plane I knew of, what I was doing should overwhelm the lock and get us going. It just wasn't to be.

Now we were getting close to the field so it was time to give up on the restart and pay attention to the matter at hand—landing. This didn't look good. I was contemplating my glide over the power lines and how I was going to handle hitting the trees on the other side of this short space. As the lines approached I said, "I'm sorry Heinz, but I think we are about to get hurt." Like a man of unbreakable spirit, Heinz grabbed a couple of bars right in front of him and said, "Greg, it is what it is." I promise you I'll take those words to my grave!

As I crossed the wires I gave it the hardest slip it would do with no regard for sink rate. I wanted to hit the ground hard and dissipate the energy that would be left for hitting the trees on the other side. Hard it was. The grass was higher

than the bottom wing and was slapping and pulling on us. We hit a shallow ditch with a resounding WHAM! But we're still going. I glanced to my right and saw the field was uphill in that direction, so that's the way I went with some hard rudder. To my surprise the tall grass mixed with the uphill ride was slowing us down really fast. All I could do was chant "don't flip over, don't flip over, baby, please, don't flip over!" while holding full back pressure. At the top of the shallow hill, we hit a clump of low bushes and, much to our surprise, we had stopped.

There was a long moment of almost total silence. The engine, almost like mocking us, was still idling. Then suddenly I broke the silence with a huge "Yahoo!" Heinz nearly pooped his pants! We had just done the seemingly impossible, and we both knew it was a matter of a lot of luck.

I grabbed my cellphone and called home. Much to my surprise, my wife, Cora, didn't answer. It was Heinz's wife on the phone. Cora was getting lunch out of the oven so she didn't answer. I just said, "Could I talk to Cora?" (I had no clue how to explain this to Heinz's wife without starting a panic). Cora had it figured out right away when I started

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the sentence, "Everything is okay; nobody is hurt."

So how did I get from picking up a nice plane to sitting in a nasty little field? Mechanically, it came from an engine that not only ran hot but also had been recently modified. The plane got a new fuel totalizer that had been plumbed into the wrong part of the engine. The result was a new fuel line routed too close to exhaust pipes. But, like the saying goes, it ain't always just one thing. Also involved was an old, weak fuel pump that was having trouble pushing the hot fuel, which was easily a subject of vapor lock.

So why had this not been a problem before now? Let's look at the human factors. It is most likely that the wing tank was always used first when used at all. Then the main was selected to finish the flight. A little closer look at the fuel system after the fact revealed that the selector itself was installed about two-thirds of the way up the main tank. It is attached to a flop tube in the tank. While switching back and forth between the tanks I was using up more main fuel than usual before exhausting the wing tank. This allowed the fuel in the main tank to drop below the level of the selector. While not in use or under pressure, that fuel could have formed an air bubble. When I switched to the main it became a vapor lock in the hot fuel. Of course, this should have been cleared by the engine fuel pressure. But a combination of hot fuel, a weak pump, and a low power setting (remember Heinz had just then throttled back) caused a vapor lock that just wouldn't clear. Ironically, a few minutes after landing the engine ran great!

After a new fuel pump, a new cooling tube to the pump, and some rerouting of fuel lines we might have the mechanical part of this resolved. Hopefully our theories there are correct. But a more sure correction comes from the pilot. We can hedge our safety by sticking to normal procedures. How about switching tanks at altitude and not while landing? Or being suspicious of any brilliant ideas like switching constantly back and forth between tanks?

I read this somewhere: A good pilot can handle even the most severe emergency; a great pilot knows how to avoid them. **IAC**



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Survival is not an Accident

THESE ARE WORDS TO LIVE BY. WHEN ASKED TO WRITE a survival article I think back on all the columns I've written about this subject. I look at the photos on the wall of my shop as I enter each morning showing people standing by an unrecognizable heap that was once their airplane. At my seminars, I joke when I show the photos and explain that the pile of wreckage was not badly damaged. If they can just find the gas cap and screw a new airplane to it, it would be just like new. That always gets a chuckle or two, but the near-death experience these pilots have had often has something in common, and I'm not talking about luck. They may have been lucky to have survived the mid-air collision with enough altitude and time to bail out. Luck also may have played a part in their being able to egress their disabled aircraft. After the initial shock wears off, you realize your life depends on making some very quick decisions, and that is not luck. Are you pre-

pared to survive? Do you have a game plan?

The key to survival of any kind is anticipating the worst possible scenario beforehand and being prepared for it. Since I'm talking about aircraft survival, I don't need to discuss having a smoke alarm in your home. After all that has been drummed in our heads over and over. The evening news talks about another tragedy that could have been averted had the home been equipped with working and well-maintained smoke and carbon monoxide detectors. The same holds true for your parachute and any survival equipment you wear or carry on you. Just having it along for the ride is not enough. You must be familiar with your parachute and the contents of your survival gear. You must keep them in working condition, especially if batteries are involved. Have a time when you change them. Like at each annual. This is also a good time to review the contents of your kit. Have your rigger go over your

Learn it, link it, and live it

BY ALLEN SILVER

parachute with you. Many of you don't even know if your parachute is steerable let alone know what color the steering handles are. Over the years I've had more than a few pilots pick up their parachutes by the rip cord thinking it was the carrying handle, only to realize it was the rip cord. If you would like a quick review on parachute survival, you can go to www.EAA.org/webinar and watch my bailout seminar. It goes down rather well with a glass of wine or a cup of coffee to keep you awake.

At each seminar I give, I ask my audience how many carry survival equipment with them. Quite a few hands go up. Then I ask how many have it stored in their aircraft? Very few hands go down. On the average, about 80 to 90 percent of those who carry survival equipment have it safely stowed away in their aircraft.

Let me be the first to tell you that is not survival gear. It's called camping gear. If you want to call it survival gear, it must be carried on you or your parachute. You just survived a bailout, and your plane went over the next ridge before impacting the ground. If it didn't explode, it dug a crater that destroyed your camping gear. Either way it does you no good. Oh, did I mention you have a badly sprained ankle or, worse, a broken leg and are not getting around too good? You'd really like to be found. It's getting late in the day and you're not relishing the idea of spending a night in the woods. What were those strange sounds you just heard in the bushes?

About now you think it would be nice if you had some way of signaling for help. Signaling for help could have started by you filing a flight plan, letting



ISTOCK



Photo 1



Photo 2

someone know when you will be returning or arriving so they can call out the posse, if necessary. Remember, you have to carry your survival equipment with you either attached to your parachute harness in a safe location or on you personally. Never attach anything to your parachute harness that will interfere with the opening of your parachute. If you have any doubts about where you

can put these items, contact your rigger or take a picture and e-mail it to your rigger or me with your idea.

Now, let's take a look at Photo 1. Is this overkill? Is this Rambo? Or, is this person prepared? They've attached a light blue pouch with a handheld radio to the upper right side of their parachute. Please note this is not attached on top of the shoulder where it will interfere with the opening of the parachute. If you need a better explanation of this, I suggest you go to the home page of my website and click on "Ask Allen." Then scroll down to my August 2009 column and refresh yourself on where *not* to attach your PLB, Spot, survival kit, or kitchen sink. Attaching any item in the wrong area could be disastrous. Let's return to Photo 1. Below the radio pouch is my Mini SMAK Pak, and this pilot also attached another larger SMAK Pak just above the rip-cord pocket to hold a Spot unit. Make sure you don't cover the rip-cord handle. Now let's take a look at a parachute that came into my shop recently for servicing. The



Photo 4. Mini SMAK Pak.



Photo 3

pilot attached his survival kit (see Photo 2) to the leg strap with a piece of parachute cord. Now go to Photo 3 and I'll explain what's wrong. Never attach anything to the snaps. It could interfere with unsnapping them. This survival kit, whipping around in the wind, could easily snag on something during egress. Don't worry, it won't be there for long. The cord is attached through the zipper, near the pouch. The metal is very thin here, and I'm pretty confident it'll break at that point, and there go your chances of being found quickly.

What should I carry *on me*? It depends on whether you want to be found quickly or you want to camp out for awhile. Most of my Air Force career was working with survival equipment (I also have about 3,200 jumps), and I feel the most important items should be devices that help to quickly locate you. This is why, several years ago, I came up with my Mini SMAK Pak. I also have larger versions. If you're wondering what SMAK Pak stands for, check out my website.

All of my kits have one thing in common (see Photo 4). On the outside of every container is a hook knife attached with about a four foot lanyard. In case you drop the hook knife, you can reel it back in and try again. What do you do with the hook knife? It has a cutting edge hidden away on the inside of the knife. I call this pilot-proof, unless you hang it on your ear. The knife serves two purposes. Let's say you successfully bailed out and have just landed, only to realize you're being

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Budd is one of the best instructors I've ever flown with. He has more knowledge to share about the Pitts, and flying in general, than anyone. -Mike Melville

...I had to dead stick my Pitts in and an old timer said "Nice save. Someone taught you well." Yes they did! Thanks, Budd. -Craig H.

My insurance company covered me, a low-time, low-tailwheel-time pilot in a single-hole Pitts largely because I went to Budd for my training. -Tom P.

...the engine failed at low altitude and the accident investigators said that my fundamentals saved me. Thanks my friend. -Maynard H.

www.airbum.com



Photo 5

dragged along the ground by high winds. This is a life-threatening situation. If you can't get out of your harness in a hurry, especially the aerobatic harness, the hook knife can be a lifesaver. Take it out and hook one of the risers (this is where the lines are attached) and instantly one-fourth of your parachute is cut free and your parachute collapses.

Or, you may not have gotten off the ground, are upside down, and putting a lot of pressure on your seat belt. It's now very difficult or impossible to release. Take out your hook knife and cut through your seat belt. So, what if you carry a knife in your pocket? Try to get it out while hanging upside down. Or, try getting it out while being dragged along the ground by your parachute in high winds. Even if you can get it out, there is a better than even chance you'll drop it or can't get it open because you're wearing your Nomex flight suit and gloves. Have you ever tried opening a knife with gloves on? Did I mention your aircraft is on fire and remov-

ing the gloves is not a good idea? The hook knife that's attached to my kit is modeled after the military version carried by pilots in their flight suits, also on a lanyard (Photo 4). On the inside of all sizes of my SMAK Pak is a signal mirror, fire starter, and whistle. Pilots often use my larger kits, like the one above the rip-cord pocket, to carry their ELTs, Spot, or other electronic devices, especially on cross-country flights. The larger kit is especially popular with glider pilots, who are often flying in some very desolate countryside. I probably don't need to explain the signal mirror. We've all seen movies where they were used. The instructions should be clearly printed on the back of the mirror. The whistle carries much further than your voice and will help when someone is trying to locate you, especially at night. The fire starter is great for starting a small smoky fire. This works great if you're hidden amongst the trees and cannot be seen. Don't start a raging inferno, just a small fire. As Smokey Bear says, "Only you can prevent forest fires."

Once you have it going, toss on some green vegetation and the smoke will go up through the trees signaling where you're located. Either that or it'll signal the aerial bomber where to drop fire retardant.

One last item for survival is your parachute (see Photo 5). It should be a color that is easy to see from the air. All the parachutes I order are manufactured orange and white for high visibility. Other bright colors like red and white work well also. Spread it out on the ground so an aircraft can spot you easier. Get out your signal mirror and practice a bit. Start a signal fire, if necessary. Your parachute can be made into a shelter. You can also wrap up in it for warmth. Now take out your cellphone. You did remember to carry it with you, right? Granted, it probably won't work out in the boondocks, but if it does, call for help. I actually think you should call your local pizza parlor first. You know, the one that promises to deliver in 30 minutes or less with your favorite pizza and beer.

Remember, you can always e-mail or call me with your questions and concerns by going to my website, www.SilverParachutes.com. All my contact information is there.

Remember, learn it, link it, and live it.

IAC

FLIGHT SCHOOLS LISTING

(continued from the May 2012 Issue)

Schools are listed by state and more will be published in subsequent issues of *Sport Aerobatics*.

A complete listing may be found online by visiting: <http://www.iacusn.org/schools/>

MONTANA

Mountain Airdance LLC HLN - Helena, MT

Jeanne MacPherson, Phone: 406-459-9408

Email: jemacpherson@msn.com

Web: www.mountainairdancellc.com

Aircraft: Super Decathlon

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics. Rich Stowell's EMT Course for upset recovery, stall/spins and introduction to aerobatics.

Paragon Air Adventures, LLC KBZN -

Belgrade/Bozeman, MT

Thomas J. Nagorski, Phone: 406-388-4158

Email: takeoff@ParagonAir.com

Web: www.ParagonAir.com

Aircraft: Micco SP26A (HP/Complex/Tailwheel/IFR/Aerobatic), Extra 330LT (HP/Tailwheel/Aerobatic)

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics. Graduate Rich Stowell's EMT course. Rich Stowell's EMT syllabus for upset recovery, stall / spins, and introduction to aerobatics. Also specialize in customized courses to fit clients' needs crafted from 35 yrs of GA flying.

NORTH CAROLINA

Acro Dynamics LLC 14A - Mooresville, NC

Mikey Matthews, Phone: 336 244 9592

Email: acrodynamics@yahoo.com

Web: www.acrodynamics.org

Aircraft: 1978 8kcab Bellanca Decathlon CS

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics

VOLARE, Inc. KHKY - Hickory, NC

Williams Pontel, Phone: 828-302-3853

Email: wpontel@gmail.com

Web: www.volareinc.com

Aircraft: Cessna A150L

Courses: Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, CFI Spin Endorsement

NORTH DAKOTA

University of North Dakota at

Grand Forks GFK - Grand Forks, ND

Greg Gilmer, Phone: 701-777-7855

Email: ggilmer@aero.und.edu

Web: www.aero.und.edu

Aircraft: American Champion Super Decathlon (2)

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics. Must be a full or part time University of North Dakota student to enroll.

NEW JERSEY

First Aero Group KVAY - Lumberton, NJ

Jim Mancini, Phone: (856)313-2065

Email: Firstaerogroup@gmail.com

Web: www.Firstaerogroup.com

Aircraft: Super Decathlon (2004)

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics

NEW MEXICO

Blackhawk Aviation/Blue Feather Aero 5T6 - Dona Ana, NM

Sam Dawson, Phone: 816-529-0358

Email: dawsonuh60@yahoo.com

Web: www.samdawson.com

Aircraft: 8KCAB Super Decathlon

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics

NEVADA

Monarch Sky KHND - Henderson, NV

Djavad Mostofizdeh, Phone: 702-631-0386

Email: info@monarchsksky.com

Web: www.monarchsksky.com

Aircraft: 7KCAB Citabria, Extra 330LC

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics
FAA 141 Flight School/Flight Club

Aerobatic Company & Flight School, Inc.

RTS - Reno, NV

Tim Brill, Phone: 775-329-3366

Email: tim@aerobiccompany.com

Web: www.aerobiccompany.com

Aircraft: Decathlon, Super Cub, Pitts S-2B

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics, Pitts checkout, RV aerobatics. Safety Seminars. Customer Designed. Home of IAC Ch. 118. FAA waivered box on airport.

NEW YORK

Michael Mancuso Airshows HWV - Shirley, NY

Michael Bellenir, Phone: 631-965-8886

Email: mike.bellenir@mmailshows.com

Web: www.mmailshows.com

Aircraft: Extra 300L, Customer owned aircraft

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics, Pitts checkout, RV aerobatics. Primary - Unlimited Competition. Coaching. Critiquing. Warbird checkouts. Insurance checkouts.

OHIO

Skyline Aviation 38D - Salem, OH

Ben Pidgeon, Phone: 330-332-4400

Email: salemaipark@yahoo.com

Web: www.salemaipark.com

Aircraft: Citabria 7ECA, Super Decathlon

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics. Basic aerobatics. CFI Spin Endorsement. Parachutes supplied.

Stewarts Aircraft Service 40I -

Waynesville, OH

Emerson Stewart, III, Phone: 513-897-7717

Email: taildragger@gc-concepts.com

Web: www.stewartsaircraft.net

Aircraft: Citabria, J-3 Cub(2), 7-AC Champ, Pitts S-2A

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Competition aerobatics, Pitts checkout.

OKLAHOMA

Happy Aerobatics, LLC HSD – Yukon, OK

Kelly Pietrowicz, Phone: 405-620-3998

Email: Kelly151PS@aol.com

Web: www.HappyAerobatics.com

Aircraft: Pitts S-2B

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics, Pitts checkout, RV aerobatics, CFI Spin Sign-off. 10 hr. Intro to Aerobatics. Custom Designed Courses. Aerobic Thrill Rides.

OREGON

Hammerhead Aerobatics KUAO – Aurora, OR

Renny Price, Phone: 503-381-5564

Email: rennyprice@msn.com

Web: www.hammerheadaerobatics.com

Aircraft: Su-29

Courses: Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics. FAA waiver to provide dual instruction. Intro to sport aerobatics - 3 hr. customized to customer's requirements.

PENNSYLVANIA

Messersmith Aviation BVI – Beaver Falls, PA

David Messersmith, Phone: 724-971-3242

Email: Airsick1@aol.com

Aircraft: Owner Supplied.

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics, Pitts checkout, RV aerobatics, Glider aerobatics. Recreational thru IAC Competition training.

Everett Flying Services KLOM – Bluebell, PA

Bruce Everett, Phone: 215-353-3208

Email: baeverett@comcast.net

Aircraft: Pitts S-2B, Citabria

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics, Pitts checkout, RV aerobatics. 5 hr/10 hr aerobatic courses.

TENNESSEE

Steve Johnson Aerobatics JWN – Nashville, TN

Steve Johnson, Phone: 615-557-2364

Email: gjunkie1@aol.com

Web: www.stuntplane.com

Aircraft: We have an MX Aircraft MX2 on site for dual instruction/training! Or, we can train in your aircraft; Decathlon, Pitts, RV, etc.

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics, Pitts checkout

Sewanee Aerobatic School UOS – Sewanee, TN

Catherine E. Cavagnaro, Phone: 931-636-8678

Email: catherine@aceaerobaticschool.com

Web: www.aceaerobaticschool.com

Aircraft: Cessna Aerobat

Courses: Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics. Aerobatics: 5 hr. ground w/ 5 hr. flight. Spins: 3 hr. ground w/ 2 hr. flight.

TEXAS

Blackhawk Aviation El Paso, TX

Sam Dawson, Phone: 816-529-0358

Email: dawsonuh60@yahoo.com

Web: www.samdawson.com, CFI.com

Aircraft: Citabria (KELP), Pitts S-2B (T27)

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Pitts checkout

Stearman Adventures LLC . – Denton, TX

Blake Nutt, Phone: 940-536-4663

Email: info@stearmanadventures.com

Aircraft: Super Decathlon, Stearman

Courses: Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics

USA Aerobatics 5C1 – San Antonio, TX

Jordan Schultz, Phone: 210-725-7251

Email: jordan@usaerobatics.com

Web: usaerobatics.com

Aircraft: Pitts S-2B, J-3 Cub

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics, Pitts checkout

Big Q Aviation JWY – Midlothian, TX

Carol Walker, Phone: 214-948-0440

Email: walkercl@aol.com

Web: www.BigQAviation.com

Aircraft: Great Lakes 2T-1A, Citabria 7GCBC, Grob 103 Acro

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics, Glider aerobatics

Four Winds Aviation, Inc. T31 – Aero Country, TX

Dave Honaker, Phone: 469-766-3500

Email: fourwindsflight@yahoo.com

Web: www.tail-wheel.com

Aircraft: Super Decathlon 8KCAB, Pitts S2B and Pitts S2A, Legend Cub A13, Piper Archer

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics, Pitts checkout, RV aerobatics, CFI Spin Training. Customer designed training. IAC Competition Prep & Critique. IAC Chapter 24. Four (4) School Instructor's hold Low Level Aerobatic waivers, One (1) A.C.E. on staff

Harvey & Rihn Aviation, Inc T41 – LaPorte, TX

Randy Young, Phone: 281-471-1675 Fax: 281-471-6646

Email: info@harveyrihn.com

Web: www.harveyrihn.com

Aircraft: Super Decathlon, Extra 300L, Citabria Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics, Pitts checkout. Safety Proficiency Training. Situational Awareness. Customer Designed Training.

UTAH

OK3 AIR 36U – Heber City, UT

Nadim Abuhaidar, Phone: 435-654-3962

Email: nabuhaidar@ok3air.com

Web: www.ok3air.com

Aircraft: Extra 300L

Courses: Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics

VIRGINIA

Aviators Unlimited 32VA – Abingdon, VA

Johnny White, Phone: 276-614-0412

Email: Johnny@aviatorsunlimited.us

Web: www.aviatorsunlimited.us

Aircraft: PITTS S2C, Citabria, Aurora

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics

Aero Enterprises GVE – Gordonsville, VA

Dan Rogers, Phone: 540-850-0984

Email: dan@flyacro.us

Web: flyacro.us

Aircraft: Bellanca Decathlon

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics. Course syllabi are available on the our web.

Atlantic Airways JY0 – Leesburg, VA

Steve Hutchens. Phone: 703-779-8787

Email: shutchens@atlantic-airways.com

Web: www.atlantic-airways.com

Aircraft: Super Decathlon

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics

WASHINGTON

BruceAir, LLC BFI – Seattle, WA

Bruce Williams, Phone: 206-283-2937

Email: brucew@bruceair.com

Web: www.braceair.com

Aircraft: Extra 300L

Courses: Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, RV aerobatics.

West Coast Spin Doctors CLM – Sequim, WA

Mike Mason, Phone: 206 369 9924

Email: roundmotor@gmail.com

Web: www.westcoastspindocs.com

Aircraft: 450 Stearman, 7KCAB

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics

FlipSide Aerobatics KRNT – Issaquah, WA

Will Allen, Phone: 425-785-9922

Email: will@flipsideaerobatics.com

Web: www.flipsideaerobatics.com

Aircraft: 1992 Super Decathlon, Customer owned aircraft

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics, RV aerobatics. Customized training.

WISCONSIN

Morey Airplane Company C29 –

Middleton, WI

Debby Maier, Phone: 608-836-1711

Email: dmaier@moreyairport.com

Web: www.moreyairport.com

Aircraft: Cessna 152 Aerobat.

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics, RV aerobatics. Primary & Sportman aerobatics.

Inverted Horizons, Inc. KENW –

Kenosha, WI

Michael Vaknin. Phone: 773-447-0786

Email: Mvaknin1@comcast.net

Aircraft: Extra 300L

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics, RV aerobatics, Primary thru Unlimited Aerobatics.

Global Flight Research KSUE –

Sturgeon Bay, WI

Rob Vuksanovic, Phone: 920-664-14632

Email: skyharbourfarm@aol.com

Web: www.globalflightresearch.com

Aircraft: 7KCAB, Beechcraft 33C Bonanza

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics, RV aerobatics. Aerobic Aircraft Buyers Agent, Aircraft Delivery. Rob is an NAAA Appraiser/Buyers Sellers Agent

AUSTRALIA

OZAEROS MBW – Melbourne, Australia

David Pilkington, Phone: 0447 800 542

Email: David.Pilkington@ozaeros.com

Web: www.ozaeros.net

Aircraft: Decathlon

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics, Pitts checkout.

Alberta, Canada

Ted Sorensen—Calgary, Alberta, Canada

Ted Sorensen, Phone: 403-730-9486

Email: jamesel@shaw.ca

Aircraft: Student supplied only (so far)

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, RV aerobatics, Glider aerobatics

British Columbia, Canada

Brandon Dreyer CYNJ – Vancouver, British Columbia, Canada

Brandon Dreyer, Phone: (778) 242-2671

Email: brandondreyer@gmail.com

Aircraft: Student supplied at present time

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Competition aerobatics, Pitts checkout

Glacier Air CYSE – Squamish, British Columbia, Canada

Colette Morin, Phone: 604-898-9016

Email: info@glacierair.com

Web: www.glacierair.com

Aircraft: Super Decathlon 8KCAB

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics

Manitoba, Canada

Harv's Air Aerobatics Steinbach, Manitoba, Canada

Adam Penner, Phone: 204-326-2434 Fax: 204-326-4182

Email: info@harvsair.com

Web: www.harvsair.com

Aircraft: Pitts S-2B, Citabria

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics, Competition aerobatics.

Ontario, Canada

Ottawa Aviation Services Inc., CYOW – Ottawa, Ontario, Canada

Frank Brzobohaty, Phone: 1-613-737-2933

Email: info@ottawaaviationservices.com

Web: www.ottawaaviationservices.com/

Aircraft: Grob X2

Courses: Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics. Also provide training towards Transport Canada.

Diamond Flight Centre London Inc. YXU – London, Ontario, Canada

Mike Jones, Phone: 519-457-5777

Email: mjones@dfclondon.com

Aircraft: Grob G115C

Courses: Stall/spin recovery, Unusual attitude/upset training, Recreational aerobatics
Also provide training towards Transport Canada

Larnaca, Cyprus

Adams Flight LCLK – Larnaca, Larnaca, Cyprus

Andy Christou, Phone: +35799594307

Email: achristou@cytanet.com.cy

Web: www.adamsflight.com

Aircraft: Super Decathlon

Courses: Tailwheel endorsement, Unusual attitude/upset training, Recreational aerobatics, etc

Denmark

Lenair EKRK – Roskilde, Denmark

Lennart Wahl, Phone: +4529900037

Email: Mail@lenair.dk Web: www.lenair.dk

Aircraft: Bellanca Decathlon

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, etc.

Portugal

SKYPRO LPSR – Santarem, Portugal

Pedro Dias, Phone: +00351965084611

Email: skyproaerobatics@gmail.com

Web: www.skyproaerobatics.com

Aircraft: American Champion Super Decathlon

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, etc.

Granada, Spain

CLUB ACROBATICO ANDALUZ LEGR – Granada, Granada, Spain

Jose Gonzalez, Phone: +34958446019

Email: acrobacia@clubacrobaticoandaluz.org

Web: www.clubacrobaticoandaluz.org

Aircraft: Super Decathlon, Extra 300

Courses: Tailwheel endorsement, Stall/spin recovery, Unusual attitude/upset training, etc

Aerobatic Safety Checklist

5 of your best rules

BY BEN FREELOVE

OPERATIONS MANAGER / FLIGHT INSTRUCTOR, TUTIMA ACADEMY OF AVIATION SAFETY

Like most rewarding pursuits in life, aerobatic flight is not without its risks. In fact for many of us, aerobatic flying may be the highest risk activity we choose to participate in.

With that in mind I developed a personal aerobatic safety checklist several years ago. I use and teach these five simple rules to make aerobatic flying as safe as possible.

1

USE THE CORRECT AIRPLANE.

Aerobatics in non-aerobic aircraft is an obvious no-no. Even though low-*g* aerobatics might be possible in most non-aerobatic aircraft, there is simply no margin if something goes wrong. Performing a maneuver that places the airplane very close to its limit load factor gives no room for error. As well, many non-aerobatic types may not have favorable spin characteristics and might require non-published special technique. Don't be an unintended test pilot.

Even if your airplane is approved for aerobatics, keep in mind its performance limitations. There is never a good reason to push an airplane beyond its intended envelope. Doing so can easily lead to expensive repair bills or worse!

2

MAINTAIN TO AEROBATIC STANDARDS.

Aerobatic aircraft are specialized machines no different than a race car or a track motorcycle. They are often put through rigorous paces on every flight and use much more of their maximum performance envelope than a normal aircraft. Think of it this way: Every time you perform a simple hammerhead you are betting your life that the control system and aircraft structure are going to work properly. If not, you may only have one chance at survival: bailing out. That's a pretty sobering thought to me. Maintenance must be a high priority. If you are unsure of airworthiness, don't fly; it's that simple.

Along with maintenance comes the idea of the sterile cockpit. Anything loose in your airplane can easily kill you. This is of particular concern if you share your aircraft or fly a rental. Try to limit the amount of possible FOD that is placed inside your machine as much as you can. If something is missing, take the airplane apart and look. It's the only way to be 100 percent sure.

3

PROPER TRAINING.

It's my opinion that any pilot wanting to fly solo aerobatics in a given type should be exposed to the entire performance envelope of that aircraft. Experience in all possible spin modes is a must! This is of particular importance in high-performance machines. Simply learning pattern procedures and some basic aerobatics is not sufficient.

Currency of training is of equal importance. Whether it is dual or solo training, maintaining maneuver proficiency, spin currency, and *g*-tolerance is an important part of avoiding scares or an accident.

4 ALTITUDE!

This is the big one. No other single factor can regulate the risk we take when pursuing our sport. Altitude is time. Time to recover from an unintended spin. Time to deal with mechanical issues. Time to wake up from accidental g-induced loss of consciousness (G-LOC). Time to make a bailout decision.

The lower we fly the higher the risk, and this risk becomes exponential. Aerobatics performed lower than 2,000 feet above ground level (AGL) can easily be fatal. Below 1,000 feet AGL requires the utmost respect and attention to detail. As Sean Tucker once told me, "If you fly low-level aerobatics, you have to do everything right 100 percent of the time...and you **might** survive." His meaning is clear. The ground takes no prisoners.

The techniques for flying low aerobatics are different. The sight picture is vastly different and intimidating. Top-level experience and training is a must. Avoid the impulse to try it on your own or to show off at all costs.

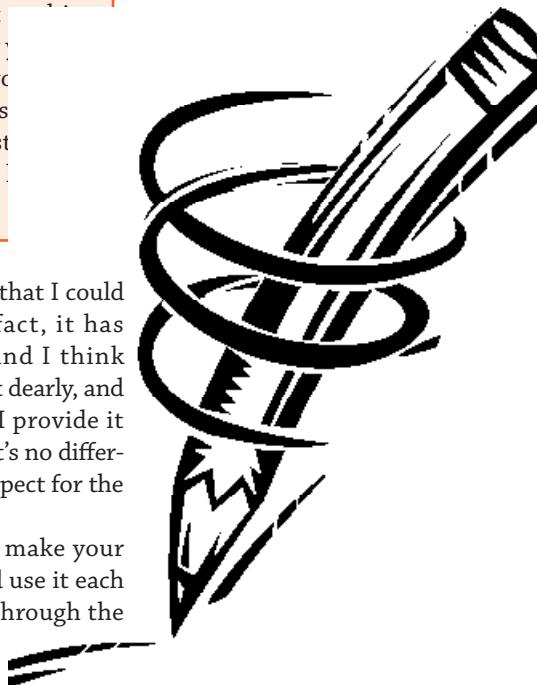
5 WEAR A PARACHUTE.

The last rule is an obvious one. Your expensive seat is most likely to blow out. Understand how it works and be prepared to use it. If a situation arises in which you know the airplane is certain to crash, BAIL OUT.

I'm sure there are things that I could add to this checklist. In fact, it has changed over the years, and I think about it a lot. I love our sport dearly, and it is important to me that I provide it the correct level of respect. It's no different than a mountaineer's respect for the mountain.

I encourage everyone to make your own aerobatic checklist, and use it each time you decide to tumble through the sky!

Fly high. Fly safe.



*Who would ever think
24 feet of nylon could
feel so good?*

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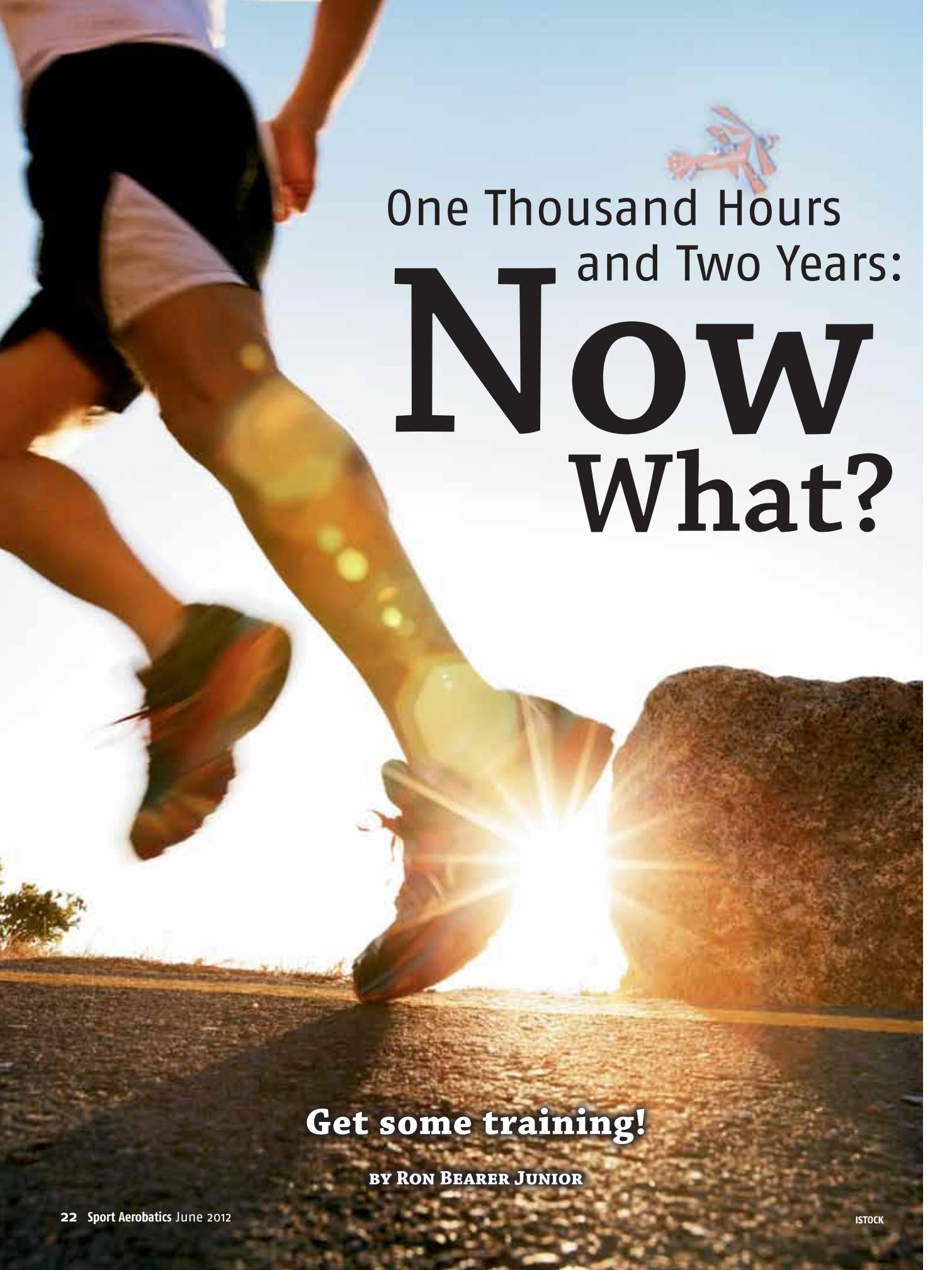
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One Thousand Hours
and Two Years:
Now
What?

Get some training!

BY RON BEARER JUNIOR

The next logical question is, “Am I ready for this plane?”

Getting to this point was a long road. A lot of time and planning went into the building of the plane, but there was some planning and training for this part of the journey as well. EAA has a nice packet available for homebuilders, which includes all kinds of information on registering and testing your new aircraft. The step-by-step approach for taxi tests, flight tests, and flying off the first 40 hours is a valuable resource.

The new plane is tested, balanced, and ready to go. The next logical question is, “Am I ready for this plane?” With hundreds of hours in a Cherokee, how could I possibly be ready to fly a +/- 9g, single-seat acro machine? My goal from the start was to build something that was unique for air shows. When the public stands next to this strong little biplane, with its 16-foot 8-inch wingspan and towering height of 4 feet 6 inches, it will be something they will remember. Yes, this thing is small!

I started talking with pilots at my airport, Space Coast Regional (KTIX), to get information on just how to become an air show pilot. With luck, I met Ken Terry of the Valiant Air Command. He was quick to point out that exercise, including running, should be included in my flight training. At the time, I did not have my tailwheel endorsement and also needed aerobatic training. When we talked about my next step to become an air show pilot, he recommended an aerobatic coach who just moved to Florida. I was quick to call and set up an appointment to start my training in aerobatics. My wife, Rocio, flew over with me to see what plane I would be flying and to meet my coach. Having a spouse who supports my passion for aviation has been a blessing.

After landing at Leesburg Airport (KLEE), we parked the plane and walked into a hangar that was filled with many exciting planes. The first one that got my attention was the Pitts S-2B. Next to it was parked a Zlin 242L. As soon as I walked past those, there was a very sharp-looking

Editor's note: This is the second in a series of articles by Ron Bearer Junior about his experience building, training and then flying his Baby Lakes biplane. You may read his first article in the October 2011 issue of Sport Aerobatics.



biplane, the Wolf Pitts! At the time, I didn't know anything about this special plane, nor the pilot who built it. That was about to change. My aerobatic coach was Steve Wolf. We talked about my goals and experience and created a plan to get me ready for

my almost complete Baby Great Lakes.

The first few flights were spent getting me used to the Pitts S-2B. I flew it from the front seat because it was a closer position and feel to how my own plane would be. Getting my tailwheel endorsement in an

S-2B was fun! The flights were spent practicing landings, stalls, and spins. Of course we would add in a loop, roll, hammerhead, and a Cuban-eight or two in there as well. When the tailwheel endorsement was complete, we spent a lot of time on safety.



MIKE STEINEKE



The first few flights were spent getting me used to the Pitt S-2B.

BONNIE KRATZ



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Before we dug into perfecting aerobatic maneuvers, I had done every kind of spin you could think of. Steve pointed out and demonstrated all aspects of a spin. These included normal, accelerated, flat, and inverted flat, just for fun. I learned firsthand how a spin feels when power is left in, versus pulling the throttle back to neutral. Feeling it really left an impression.

One of my favorite moments was when Steve asked me to put the plane in an inverted flat spin. The directions were simple. Slow down to stall speed, flip it on its back, stall it inverted using forward stick, aileron, and rudder to hold the flat spin. It sounded easy. I slowed the plane down, and when it was close to stall speed I pulled back on the stick, thinking I had enough energy to flip it onto its back to enter the spin. Of course, he meant roll the plane inverted, not back flip into it, so I did not have enough energy to get it all the way over. Coming over the mic in a calm, relaxed voice, Steve said, "I want to see how you're going to get out of this one." Fixing my uniquely created unusual attitude



The author and his wife standing by Ron's Baby Lakes.

was no problem. He laughed and then described in more detail how to correctly get into the spin. Thinking back now, it was a true test of how I could mess up a maneuver and end up in some exciting, unplanned unusual attitude. Perhaps, he was testing

me as well to see how my training was going.

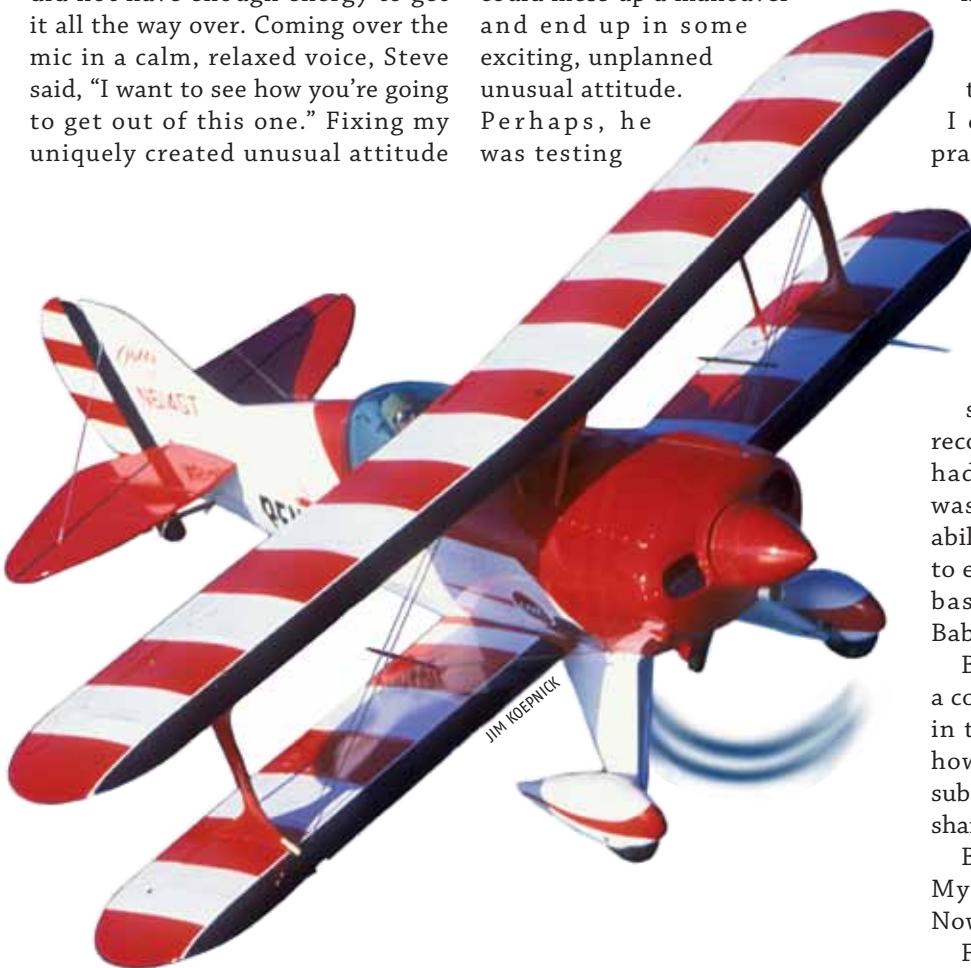
When I had a solid feel for the spins and the plane, we spent the next flights purposely botching aerobatic figures. This was one of the most valuable parts of my training. We simulated problems I could get into when I would practice aerobatics on my own. An

example was to fly a loop with too slow an entry speed and get into an inverted stall at the top. Being there really helped me in a few ways. Knowing the feeling of the plane when it gets into the stall condition and proficiency in recovering from it is priceless. Steve had knowledge about the plane I was building, which gave him the ability to explain and teach me what to expect and how to fly maneuvers based on the personality of the Baby Lakes.

By the end of my training, I had a complete feel of what to do if I got in trouble and, more importantly, how to practice safely. There is no substitute for proper training and the shared knowledge of a great coach.

Back to the original question. My new acro mount is complete. Now what?

Fly hard...fly fast...fly safe! **IAC**





What if . . .?

HERE I AM ON MY FAVORITE airline where bags fly free writing this column. I survived another Sun 'n Fun. I did not miss the tornadoes this year. However, humor is alive and well within the SNF crew. Our exhibit building had a sign on the outside door that said, "This building was tested to 110 mph winds March 2011." I know because I was in it.

My bailout seminar was well-attended. I want to thank those who attended and the IAC members for inviting me. If you missed my seminar at Sun 'n Fun, you can go to www.EAA.org/webinar and sign up for my bailout seminar or one of the many other great seminars. They're free, and you do not have to be a member of EAA or IAC. You can also join either or both online, if you so desire, and then you don't have to keep borrowing or stealing someone else's magazine.

In a previous column I asked you to consider what would happen if you had to bail out during a flight and to consider what would happen if the center of gravity (CG) suddenly changed. It's going to be difficult enough to say goodbye to your dream machine, but what if? What-ifs cover a lot of possibilities. What if your front-seat passenger bailed out and all of a sudden the nose pitched straight up? What if you're flying your single-seat aircraft, you've jettisoned the canopy, and when you stood up to exit, the nose of your aircraft pitched up. Could this happen to you? You bet it could, and it has happened. Have you considered the possibility of having to add nose-down trim in a hurry before you're pinned to the turtledeck or the back of your seat? It's already gone from a great day to the worst day of your life, and it's not over yet. You may only have one or two seconds to deal with it. Can you think of other (what-if) scenarios unique to your aircraft that could make the difference between buying your parachute rigger a bottle of their

favorite booze or you buying the farm?

Now is the time to prepare and have your game plan indelibly inscribed in your head. Remember, when you have an emergency, time is critical. Not being prepared may cost you more than time. You've heard me preach before about the four mental steps on bailing out. I call the first step the "Oh s*@*" step or the "I have a problem" step, followed quickly by step two. I call step two the "What do I do?" step. This is immediately followed by step three, the "How do I do it step," and finally as the clock ticks away, you reach

As the flying season progresses and the temperatures rise . . .

step four, which I call the "Doing it step." Wouldn't it be nice to eliminate steps two and three and go directly from the denial of step one to step four? Having spoken to many people who have bailed out, I've come to the conclusion you'll never skip step one, but being prepared and having a plan will move you directly to step four after a very brief expletive-deleted step one. Time is critical. Having committed your bailout procedures to muscle memory will save you time and quite possibly your life.

As the flying season progresses and the temperatures rise, I've received several calls from concerned parachute riggers about parachutes that came to them for servicing with the suspension lines sticky or lightly stuck together. I've also received a couple in my shop. They all have one thing in common. They've come from hot, humid climates. This can also include the trunk of your car. This condition doesn't appear to affect the opening of your parachute and can easily be neutralized by your rigger. Some parachutes have resin-treated suspension lines to

help protect them from abrasion and damage. On a few canopies the amount of resin treatment on the lines was more than ordered. Kind of like the waitress putting too much butter on your toast. That's why I order mine dry. On very rare occasions the lines can become sticky, especially—as I mentioned before—in a hot, humid climate.

If your rigger finds your lines this way and is concerned, you may explain the following solution. They'll be amazed at your knowledge. Tell your rigger they should soak the lines in Woolite or other mild soap solution for a few hours. Then, *very gently massage the lines in their hands for a few minutes*. This loosens any remaining resin, and it washes right off. *Do not use hot water*. Cold or lukewarm water only. Rinse the lines in fresh water several times. Drain the water and squeeze the lines gently. *Do not wring them out*. Hang or lay them on a clean surface (like towels) to dry thoroughly. One or two days will be sufficient at room temperature. Your rigger should replace all the rubber bands that held the lines in place, just in case some of the resin has stuck to them. If you ship your parachute to someone to pack, ask your rigger to check your lines carefully, especially if you live and fly in a hot, humid climate. You can also have your rigger call or e-mail me, if they have any questions.

Speaking of questions, I could always use a few more. My Weegie Board (or Quija Board) could use your help. I also have several seminars planned in the coming months. If you're planning an event or competition, please consider a bailout seminar. Check my website for details and for upcoming seminars. I look forward to hearing from you.

Remember to practice, practice, practice your bailout procedures before and after each flight.

Learn it – link it – live it.

Fly safely and blue skies.

IAC

TECH TIPS

"A PITTS IS A PITTS IS A PITTS"

REPRINTED FROM THE INTERNATIONAL AEROBATICS CLUB TECH TIPS MANUAL NO 1, 1981

Or is it? In the United States there are two government agencies that investigate aircraft accidents—the Federal Aviation Administration (FAA) and the National Transportation Safety Board (NTSB). Both agencies use computers to file and then distribute information. Other countries have similar bureaus that work in the same manner.

A couple of months ago we received from the NTSB a computer printout sheet entitled "Briefs of Accidents" on which was listed File Number 3-1931 with the following information:

"Aircraft Data — Pitts Sl-C
Injuries — Crew one, fatal
Damage — Destroyed
Type of Accident — Airframe failure in flight

Probable Cause(s) — Pilot in command - exceeded designed stress limits of aircraft

Factors — Pilot in command - failed to follow approved procedures, directives, etc.

Miscellaneous acts, conditions — Unwarranted low flying - overload failure - separation in flight."

Now, if reading a report like that doesn't bring a Pitts driver to attention, ain't nothin' goin' to. However, the IAC Technical Safety Committee received this NTSB computer data approximately nine months after the accident and by that time we had a pretty good handle on the situation including the complete report upon which the computer printout was based, photographs of the wreckage, input from an IAC chapter president who knew the party involved and lived in the area of the accident, and information from Curtis Pitts of Pitts Aircraft (now Aerotek) and Sam Macre of Razorback Fabrics.

Presented below are excerpts of im-

portant information quoted from the sources that were contacted by the IAC T.S. Committee.

First, some info from NTSB Form 6120.4, "Factual Aircraft Accident Report - General Aviation" — (This is the full 12-page report on the accident in question.)

Now, if reading a report like that doesn't bring a Pitts driver to attention, ain't nothin' goin' to.

"Part U — Narrative Statement of Pertinent Facts, Conditions, and Circumstances.

Section A. **Resume:** Following completion of a loop, both left wings separated from the fuselage and the aircraft crashed in the water, fatally injuring the pilot.

Section B. **History of Flight:** Mr. (deleted), a private pilot, employed by (deleted) Aviation, Inc., told me he saw the aircraft complete two loops. (Name deleted) further told me that the second loop was completed at an estimated 2000' with the aircraft in a shallow dive, and when the aircraft was at an estimated 400' to 500' altitude he saw a wing come off.

Section D. **Damage to Aircraft:** The aircraft as such was destroyed. The impact in approximately three feet of water was near vertical. The propeller showed no evidence of damage, however, the propeller's spinner was pushed straight back and had the imprint of the heads of all the propeller's attach bolts.

The aircraft's fuselage, landing gear and empennage were a completely mangled mass of steel tubing. The

mangled and broken right top and bottom wing were found with the main wreckage, with the right aileron still attached to the lower right wing. The left top wing, the larger portion of which was in two parts, was found by the (deleted) County Sheriffs personnel floating in the water south of the main wreckage. Numerous small scraps of wood from the bottom left wing, and the detached shattered left aileron, were found floating in the water near the left top wing.

The left outer bay I strut, with flying and landing wires attached, remained attached to the main wreckage.

The two largest portions of the left bottom wing that was retrieved were two portions of the rear spar, each approximately 18 inches in length, with one of the two aileron hinge brackets attached to each piece.

Most of the wooden pieces of the left aileron remained in its envelope covering. The left aileron spar was broken in two at the points where the two 3/16 inch bolts that attached the aileron to each of its two hinges were bolted through the aileron spar.

The bolts were not pulled through the aileron spar prior to its breaking in two.

Section G. **Aircraft Information:** The aircraft was a modified version of the amateur built Pitts Special in that the wing span was approximately three feet longer and the fuselage two feet longer.

Also, the aileron ribs were made from 1A inch mahogany plywood with no reinforcement at their trailing edges. Each rib was attached to the aluminum V trailing edge with two 4/32 metal screws of an inch long, with one screwed into the plywood rib from the top and one from the bottom.

The ailerons also had aluminum

fixed trim tabs approximately 6 inches long and one inch wide attached to their trailing edge. The left tab was found bent up and the right down on an approximate 30 degree angle.

(Name deleted) an Airframe and Powerplant Mechanic holding an Inspection Authorization, told me that he sold the aircraft to (name deleted). He further told me that during the time he owned the aircraft, he had experienced considerable aileron control problems but this was corrected by further crimping the aileron's aluminum V trailing edges and adding the fixed trim tabs. He also stated the trim tabs were only slightly bent when he owned the aircraft.

Section N. Wreckage: In addition to that as described under Item D of this report, the following was noted: the left aileron, in addition to having its spar broken into at its hinge points, had a considerable amount of the finish missing from its razorback fabric covering. Also, the fabric tape along the trailing edge of the left aileron was pulled loose from the fabric and extended up along most of the top of its trailing edge."

In Part O — Instrument Readings — airspeed indicator impacted at 208 mph.

After going through the NTSB report we contacted Curtis Pitts for his comments. Below is what Curtis had to say:

"After reading and analyzing the contents of the report we have come up with a Sherlock Holmes type deduction of the sequence of events leading up to the failure.

1. Excessive loads were imposed on rear spar of lower wing by aileron, (probably by flutter developing in the left lower aileron). a. Flutter could have been excited by the loose tape at the trailing edge of the aileron.

2. Rear spar of lower wing failed due to excess aileron loads. We note that two sections 18 in. long with aileron hinge bracket attached were found, apparently ripped right out of the wing. Also note that one hinge bracket was inboard of the "I" strut and one outboard. The section in between was still attached to "I" strut and aircraft.

3. The damaged lower wing folded

rearward due to drag loads plus torsion loads from the upper wing induced by lift and drag. This torsion load was transmitted to the lower wing in a rearward direction by the "I" strut causing the upper and remaining portion of the lower wing on this side, to be twisted from the aircraft.

Since the wings on this aircraft were of longer span than the standard wings the natural frequency of the wing would be somewhat lower. This would probably make flutter possible at considerably lower airspeed than the standard wing.

Since we do not know the actual natural frequency of the longer wings or ailerons we can not make a very good guess as to what speed would be critical."

Following up the loose tape-aileron flutter idea, the IAC T.S. Committee called Sam Macre of Razorback Fabrics in Manilla, Arkansas. Sam advised that he had never heard of Razorback tapes pulling loose from Razorback fabric but hastened to add that he has seen many unapproved covering jobs that used Razorback fabric and either Dacron or Grade A tapes. He said that using either Dacron or Grade A in conjunction with Razorback may give a less than satisfactory bond and is not the recommended Razorback process.

By the time we had gotten this far the accident investigation was all over but the shouting and there was not much chance of determining anything further about the tapes or the covering job.

Now that we have read the computer printout data and the pertinent background information, this brings us full circle to the significance of the title of this article, "A Pitts is a Pitts". The NTSB computer has this accident on file as a Pitts aircraft, airframe failure in flight, aerobatics, etc., and any future request for computer information sorts on Pitts a/c, or aerobatic accidents, etc. will have the computer spitting out File Number 3-1931 as noted in the beginning of this article. Is this good data? Do you think that an aircraft, in this case a Pitts, that has been modified both in construction details and basic design — three foot longer wing span and

two foot longer fuselage — should be in the same classification as an "unmodified" version? Was this aircraft a Pitts Sl-C? What about the computer printout listing for probable cause(s) of the accident—"Pilot in command exceeded design stress limits of aircraft"? It is highly probable that no one has ever figured the design stress limits of a Pitts that has a two foot longer fuselage and a three-foot longer wing span. And does in fact the idea of exceeding "stress limits" fit in with the actual observed data and probable cause of the accident?

The purpose of this article is not to second guess the accident investigators or to belittle the NTSB or any other government agency but only to do the following:

(One) — To point out the shortcomings of some types of computer information. Everyone knows that water is composed of oxygen and hydrogen and when water is broken down into its basic elements, neither of these elements bears any resemblance to the original substance — water. This "corruption by division and classification" (or whatever you would like to call it) holds true for all complicated information (such as aircraft accidents) that has to be broken down and classified to fit into certain slots in a computer. IAC members should bear this in mind when dealing with computer information, or studies based on computer information, that deals with aerobatic aircraft, or aerobatic accidents.

(Two) — To present background information for those IAC members who had already read the NTSB "Briefs of Accidents" File Number 3-1931 computer printout and had had questions regarding this particular accident.

(Three) — As is the case with all IAC T.S. articles, to disseminate as widely as possible, any information of a technical/safety nature that may help to make flying sport aerobatics safer and more enjoyable. The above article has some good pointers by Sam Macre of Razorback Fabrics and by Curtis Pitts of Pitts Aircraft (now Aerotek). To these two gentlemen and the others who contributed, IAC thanks. **IAC**

CONTEST CALENDAR

Mark your calendars for these upcoming contests. For a complete list of contests and for the most up-to-date contest calendar, visit www.IAC.org. If your chapter is hosting a contest, be sure to let the world know by posting your event on the IAC website.

Ohio Open (Mid-America)

Thursday, June 14 – Saturday, June 16, 2012
Practice/Registration: Thursday, June 14
Rain/Weather: Sunday, June 17
Power: Primary through Unlimited
Location: Union County airport (MRT): Marysville, OH
Region: Mid-America
Contest Director: Jeff Granger
Contact Information: Primary Phone: 574-721-4340
Alternate Phone: 614-505-6555
E-Mail: jgranger@columbus.rr.com
Website: www.iac34.com

Midwest Aerobic Championship (South Central)

Friday, June 22 – Sunday, June 24, 2012
Practice/Registration: Friday, June 22
Power: Primary through Unlimited
Location: Seward Municipal (SWT): Seward, NB
Region: South Central
Contest Director: David Moll
Contact Information: Primary Phone: 402-613-5422
E-Mail: davidmoll66@gmail.com

Apple Cup (Northwest)

Friday, June 22 – Saturday, June 23, 2012
Practice/Registration: Thursday, June 21
Rain/Weather: Sunday, June 24
Power: Primary through Unlimited
Location: Ephrata (EPH): Ephrata, WA
Region: Northwest
Contest Director: Rochelle Oslick and Jerry Riedinger
Contact Information: Primary Phone: 425-442-8280
E-Mail: volez@earthlink.net
Website: www.iac67.org

U.S./Canada Aerobic Challenge (Northeast)

Saturday, June 23 – Sunday, June 24, 2012
Practice/Regist.: Thursday, June 21 – Friday, June 22
Power: Primary through Unlimited
Location: Olean Airport (KOLE): Olean, NY
Region: Northeast
Contest Director: Patrick Barrett
Contact Information: Primary Phone: 716-361-7888
E-Mail: cbpbmb@aol.com
Website: IAC126

Wildwoods AcroBlast (Northeast)

Thursday, June 28 – Sunday, July 1, 2012
Practice/Registration: Thursday, June 28–Friday, June 29
Power: Primary through Unlimited
Location: Cape May County Airport (WWD): Lower Township, NJ
Region: Northeast
Contest Director: Craig B. Wisman
Contact Information Primary Phone: 717-877-8933
Alternate Phone: 717-566-5665
E-Mail: cwisman@comcast.net
Website: www.iac52.org, www.iac58.org

Salem Regional Aerobic Contest (Mid-America)

Saturday, June 30 – Sunday, July 1, 2012
Practice/Registration: Friday, June 29
Power: Primary through Unlimited
Location: Salem – Leckrone Airport (SLO): Salem, IL
Region: Mid-America
Contest Director: Bruce Ballew
Contact Information: Primary Phone: 314-369-3723
E-Mail: bruceballew@earthlink.net

Michigan Aerobic Open (Mid-America)

Saturday, July 7 – Sunday, July 8, 2012
Practice/Registration: Monday, July 2 – Friday, July 6
Power: Primary through Unlimited
Location: Reynolds Field (JXN): Jackson, MI
Region: Mid-America
Contest Director: Don Weaver
Contact Information: Primary Phone: 989-859-7237
Alternate Phone: 989-859-7237
E-Mail: donflies@chartermi.net
Website: <http://iac88.org/contest.html>

Revenge of the Aerobatist (Southwest)

Saturday, July 14 – Saturday, July 14, 2012
Practice/Registration: Friday, July 13
Rain/Weather: Sunday, July 15
Power Categories: Primary Sportsman
Location: Redlands Municipal (REI): Redlands, CA
Region: Southwest
Contest Director: Casey Erickson
Contact Information Primary Phone: 619-417-0839
E-Mail: Casey@allwaysair.com

Green Mountain Aerobatics Contest (Northeast)

Friday, July 13 – Sunday, July 15, 2012
Practice/Registration: Thursday, July 12–Friday, July 13
Power: Primary through Unlimited
Location: Hertness State Airport (vsf): Springfield VT
Region: Northeast Contest
Director: Bill Gordon
Contact Information Phone: 802 533 7048
E-Mail: wsgordon@earthlink.net

High Planes Hypoxia Fest (South Central)

Saturday, July 14 – Sunday, July 15, 2012
Practice/Registration: Friday, July 13
Power: Primary through Unlimited
Location: Sterling Municipal Airport (STK): Sterling, CO
Region: South Central
Contest Director: Dagmar Kress
Contact Information Primary Phone: 303-887-4473
E-Mail: dagmarkressbassett@mac.com
Website: www.iac12.org

Robert L Heuer Classic (Mid-America)

Saturday, July 14 – Sunday, July 15, 2012
Practice/Registration: Friday, July 13
Power: Primary through Unlimited
Location: DeKalb Municipal Airport (DKB): DeKalb, IL
Region: Mid-America
Contest Director: Jim Klick
Contact Information Primary Phone: 815-258-0047
Alternate Phone: 815-609-7165
E-Mail: jimklick@sbcglobal.net
Website: iacchapter1.org

Hoosier Hoedown (Mid-America)

Friday, August 3 – Sunday, August 5, 2012
Practice/Regist.: Thursday, August 2–Friday, August 3
Power: Primary through Unlimited
Location: Kokomo Municipal Airport (OKK): Kokomo, IN
Region: Mid-America
Contest Director: Mike Wild
Contact Information Primary Phone: 765-860-3231
Alternate Phone: 765-864-0096
E-Mail: mike.wild@comcast.net
Website: www.hoosierhammerheads.com

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510-785-7070

Doug Yost Challenge (Mid-America)

Friday, August 10 – Sunday, August 12, 2012

Power: Primary through Unlimited

Location: Spencer Municipal Airport (SPW): Spencer, IA

Region: Mid-America

Contest Director: Justin Hickson

Contact Information Primary Phone: 651-338-3345

E-Mail: jhisbatman@yahoo.comWebsite: www.iac78.org/Index.html**Kathy Jaffe Challenge (Northeast)**

Friday, August 17-Sunday, August 19, 2012

Practice/Registration: Thurs., August 16-Fri., August 17

Power: Primary through Unlimited

Location: South Jersey Regional & Flying W (VAY), Lumberton, NJ

Region: Northeast Contest

Director: Mark L. Mattioli

Contact Information Primary Phone: 609-634-0327

Alternate Phone: 609-634-0327

E-Mail: ce2n6gk@gmail.comWebsite: www.iac52.org**Harold Neumann Barnstormer (South Central)**

Saturday, August 18 – Sunday, August 19, 2012

Practice/Registration: Friday, August 17

Power: Primary through Unlimited

Location: New Century AirCenter (IXD), Olathe, KS

Region: South Central

Contest Director: Grant Wittenborn

Contact Information Primary Phone: (913) 369-5569

E-Mail: Grant.Wittenborn@gmail.comWebsite: www.iac15.org**Beaver State Regional (Northwest)**

Friday, August 24 – Saturday, August 25, 2012

Practice/Registration: Thursday, August 23

Rain/Weather: Sunday, August 26

Power: Primary through Unlimited

Location: Eastern Oregon Regional Airport (PDT): Pendleton, OR

Region: Northwest

Contest Director: John Smutny

Contact Information: Primary Phone: 2063997097

E-Mail: johnsmutny@gmail.comWebsite: <http://iac77.eaacapter.org/>**Upper Canada Open (Mid-America)**

Saturday, August 25-Sunday, August 26, 2012

Practice/Registration: Friday, August 24

Power: Primary through Unlimited

Location: Hanover/Saugeen Municipal (CYHS), Hanover, Ontario

Region: Mid-America Contest

Director: Mike Tryggvason

Contact Information Primary Phone: 519-873-0327

Alternate Phone: 519-873-0327

E-Mail: aerobaticscanada.ch3@gmail.comWebsite: <http://aerobaticscanadachapter3.blogspot.com>**Happiness Is Delano (Southwest)**

Saturday, September 1 – Sunday, September 2, 2012

Practice/Registration: Friday, August 31

Rain/Weather: Monday, September 3

Power: Primary through Unlimited

Location: Delano Municipal Airport (DLO), Delano, CA

Region: Southwest

Contest Director: Steve DeLaCruz

Contact Information Primary Phone: 760 963 6426

E-Mail: DelanoCD@iacChapter26.orgWebsite: IACChapter26.org**Hill Country Hammerfest (South Central)**

Saturday, September 1-Sunday, September 2, 2012

Practice/Registration: Friday, August 31

Power: Primary through Unlimited

Location: Llano Municipal (AQO), Llano, TX

Region: South Central

Contest Director: John Harlan

Contact Information Primary Phone: 512-632-9588

Alternate Phone: 512-259-9028

E-Mail: jmharlan@earthlink.netWebsite: www.iact07.org**Ace's High Aerobatic Contest (South Central)**

Saturday, September 8 – Sunday, September 9, 2012

Practice/Registration: Friday, September 7

Power: Primary through Unlimited

Location: Newton City Airport (KEWK): Newton, KS

Region: South Central

Contest Director: AJ Hefel and Ross Schoneboom

Contact Information: Primary Phone: 316-648-5057

E-Mail: ahefel@cox.net schoneboomr@prodigy.netWebsite: <http://www.iac19.webs.com>**East Coast Aerobatic Contest (Northeast)**

Saturday, September 8-Sunday, September 9, 2012

Practice/Registration: Friday, September 7

Power: Primary through Unlimited

Location: Warrenton-Fauquier (HWY), Midland, VA

Region: Northeast

Contest Director: Scott Francis

Contact Information Primary Phone: 703-618-4132

Alternate Phone: 703-327-3135

E-Mail: s.francis@ieee.org**US National Aerobatic Championship (South Central)**

Sunday, September 23 – Saturday, September 29, 2012

Practice/Registration: Saturday, September 22

Rain/Weather: Sunday, September 30

Glider Categories: Sportsman through Unlimited

Power: Primary through Unlimited

Location: North Texas Regional Airport (KGYI), Sherman, TX

Region: South Central

Contest Director: Aaron McCartan

Contact Information Primary Phone: (515) 570-3537

E-Mail: aaron.mccartan@gmail.comWebsite: <http://www.iacusn.org/Nationals/>**The Winner's Propeller!***Fly the Champions' Choice!**like Patty Wagstaff
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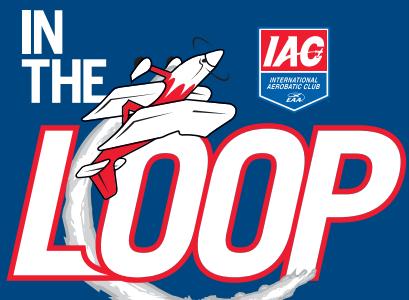
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