
SPORT
Aerobatics
AUGUST 2016
OFFICIAL MAGAZINE of the INTERNATIONAL AEROBATIC CLUB
IAC
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EAA
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N260AB
Pitts
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Lycoming
CLEVELAND
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Somehow we have to continue to stress that training for emergency situations is totally different from doing spin training (which I am very much in favor of as well).

—Bill Finagin

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The Pitts S2-B. Photo by David Carlson.

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EDITOR'S LOG

BY REGGIE PAULK

The Adventure of AirVenture

As I sit here writing this, AirVenture is less than a month away. By the time you're reading these words, it will have already passed us by. It's a strange feeling writing about an event in the future, knowing our members are reading about something in the past.

Throughout the year, I talk to so many pilots who tell me they haven't yet been to Oshkosh, but that they really want to someday. No matter who you are, if you are interested in aviation, someday is something you should endeavor to turn into reality.

This summer seems to be rapidly passing us by, but what a beautiful summer! I live high in the Colorado Rockies—in fact I'm almost 2 miles above sea level at 9,000 feet. Many people assume that, since the IAC's headquarters is in Oshkosh, the editor lives there as well. I work remotely from my home in Colorado—90 miles west of Denver. It affords me the opportunity to enjoy the grandeur of the Rockies while working with the wonderful people of the IAC—and to visit Oshkosh a couple times a year!

Every year since 2008, I've made my way to Oshkosh through endless fields of soybeans, corn, and wheat for the fun and excitement that is AirVenture. But I was attending vicariously through magazines and other media long before that. I am particularly blessed to have the privilege of attending an event that is a dream for so many. I like knowing I might play at least a tiny part in stoking the fire of desire to attend someday.

Throughout the year, I talk to so many pilots who tell me they haven't yet been to Oshkosh, but that they really want to someday. No matter who you are, if you are interested in aviation, someday is something you should endeavor to turn into reality. Believe me—it's worth it! The beauty of AirVenture is that the more you go, the more people you'll meet. Every year, I look forward to spending quality time with people of the IAC I see only for that special week. But I'll tell you, it's like a homecoming. The IAC pavilion is home base for so many special characters, and it's at one of the best locations on the field.

I look forward to writing to you next month—after I've seen all the wonderful people who come together in Oshkosh. *IAC*

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

PRESIDENT'S COLUMN

BY MIKE HEUER, IAC PRESIDENT, IAC 4

More on AirVenture and ADS-B

I AM WRITING THIS COLUMN LESS THAN TWO WEEKS before I head north from my home in the Memphis area to Oshkosh for EAA AirVenture 2016. I believe this year's AirVenture will be one of our best ever, and we will have a full report in this magazine later in the fall. Our editor, Reggie Paulk, will be in attendance, as will IAC's official photographer, Evan Peers. They will do a fine job of collecting information and photos for those of you who could not attend.

AirVenture is an event that brings more IAC members and aerobatic enthusiasts to one place at one time than any other. During the course of the week, we talk to dozens of people, renew friendships, and make new ones. It has been one of the highlights of my year since I first attended the EAA fly-in in Rockford, Illinois, in 1963, when I was 13 years old. I still have a vivid memory of a Pitts S-1C N8L that year as Rockford served as the debut of this beautiful airplane.

All of this came full circle for me when we celebrated the 70th anniversary of the Pitts Special at last year's AirVenture. Grassroots aerobatics has been the IAC's hallmark since our beginning in 1970. But what grassroots activities make possible is the beginning of a road map for aspiring aerobatic pilots who wish to make an avocation of aerobatics beyond just the benefits of training. We believe, quite simply, that every pilot should be exposed to aerobatics. The benefits need no further explanation to all of you. But after that, then what? The IAC provides the activities and the organization for you. The 15 American aerobatic pilots we honored in our AirVenture exhibit this year all started out at the grassroots. They all rose to the highest levels in aerobatic achievement, and many were pioneers and innovators on top of it.

Last month in my column I wrote about the problems with ADS-B "out" equipment and the fact that aerobatic aircraft today could be shown to be in non-compliance because the specifications for the equipment did not take into account the parameters of aerobatic flight in our types of aircraft. Since then, a lot of work has been done.

In mid-June, the "Equip 2020" working group met in Washington, and I am happy to report that EAA's Sean Elliott brought the problem to the group's attention. We had also been in contact with AOPA and its governmental affairs staff who were thorough, professional, and quick in response. As a result of this meeting, and with EAA and AOPA representatives present who were well familiar with it, I can report that the FAA acknowledges the issue exists and has made a verbal agreement that no action will be taken against aerobatic pilots for ADS-B performance non-compliance. We are waiting for written confirmation of this agreement, but this is very good news.

Our government relations committee has agreed to the following guidance for members to demonstrate good faith as follows:

1.) After ADS-B "out" implementation, make a straight and level, plain old cross-country flight of 30 minutes or more. Do not perform any aerobatic maneuvers, not even steep turns.

2.)No steep climbs or rapid descents are to be flown on this documentary flight.

3.)At the end of the flight, request a Performance Monitor Report to document the installed equipment is in compliance.

4.)Print this report and keep it in the aircraft.

Never request a Performance Monitor Report for any aerobatic flight. Should you be contacted by FAA regarding any alleged ADS-B "out" non-compliance, contact the IAC immediately. You have my e-mail address accompanying this article. Send it to me, and I will get it to our people. This should be done before responding or taking any action.

In a message to the IAC dated June 27, AOPA also promised an upcoming article on the subject that will highlight the aerobatic issue. The FAA is providing information for the article as well, so it is participating in getting the word out. We hope for formal guidance soon.

On another note, if I were to offer a personal recommendation, I would be in no hurry to install the ADS-B "out" equipment in the first place. It must be installed by January 1, 2020. But not a minute before.

This an excellent example of your representatives in action, and I am delighted with the work of the IAC government relations committee and Wayne Roberts in particular, who serves as vice chair of the committee. My thanks to EAA's Sean Elliott and the governmental affairs staff at AOPA. These organizations are worthy of your support, and your dues money is having good effect. ***IAC***

Please send your comments, questions, or suggestions to *president@iac.org*.


SP-2473

Nancy Blank

Game Changer

BY GARY DEBAUN WITH NANCY BLANK

• • •

In 1987 it was pretty much unheard of to find women competing at the world level in Unlimited glider aerobatics, and they were not allowed to medal in competition, but they were given flowers, just for being there. American pilot Nancy Blank changed all that.

It was Christmas 1979 and Nancy, who was terrified of roller coasters and heights, asked for a gift certificate for a glider ride at Estrella Sailport, just a short drive south of the sprawling megalopolis of Phoenix, Arizona. One flight was all it took; Nancy was hooked. In March 1980 she soloed, then shortly thereafter completed a successful checkride on a day when the winds surrounding the Estrella Mountains were anything but calm.

Christmas 1982 rolled around with yet another gift certificate, this one for an aerobatic glider ride in a Schweizer 2-32. Les Horvath, co-owner of Estrella Sailport, was the pilot. Nancy held onto her seat belts until her fingers turned white—there was no way she would ever be an aerobatic pilot, she thought. She was wrong; the aerobatic lessons began in September 1983.

Nancy trained in a Grob 103A. It took 20 lessons before she was allowed to do simple loops by herself. Her first aerobatic solo was supposed to start at 5,000 feet AGL, but Nancy couldn't wait and jumped off tow at 4,000 feet. She did loop after loop until there was no altitude left for another one.

She went on to earn her commercial glider and flight instructor/glider ratings and started working as a full-time instructor at Estrella Sailport in May 1984. She did not start teaching aerobatics right away—first she had to complete a checkride with Les. Nancy and Les flew out to the far end of the Estrellas, 25 miles away from the sailport. Les then rolled the Grob inverted and flew 20 minutes back down the ridge. Neither spoke a word during that long inverted flight. At 700 feet back in the pattern, Les rolled upright and told Nancy to land. The next day she started giving aerobatic demo rides and shortly thereafter began teaching aerobatics.

The first U.S. glider aerobatic contest was held at Estrella Sailport in March of 1985. Les finished 1st and Nancy 2nd.

The first U.S. glider aerobatic contest was held at Estrella Sailport in March 1985. Les finished first and Nancy second. Les mentioned that the 1985 World Championships were in Austria. At first Nancy thought there was no way she could go because she and her husband had a very large daily paper route and a bunch of animals to care for. But in August she was on an airplane headed for Austria. The U.S. Team was made up of Les, Charles Kalko, Dave Keeling, Bill

I called this article "Game Changer" because Nancy's accomplishments in the 1987 World Glider Aerobatic Championships forced the Europeans to rethink the way they looked at women pilots in competition.—Gary DeBaun

Nancy and Les Horvath (right) talking with Jury Chairman Karl Berger.

Lumley, Bob O'Dell, and Nancy. They had no U.S. support; it was all on their own dime.

The 1985 World Aerobatic Glider Championships were held in Mauterndorf, Austria, a beautiful, mountainous resort town in a lovely green valley with a castle and pretty homes. There was no trash and no disrepair anywhere to be seen. Nancy reserved a room at a friendly, traditional gasthof while the rest of the team had reservations at an American-style, English-speaking hotel. Nancy didn't understand the "after water heater hours" instructions and showered in ice-cold water—the first night.

The airport was a pleasant half-mile walk from her hotel, and the morning air was filled with the smell of fresh baked goods. Nancy could not indulge; she had to watch her weight very carefully due to the delicate balance of the Salto glider she was preparing to fly.

The contest was subject to weather conditions, and of course the mountains had a lot to do with that. The team had several days off during the contest because of the weather. Nancy used the time to take a lot of hikes and tours of the surrounding castles.

The team had several days off during the contest due to weather conditions. Nancy used the time to take a lot of hikes and tours of the surrounding castles.

The turbulence from the mountains made aerobatic flying difficult, especially for Nancy, as she was a novice aerobatic pilot who was nervous and felt like she did not belong in world competition. Two women competed in the 1985 World Championships, Angelika Machinek of Germany and Nancy. Women were not common in world competition and could not win medals, but contest officials were not worried about a woman causing a "problem," as Angelika finished 22nd and Nancy 29th out of 31 pilots.

Angelika and Nancy were presented a small trophy and flowers "just for being there." Nancy didn't realize at the time that this trip was just a warm-up for great things to come.

In 1986, the U.S. National Aerobatic Glider Championships were held at Estrella Sailport, with Nancy again finishing second behind Les Horvath. Since it was a year off for world competition, Nancy continued to work full time at the Sailport. She also completed a commercial pilot certificate with multiengine and instrument ratings. She practiced aerobatics on her days off, trying to perfect her routines.

In 1987, the U.S. Nationals were held in Stillwater, Oklahoma. Nancy once again finished second to Les. She felt good about her flying

Gold Medal – Makula (Poland)
Silver Medal – Tomkowicz (Poland)
Bronze Medal – Blank (USA)

4th Place standing next to Nancy is Ludwig Fuss who refused the Bronze Medal because he was clearly beat by Nancy. He gave her his medal.

and was ready to give world competition another try.

Nancy flew to Dallas with Kathy Brackney, the team manager's wife, and Andre Volant, their interpreter. There they met up with Veva Becker, a friend and international judge, to continue their flight to Frankfurt, Germany.

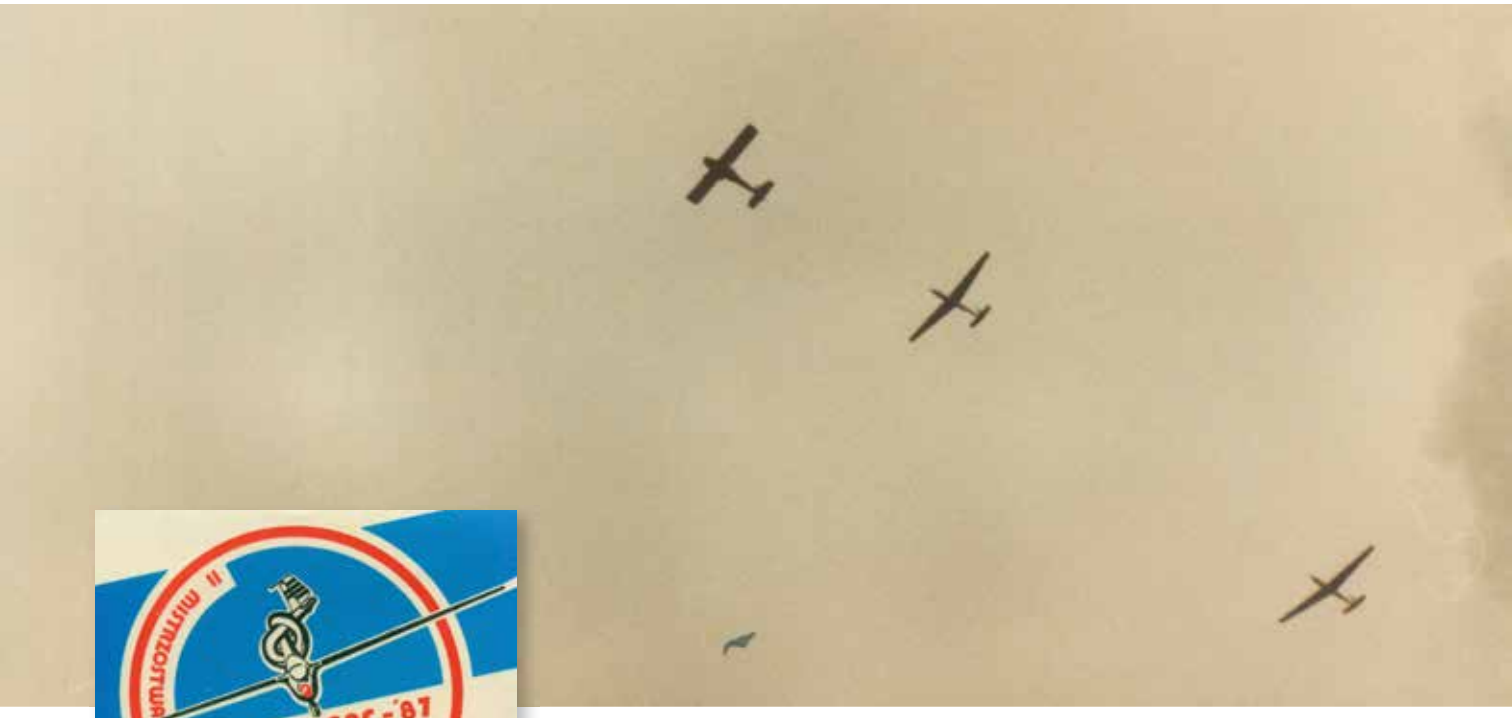
Once in Germany, things began to fall apart, logistics-wise. After several hair-pulling days of delays, detours, practice site changes, and crazy border crossings, the team reached the new practice site at Leszno, Poland. At the airport there was a two-story building with dormitory rooms and private showers, with the restrooms just down the hall. Airport offices, a pilot's lounge, and a cafeteria were located downstairs. Veva and Nancy would share a room.

The sun was shining during the first practice day and the team was given a very generous breakfast, but no one told them they were supposed to take the lunch meat, make a sandwich, and save it for lunchtime. So much for lunch.

As they walked out to the hangar, they heard about an accident involving the Kobuz 3, the type of glider they were about to fly for the first time. The old, high-hour Kobuz had begun to get a reputation for mechanical problems, and this time it broke. The wings departed the aircraft while the Polish pilot flew his routine—quickly followed by the pilot, who landed in a lake and was forced to swim out from under his canopy. Nancy started to doubt the Kobuz. The remaining fleet was inspected and three of the aircraft were found to have problems. The two assigned to the U.S. Team were determined to be okay.

The airport manager briefed the team on the field rules and the flying characteristics of the Kobuz. Nancy was given the honor of flying first. Thumbs-up, and off she went. The Kobuz had retractable

Nancy with the Kobuz model she was given and awarded "Honorary Polish Flight Instructor"



Nancy and Les in the two Kobuz gliders being towed from the practice site to the contest site in not so favorable conditions.

gear that was difficult for Nancy to manipulate one-handed. The only way she could get the gear up was to trap the stick with both knees and use both hands to operate the gear lever. This caused some significant "beginner" oscillations on tow that probably amused the tow pilot.

During this first practice flight, Nancy's seat belts gave way while she flew knife-edge, and she crashed against the canopy. She grabbed the steel roll bar with her left hand and kept the airplane rolling with her right hand and knees to right the glider. So much for her first practice flight. The next flights went much better.

Each of the team members got in several practice flights in the Kobuz. Les made a quick transition; Bob O'Dell waited for his Salto, which finally arrived with only one practice day left. Everyone expected Nancy to move back into the familiar Salto, but she decided to stick with the Kobuz even though she was told, "You cannot win in the Kobuz."

Everyone expected Nancy to move back into the familiar Salto, but she decided to stick with the Kobuz even though she was told, "You cannot win in the Kobuz."

It was the last day of practice, when routines are usually perfected. Nancy was still putting together fragments by flying partial routines and didn't feel at all ready for world-class competition—she needed more time, but there wasn't any. "Go do your best," she was told.

Les and Nancy were asked to ferry the two Kobuz gliders to the contest site at Bielsko-Biala. This was done by dual tow, in which the towplane pulls two gliders simultaneously. The distance to the contest site was about 200 miles—a long way to fly dual tow. The towplane pilot flew through some small cells during the flight, making things trickier for Nancy and Les. At times Nancy could even read the instruments in the towplane and had to pop the spoilers and slip a bit just to keep from overtaking the towplane. After three very stressful hours, Nancy and Les released over the contest site. Nancy immediately noticed Les was not sightseeing, as he was busy memorizing every visual landscape reference for use during competition.

The following day the two on-site practice flights began, and Nancy was offered many tips on her flying. She was somewhat cautious about listening to some of the competitors' suggestions. After all, this was a world competition, and everyone wanted to win. Nancy lay awake thinking about the advice all night. Finally she decided just to go with her gut feelings and

Don't let the beer bottle fool you. It was emptied and replaced with soda. Nancy didn't want anything to mess up her final flight. The polish hats were pretty cool though.

Finally she decided just to go with her gut feelings and "fly it like she stole it"—but safely, within the envelope.

"fly it like she stole it"—but safely, within the envelope.

At the pilots' briefing, numbers were drawn to determine the order of flight. To the gasps of fellow competitors, Nancy consistently drew numbers between 26 and 30 for each day. Drawing a late number meant the judges might be tired by the time she competed, which did not bode well for her.

The first flight was the Known program, which did not go as planned. After she opened the spoilers to slow down for a spin, they locked in the open position. However, Nancy followed the procedure for aircraft problems and was awarded another partial flight. She placed 11th out of 32 pilots in the Known program. Not a bad start. Les was in second place overall.

As the flights progressed, Nancy started moving up in the standings. Karl Berger, the jury chairman, paid a visit to Nancy and informed her that women were not eligible to win medals at this contest or count for their team in overall team standings. Karl's visit was in no way meant to demean Nancy's accomplishments. It was a simple matter of abiding by the rules as they were written: There were not enough female entries in the WGAC to warrant a women's classification with the associated medals. No matter how well Nancy finished, she could only expect flowers.

As she continued to move up in the standings with each flight, the rest of the team was not faring as well. Bob was having difficulty adjusting the weight and balance of his borrowed Salto. Charles was doing better, but Les had been ill and flew a disastrous Free program, which caused him to tumble from the top competitors.

The sixth flight was a Free program. Even though it was not Nancy's best flight, it was clean—no outs, no zeroes. Nancy was suddenly in third place overall with one flight to go—the Free program for the top 10 pilots.

Rain, turbulence, and 30-knot winds greeted the seventh flight, and the weather was not expected to improve. The announcement came: "The Second World Championship has ended."

Ludwig Fuss from West Germany was sitting behind Nancy when the announcement was made. He finished fourth, only five points behind her. The rules dictated that he should receive the overall bronze medal, but he said he would not accept it. "Be ready," he told Nancy.

The announcement came: "The Second World Championship has ended."

IInd WORLD GLIDER AEROBATICS CHAMPIONSHIP - '87

1-15.08 Bielsko - Biala

Main Classification - Programme 1, 2, 3, 4, 5, 6

Place	Pilot	Nation	Glider	Score (Long 90 %)
1	Makula	POL	KOBUZ	16260.1
2	Tomkowicz	POL	KOBUZ	15635.9
3	Blank	USA	KOBUZ	15453.2
4	Fuss	FRG	LO-100	15448.1
5	Jansch	FRG	LO-100	15391.2
6	Mezyk	POL	KOBUZ	15370.5
7	Scheuermann	FRG	LO-100	15217.6
8	Hernik	POL	KOBUZ	15191.2
9	Solski	POL	KOBUZ	15159.9
10	Hofmann	FRG	LO-100	15121.1
11	Weiss	FRG	LO-100	15052.7
12	Dednorz	POL	KOBUZ	15007.9
13	Horvath	USA	KOBUZ	15003.7
14	Szufa	POL	KOBUZ	14942.3
15	Wyskiel	POL	KOBUZ	14868.6
16	Fendt	FRG	MU-28	14859.2
17	Hartmann	AUT	PILATUS B-4	14751.4
18	Katona	HUN	MU-28	14517.1
19	Wasserkordt	FRG	LO-100	14361.0
20	Kopff	AUT	PILATUS B-4	14345.8
21	Kalko	USA	KOBUZ	14211.3
22	Bierbaum	AUT	PILATUS B-4	13834.9
23	Hoerl	FRG	LO-100	13610.2
24	Sole	UK	LO-100	13481.3
25	Matuz	HUN	MU-28	13341.5
26	Muller	AUT	SALTO	13258.2
27	O'Dell	USA	SALTO	13048.9
28	Spang	HUN	MU-28	13018.2
29	Mayrhofer	AUT	SALTO	12930.7
30	Stewart	UK	LO-100	11151.9
31	Labib	EGY	KOBUZ	2507.5
32	Nasr	EGY	KOBUZ	287.2

Final Standings in the 1987 World Glider Aerobatic Championships.

The awards ceremony began and awards for the Known, Unknown, and Free programs—a beautiful crystal vase, flowers, and medals—were given out. The band played the national anthems of the winning pilots' countries. Finally it was time to announce the overall winners. There was a deafening, nervous silence. No one knew what would happen; Ludwig was in control. He never hesitated in his walk to the speaker's stand. In front of everyone he refused the medal. In a gesture of sportsmanship, he called Nancy's name and escorted her to the awards stand. It was an unforgettable moment in World Aerobatic Championship history.

The American team would have placed third by a large margin if Nancy's scores had been included, but the existing rules were enforced. Nancy felt bad for the other U.S. Team members. Later that year at its plenary meeting, CIVA eliminated gender classifications in glider championships.

In a gesture of complete, unselfish sportsmanship, he called Nancy's name and escorted her to the awards stand.

The Polish Aeroclub awarded club medals and vases to the three female pilots. Nancy was also awarded the title of honorary Polish flight instructor and given a model of the Kobuz.

Poland was not the end of the story. Nancy was fortunate to fly a number of air shows representing Post Cereals in 1989. Nancy no longer flies competition aerobatics or air shows, but she continues to fly gliders and tow out of her beloved Estrella Sailport, sometimes giving rides to people who have no idea of their pilot's historic accomplishments. *IAC*

Notes: Nancy Blank continues to be the highest overall scoring American woman in World Aerobatic Competition, Glider or Power. Nancy wants to thank her family, friends, and everyone at Estrella Sailport because none of this would have happened without their support.

U.S. NATIONAL AEROBATIC CHAMPIONSHIPS 2016

NATIONAL AEROBATIC CHAMPIONSHIPS

SEPTEMBER 24-30
NORTH TEXAS REGIONAL AIRPORT

IAC

2016 U.S. National Aerobatic Championships

Countdown to the Nationals

by Gary DeBaun
Nationals Contest Director, IAC 4115

As I write this we are less than four months away from the IAC's premier event—the U.S. National Aerobatic Championships. This year's event will be somewhat bittersweet, as it marks the end of our 42-year relationship with the North Texas Regional Airport and all the great people of the Denison/Sherman area. The continued expansion of the flight school and increase in airport traffic were the prime reasons for our departure, but as they say, when one door closes another one opens—and we are excited for our move in 2017 to Oshkosh, the home of EAA and the IAC.

To balance the flight restrictions at KGYI, this year we have added an extra day to the contest. Competition flying will begin on Saturday rather than Sunday as it has been in the past. This will allow us some flex time should weather and/or heavy airport traffic interfere with our flying schedule.

This last year at KGYI is an Unlimited team selection year, and it promises to be a great one as many of our top Advanced pilots move up the ladder to the Unlimited category. I expect as many as 15 of our top pilots will vie for the eight available slots on "Team 17," which will compete at the World Aerobatic Championships in South Africa in the summer of 2017. Also new this year is the introduction of the Free Known Programs in Advanced and Unlimited Glider and Unlimited Power, which Teams 17 will have to fly in place of the Known Program. This will better prepare them for WAC 2017.

Another addition this year is a director of social media and communications, which will be staffed by longtime IAC member Monique Hartman out of Florida. Monique has been a staple at the Sebring contests for many years and brings a wealth of contest experience and expertise. Monique will be responsible for all social media (Facebook, Twitter, and Instagram) feeds along with contest communications throughout the contest week. Monique will handle all schedule changes and posting of scores through Facebook and Twitter, along with hard copies to the hangar door and phone communications to the glider operations side.

Ellyn Robinson, our volunteer coordinator, will post the daily volunteer schedule on the hangar door. Please—if you are a volunteer—stay in touch with Ellyn, as things change rapidly during the contest, and she may need you sooner than expected. Monique will be taking photos of the daily volunteer list and posting to social media.

The IAC Welcome Trailer, which was a big hit last year, will return bigger and better this year. It will be a large motor home, which will be parked just to the south of our contest hangar (Mike Plyler's hangar), and will face west. It will have Wi-Fi and again be stocked with lots of food and beverages for our pilots, volunteers, and sponsors. The IAC Welcome Trailer is sponsored by many of our members who will be listed on a banner outside the trailer.

The glider operations across the runway will also have its own IAC Welcome Trailer this year. It is also fully funded by IAC members, glider schools, and some independent glider pilots.

The schedule for this year is a bit different from previous years, as we will get the Sportsman pilots involved earlier in the contest week. In the past they have had to wait several days into the contest before they flew. This year, they will fly their Known on Sunday morning.

Last year the practice days had a glitch that we have fixed. If you have preregistered, selected, and paid for a specific time slot, you will get to keep that time slot regardless of how many times you have practiced in the box prior to your paid time slot.

Bob Meyer, our jury chairman, along with our jury, will be busy this year. Last year there were a few instances in which we shot from the hip on issues we had not encountered before. This year there will be no quick decisions on how to fix a problem. We will stop and let the contest rule book be our deciding factor. If the rule book does not cover a specific item, we will let the jury make a decision on how to proceed.

Since this is our last year at KGYI, let's make it a special one. We expect a close to record turnout this year—don't miss it. Our website, (*www.IAC.org/us-national-aerobatic-championships-2016*) has been up and running for some time now and has all the information you need. Please register early, whether you are flying the contest or volunteering.

Blue skies. IAC

A Pitts S-2 Canopy Departure Postmortem

Things I wish I'd known earlier

BY DAVE WATSON, IAC 26557

Several months ago, a fellow pilot asked me how long I had owned my Pitts S-2B, and I answered, "Eight years."

Then he asked me, "How many canopies have you lost?"

I gave him a puzzled look as if he must have thought I was an idiot. Unfortunately, the general consensus is that two-place Pitts pilots simply just fail to latch their canopies, with regularity. Maybe this is true, but of course it had never happened to me, knock on wood.

The question I was asked that day was unfortunately a foreshadowing of events to come in the near future. As it turned out, the unthinkable did happened to me in early February, when it suddenly got very windy in my Pitts. As I safely made my way to the ground, I asked myself, "How could this have happened to me? I know I latched that canopy!" Let me explain and share with you my postmortem that may change the way you do your preflight of your Pitts S-2 (A, B, or C) canopy or the way you may think of Pitts pilots who have lost their canopy(ies).

I had just refueled after my fourth break-in flight of my newly rebuilt engine (including annual inspection). I got back in, went through all my checklist rituals, including slowly and carefully rotating the canopy down, then shoving it briskly forward against the stops, then swinging the latch knob firmly to the right, putting both hands on the canopy support rail (that runs over the instrument panel), and pushing and pulling on it firmly to ensure it is secure. Then lastly, I took a loop of bungee that was secured with an Adel clamp to the top right of the instrument panel. (See Photo 1; this is not standard issue on a Pitts.) I looped it around the canopy latch knob so that it could not move freely to the left, potentially inadvertently releasing the canopy. (The bungee can be overridden with a relatively low force so I do not think it poses any issues should I want it to depart!) This ritual had served me well for more than 400 flights. It was about to fail me catastrophically.

After taxiing and finishing all other preflight requirements, I received clearance to take off and climb on downwind, then circle over the Class Delta airspace to burn in another hour on the new engine. I was climbing out, focusing more intently on the oil pressure and EGTs than normal, and I was turning crosswind to downwind using my peripheral vision only. Just as I was finishing my downwind turn at about 1,200 feet AGL, I looked up from the instruments and observed the left back corner of my canopy moving away from the fuselage, revealing sunlight between it and the fuselage. And then before I could fire a single neuron to comprehend what the heck was happening, I was open-cockpit.

Fortunately the canopy departed without structural damage to the tail and only damaged the fabric and paint. Also, fortunately I was wearing a cloth helmet that was holding my headset and glasses firmly in place. It was windy, yes, but I was in control. I ducked my head down out of the wind and asked for clearance to land, and I did so without further incident. I then got my beautiful B back in the hangar safely, and while cussing myself out for my apparent

PHOTOS BY DAVE WATSON

Photo 1, bungee

Photo 2, pin and block

stupidity, I jumped in my car to quickly survey the area where the canopy departed to make sure I had not deposited the canopy on anything living or valuable. The canopy is still MIA, so it's probably lost in the fields, not in the nearby businesses or parking lots—thank goodness.

Later evaluation of what was left on the plane is the basis for my conclusion that I did in fact latch the canopy properly; however, apparently the canopy did not latch properly. First of all, my loop of bungee was gone, indicating it must had been wrapped around the knob and ripped from the instrument panel. More conclusively, though, the remaining latching hardware on the plane told a vivid story of a marginal design exacerbated by long-term neglect or "creeping normalcy."

For background information, the S-2 canopies have two forward-facing 1/4-inch-diameter pins mounted on the aft-lower corners of the canopy frame. When the canopy is pushed forward to close it, these pins (should) engage in plastic (acetyl) blocks mounted on the outside of the fuselage aft of the pilot's seat (Photo 2). The blocks are mounted to a flexible triangle of sheet metal. Those are not mounted directly to a structural frame member of the fuselage. The pins engage the blocks by inserting themselves into holes that are in the lower-outside corners of the blocks. Similar pins also engage in an acetyl block mounted on the apex of the instrument panel.

The leading edge of the canopy slips under a circumferential rim of aluminum that projects aft from the top rim of the windscreen in front of the passenger seat. The hinge mechanism consists of two 3/4-inch-diameter acetyl runners (bearings) that are mounted to the fuselage with a 3/16-inch-diameter post. The bearings are secured to the pins with snap rings on both sides of the bearing (Photo 3). The bearings run within a very thin steel tube (that has had slots machined in it) on the canopy frame.

Because the tube is slotted, it is easily deformable over time from any misuse (such as putting any outward pressure on an open canopy when getting in or out, or from wind gusts if left open). After closure of the canopy, the act of rotating the latching knob to the right does not engage any additional pins nor do hooks grab into slots, like many other canopy mechanisms. The latching action simply rotates a post behind a wall in the central plastic block, which only prevents the canopy from moving aft. So there you have it, the canopy under ideal circumstances:

1) The canopy is held on by four 1/4-inch pins that engage in plastic blocks (which are mounted on flexible sheet metal of the fuselage).

2) The miniscule engagement area of two snap rings on the bearing posts holds the plastic bearings on their posts.

3) The only thing preventing aft movement (opining) during flight is a 1/4-inch diameter by 1/4-inch long post sitting behind a plastic wall on the central block.

In retrospect, I don't find this a particularly robust design, but it does work, most of the time. The S-2 canopy is remarkably flexible; I encourage you to "wiggle" one in the nearly closed position and see how flexible is that left-aft corner. Failure or wear of any one of the blocks or bearings can lead to excessive wiggle of the canopy. That wiggle, combined with the inherent flexibility of the canopy, can

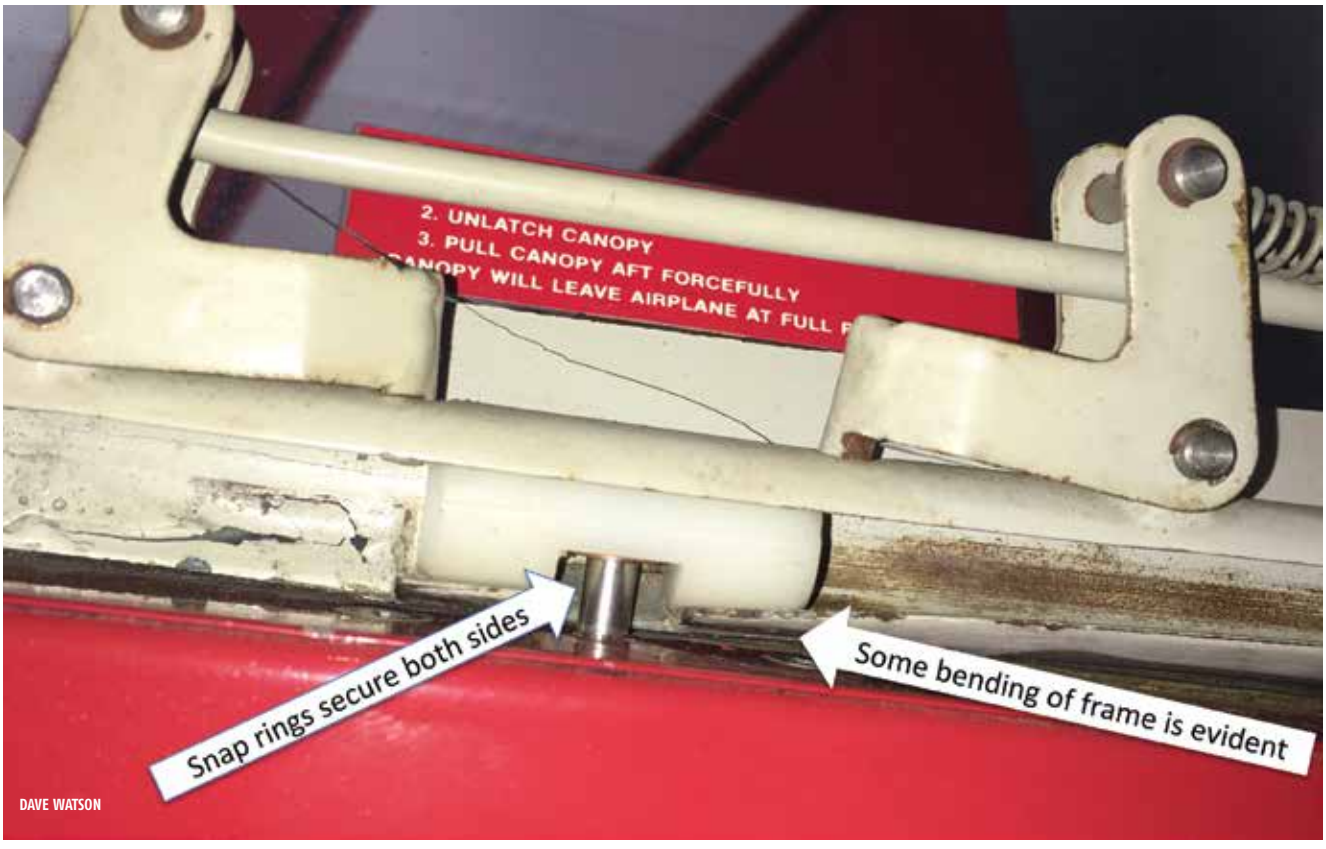


Photo 3, canopy bearing detail, including some slight bending in the loaner canopy

result in misalignment, resulting in total loss of security.

Upon very close examination, that admittedly did not happen during the annual that was completed just one week earlier. It is evident that my left-aft canopy pin had been having its way with the corresponding latching plastic block, and numerous dings and gouges are evident from the canopy pin hitting the face of the block off-center of the hole (Photo 4). Also evident is one deep groove on the left block that extends from the hole to under the block (Photos 4 and 5). Upon closer exam, the outer surface of the block has a shiny white skive (the rest of the block is off-white from age and oxidation) that starts at the lower-aft corner of the block and extends almost entirely along its aft edge (Photos 4 and 5).

From this evidence, I surmised that when I shoved my canopy forward, that aft left pin on the canopy missed the hole and skittered under the block. The center of the hole is only 0.31 inch from the bottom edge of the block and even closer to the outer surface, so it would not take a significant amount of canopy "wiggle" for the pin to miss the hole and skitter off under or outward of the block. With the pin semiconstrained under the block, as I suspect it was, I had no visual or structural cue that the left-aft edge of the canopy was not secure. In fact, in this state it was likely more secure in the vertical and longitudinal axis since it was pulled down onto the fuselage tighter than it would be normally.

In any case, it passed with flying colors the "grab and rattle the canopy bridge support" test that I did (and always do) after latching it. However, with the pin not engaged in the hole, it was very susceptible to lateral loads. I suspect that, with my head a bit down when watching the instruments and while climbing and turning, a side slip may have caused enough negative pressure to act on the canopy, and it pulled that pin out from under the block and away from the fuselage, allowing a swift cascade of failure of the other pins to follow and leaving me in a wind tunnel.

Lessons learned and some thoughts for improvements

I do not have the statistics, but apparently a few canopies are lost every year! My canopy took well over twice the expected time of four weeks for replacement from Aviat Aircraft because it was in a queue behind others being made. I don't think that only Pitts S-2 pilots are careless enough to substantiate these planes shedding their canopies like fall leaves; the sheer numbers of these specific incidents indicate that a systematic failure and not just pilot error may be the root cause. If as I have described here was my failure mode

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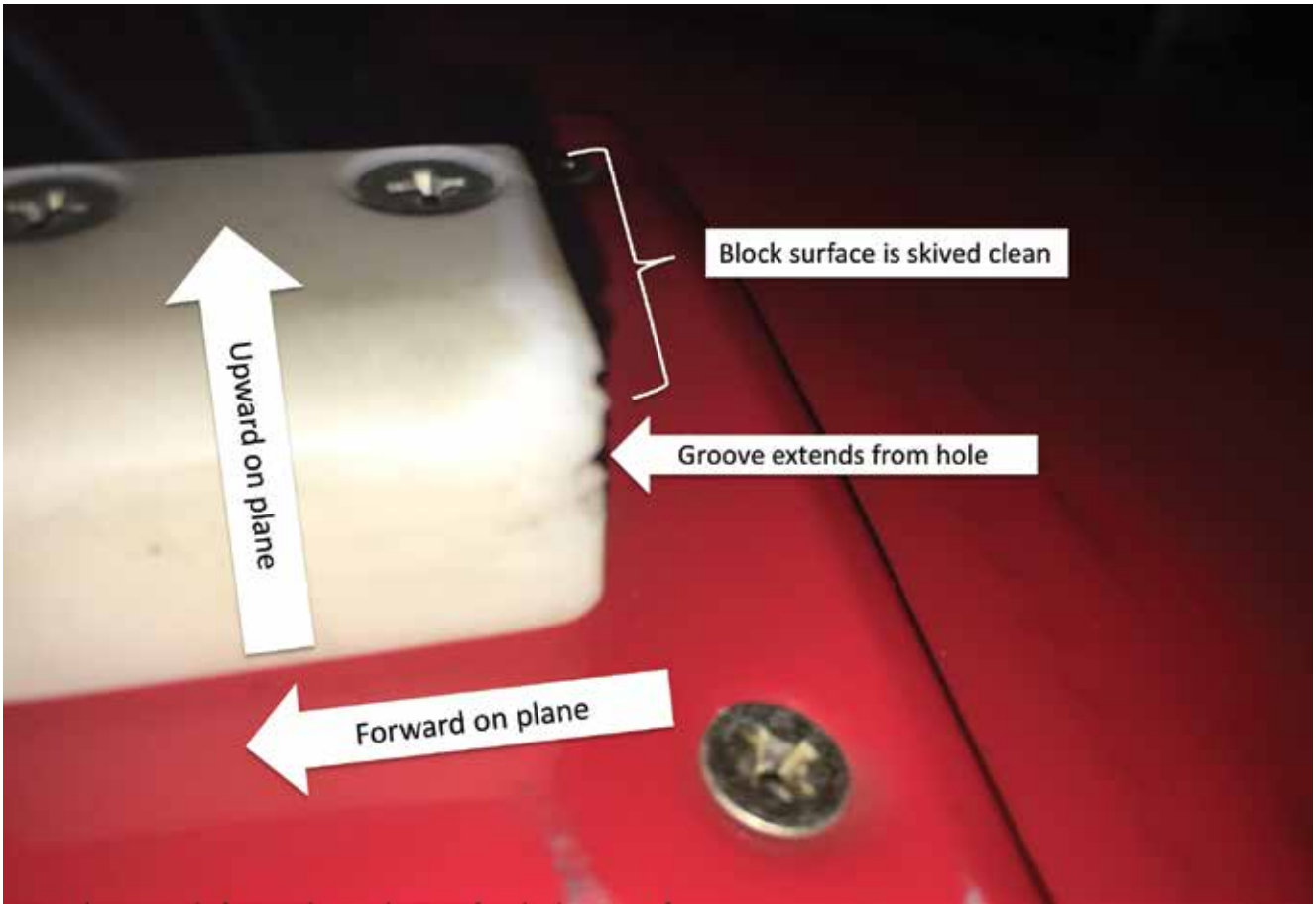

PHOTOS BY DAVE WATSON

Above: Photo 5, left block removed from plane shows numerous deep gouges from pin hits

Far top: Photo 4, left on plane shows fresh damage from canopy pin

and if it is at all indicative of any others (as it may be from the evidence presented here), this failure is potentially 100 percent avoidable with proper attention and more focused diligence.

My new pre-start checklist includes a new test where I reach over each shoulder with my opposite hand and push out firmly on the lower aft corners of the canopy to ensure the canopy pins have engaged properly in the blocks. Another change I have made to my canopy closure ritual is not to shove the canopy forward as firmly as I had been doing. I see (and hear) many Pitts pilots do exactly the same thing, so I think this is not unusual. However, ramming it forward may give a false sense of security when it is heard to "hit home," but this forcible action could create the energy necessary for the canopy to twist out of alignment if any of the pins miss their corresponding hole. That extra slamming force may also mask the resultant feedback (the canopy would just stop short of full-forward) that would happen if the pin(s) misaligned at lower forces.

Another thing I will pay more careful attention to is the condition of the aft face of the blocks. I have always just looked for cracks in the blocks at the mounting hardware, as I had been instructed many years ago. I will now routinely check the aft face of the blocks, noting any evidence of off-center dings indicating that the pins are not perfectly in alignment; such evidence may be the precursor to this failure, and canopy adjustment may be needed.

The means of securing the round bearings may also be a contributor to the misalignment potential. Those round acetyl bearings are supported on their attachment pins with tiny snap rings on both sides.

If the snap ring under the slider has failed, the slider can move toward the fuselage by about 1/4 inch, greatly increasing the angular mobility of the aft end of the canopy, especially on the left side. If the outer snap ring fails, the bearing can simply fall off the pin, greatly increasing the canopy departure potential. My fuselage has evidence that the canopy was rubbing on the fuselage directly under these bearings. (An intact bottom snap ring should have prevented this, I suspect.) All the snap rings, including the bottom ones, were missing after the incident, and the canopy support pins were not bent at all. The top rings obviously would have been ripped off with the bearings in my incident, but why are the bottom ones missing? I suppose the bottom ones could have failed during canopy departure, so it is speculation that they may have been missing before the incident. But it is something I will look out for more diligently.

Those 3/16-inch-diameter pins that support the round bearings along the right edge are installed from the fuselage end by a threaded portion on the pins, yet the far end that holds these critical bearings in place has a tiny snap ring that prevents the slider from falling off the distal end of the pin. I would think these parts could and should be made from larger-diameter stock and machined with a flat round head on the end (such as a clevis pin) so that the security of the canopy is not predicated by two $0.87 snap rings that can easily fail or fall off.

The central latching block (discussed before) is another weakness in the design. The latching mechanism as I described simply locates a pin behind a "wall" in this block preventing the canopy from moving aft. The pin that engages with the wall is only about 1/4 inch long. So once an aft pin fails and the canopy flexes enough to lift 1/4 inch, the canopy is gone! After I had this incident, I replaced all the existing hardware despite no damage noted to this latching block. Unfortunately the replacement latching block would not function when I installed it! My latch would not move all the way to the fully right (latched) position, so I called the factory. These latching blocks are provided by Aviat (without instructions) with the requirement of "field adjustment" that was described to me by a factory representative as using a Dremel to remove enough material until the latch knob swings into place properly. Are they kidding? Using a Dremel by hand to machine a critical part on a certificated aircraft so it can fit? Close examination of mine shows the machining marks from when this block was fit to my plane well before I owned it (Photo 6). Could uncontrolled workmanship be another reason these things spontaneously depart?

I wish I had known all this before it bit me in the butt, and I hope this information gets to every Pitts S-2 pilot. Hindsight is 20/20, and my motive in publishing this event is that with this knowledge I hope we all can reduce this incidence, hopefully to zero. Prior to submission of this article, I spoke with Stu Horn of Aviat. He agreed that my conclusions about why my canopy departed may be correct, and he strongly emphasized the importance of regular inspection (pre- and post-every flight) of the latching blocks. And he suggested routine replacement of them. However, he feels that many canopy departures are simply pilot error from failing to latch them. Regardless of which is the more prevalent, I think both instances can be and should be eliminated with increased diligence. This was my first (and hopefully last) insurance claim in my flying career, and I hope my experience can save many if not all S-2 pilots this embarrassment and costly mistake in the future. Fortunately I was flying my S-2B again in less than two weeks after the incident (despite the excessive wait for my new one) with a loaner canopy (used in all the photos) I got from Ray's Aviation in Santa Paula, California—thank you, Ray. He tells me he keeps this one loaner just for such occasions; let's hope it sits on his shelf for a very long time! ***IAC***

Photo 6, Dremmel marks the block

Bonnie Kratz

BY BILL FINAGIN
IAC HALL OF FAME RECIPIENT

Emergency vs. Spin Training

It's totally different

Reggie's comments in the June *In the Loop* e-newsletter prompted me to pen this article. Somehow we have to continue to stress that training for emergency situations is totally different from doing spin training (which I am very much in favor of as well). People need to understand that when things go badly, it is very likely that their brain literally goes into "neutral," and they cannot think their way out of a bad situation. First is recognition: All too often things get worse when pilots delay the correct response or even progress to doing the wrong thing entirely because they have become confused. We need to continually stress this to our readers.

This is known as Finagin's technique by many, but maybe that is its biggest deterrent! Thanks for listening (and hopefully reading the following).

People need to understand that when things go badly, it is very likely that their brain literally goes into "neutral," and they cannot think their way out of a bad situation.

Simply mentioning the word "pilot" evokes many feelings in our minds, and certainly not one of "bashfulness," "introvert," or even a "wallflower." No, most thoughts go to a self-assured and certainly not a "shrinking-violet" individual. As a result there are those, by their very own nature, who feel that a pilot is sometimes hard to approach if there is a perceived deficiency that could normally be corrected by a straightforward and simple conversation. [Translated: This means pilots are sometimes hard to talk to!]

Over the years, many of us have not grasped the difference between two distinctly different entities. This vitally important fact was brought home in our editor's comments in June's *In the Loop*.

Reggie said, "Contest spins and inadvertent spins are two different beasts. Spins that occur due to

known control inputs and deliberate action are much easier to recognize and control. Inadvertent spins are much more incapacitating due to their inadvertent nature."

Or you might say that one is spin training and the other is recovery from out-of-control situations. One is a planned action, and the other an unplanned event. Our brains act and reacts differently to these two distinctly different situations.

For years we have had the controversy of should we teach spins or not teach spins? Depending on whom you talk with or what articles you read, you can come down on either side and be justified by the evidence presented. The cons point quite correctly to the lowering of fatalities in flight training when spins were eliminated. One might argue that further examination of the actual evidence may suggest that a high percentage of these accidents occurred at very low levels where they should not have been taught or attempted in the first place. However, there seems to be scant evidence as to the degree of training pilots involved in spin fatalities ever received in their training.

Proponents cite the added comfort, if you will, of knowing what will be happening next if given a training curriculum involving spin training. Thus employing the longstanding axiom, "If you know what will be happening next, you will be more in command." Therefore, you'll probably be thinking more clearly, and consequently more likely to make the correct decisions. It's doubtful this changes anything in the brain of a die-hard know-it-all pilot with X number of hours. However, just hoping that maybe this article may save at least one life, I will press on.

> "If you know what will be happening next, you will be more in command."

For years we have read about spin training and spin recoveries and the pros and cons. If one survived, then he or she obviously touted that method. Eric Mueller and Gene Beggs, in my opinion, advanced the survival rate of many by their techniques, and I applaud them for their tireless pursuit of success. I hasten to add before going further that I am addressing the recovery from an out-of-control situation, where the pilot's brain is mush or at least not in a normal thinking situation.

Anxiety, panic, or whatever you choose to call it often distorts how you remember a situation. So in an out-of-control situation (defined as simply the moment the airplane does not do what you expected the next movement to be), one might argue that previous training in what to do would be very valuable, maybe even lifesaving.

So, while some methods in a controlled situation may be faster, it seems logical that if one had a technique that always worked and where you could not make a false move if trained to use the technique, then why not use it? Over the years this technique has saved lives—many lives. Simple and idiot-proof—if you have received quality instruction in the technique from a qualified instructor!

CAUTION: Do not think reading about it will provide the necessary rote reflex if caught in an out-of-control situation. Please get qualified instruction!

So what are we talking about? There are four distinct steps to the recovery:

1) First, remove all the power quickly. (We have people say, "Rip off the power.")

2) Next, force all of the controls to neutral and hold them firmly there! Totally still. Do not attempt to fly the airplane!

3) In the Pitts, wait for 100 mph or, in other aircraft, use 1.4 times stall speed value.

4) When you reach 100 mph, pull out of the dive. No matter where you begin your recovery, you will always be upright at 100 mph if you have done the previous three things correctly.

Why is this an excellent method? Because you cannot make a mistake by pushing the incorrect rudder or putting the stick in an incorrect position or moving one control before the other out of sequence. Simple and easy.

In every case over the past 30 years where people have spoken unfavorably of this technique, I have found that they have not tried it with a qualified instructor in the aircraft. So, find a qualified instructor knowledgeable in this technique and give it a whirl. It very well may save your life. IAC

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How Fast Does Your Parachute Fall?

It's slower than you think

THE FLYING SEASON IS IN FULL SWING and the contests abound. Semi-retirement has been great. I'm writing this from the pilot's lounge of the Arlington Municipal Airport (AWO) in Washington. In about four hours I'll be giving a group of pilots a bailout seminar.

One customer recently asked me about his rate of descent under his parachute. He was sure his parachute's rate of descent was like jumping from a height of 15-18 feet. I assured him that was not the case.

Your rate of descent is just one of the many important questions you need to ask before purchasing a parachute. The parachutes on the market today are not the issue. The issue is people today are bigger and weigh more. Your cockpit has not gotten smaller. It's your favorite fast food restaurant. For only a dollar more you can double the size of your order. I can't force you to change your eating habits, but I can explain how to determine the best parachute available for you.

The parachutes on the market today are not the issue. The issue is people today are bigger and weigh more. Your cockpit has not gotten smaller. It's your favorite fast food restaurant.

Let me explain a little about rate of descent. All manufacturers have to do a lot of drop tests before they are issued TSO certification for their product. Part of that certification process is doing drop tests to determine the rate of descent. Let me use a canopy I'm familiar with. The rate of descent drop tests on the 24-foot Preserve 1C canopy were done with a 210-pound test dummy. It was dropped from a specific altitude, and the descent is timed. Wind conditions must also be factored in. After completing the required number of drop tests it's pretty easy to figure out the rate of descent. In this case it was approximately 16.2 feet per second with a 210-pound test dummy. This equates to you jumping off an approximately 4-foot platform. Similar tests were done by other manufacturers.

Most parachutes are tested at 1.2 times what they are placarded at. For example, the parachute mentioned above is placarded at 150 KIAS and was drop-tested at 180 KIAS. Since it's rated to carry 220 pounds, it was also tested carrying 264 pounds. All certified parachutes have a considerable amount of safety built into them. That doesn't mean you should push them to the limits. Your parachute is a precision piece of equipment and is there in case it's turned into a very bad day. Staying within the guidelines specified by the manufacturers will help minimize possible injuries you might incur during a landing. Remember the alternatives are not better.

Make sure when you purchase a parachute to ask what speed it's rated at and how much weight it can carry. You need to determine the rate of descent (with your weight) of the parachute you're considering to buy. If it's a used parachute, the person you're buying it from probably doesn't know. Call your parachute rigger, the manufacturer, or me. Keep in mind that a larger parachute doesn't mean it will come down slower. Bigger does not always mean better or a slower rate of descent.

There are several other factors that play into the rate of descent picture. One is what type of material the manufacturer used in its construction. The material on all modern canopies is nylon and may look similar, but it varies. I will not get into how much cfm (cubic feet per minute) flows through the material or the weave in detail. Very simply put, the nylon is woven on looms. One direction is called warp and the other fill. For example, the warp direction may have 110 filaments (threads) of nylon and the fill direction 100. The material is often coated to meet specific requirements. The coating prevents air from flowing through the fibers. That's why some material is called lo-po (low porosity) and others may be called F-111 or Zero P. What they call it is not important. The question you need answered is how fast will my rate of descent be with my weight?

Keep in mind the above-mentioned figures are

based on a rate of descent at sea level. If you bail out at higher altitudes your descent will naturally be higher. The same applies for density altitude.

Also do not confuse what weight your parachute can carry with its maneuverability or its forward speed. Those are other considerations you need to make when purchasing a parachute.

Many of you have never taken the time to become familiar with your parachute. In my presentations I often have someone pull the rip cord on a parachute (see photo). The blur you see in the photo is the spring-loaded pilot chute leaving the container. The pilot chute will easily spring out 3-5 feet. One of the more common pilot chutes has a 30-inch spring inside of it. During the packing and closing of your parachute it's compressed to about 1-2 inches. After the excitement of pulling the rip cord wears off I explain what's inside. A few words of caution: Do not practice pulling your rip cord close to your Ming Dynasty vase.

Now that I have a lot more time on my hands I would like to meet you and your fellow pilots in person and give you a bailout seminar. ***IAC***

A few words of caution: Do not practice pulling your rip cord close to your Ming Dynasty vase.

2015 Annual Non-Flying Awards

By Lorrie Penner

Thanking our volunteers

Each year, the membership of the IAC nominates outstanding volunteers to be recognized for their contribution to the sport of aerobatics. The award winners are selected by a secret ballot of the IAC board of directors.

This year IAC President Michael Heuer will present the recipients with their awards at the IAC Gathering of Members on Friday evening, July 29, at the EAA Nature Center during AirVenture Oshkosh.

In the past, these awards have been presented at the U.S. National Championships, but Oshkosh offers a venue that is unique and well attended. Recipients who are unable to attend on July 29th may receive their awards during the banquet at the 2016 Nationals.

Frank Price Cup
Doug McConnell

Doug has been a member of IAC for 46 years. Attempting his first aerobatics in a Navy N3N when he was still a teenager, the excitement and fun of aerobatics became a lifelong passion.

After the Air Force, Doug became part owner of an aerobatic flight school in Oakland, California, which was shortly after the Champion Citabria was introduced. The school ended up with 10 Citabrias and was totally devoted to aerobatic training. Doug and the school would eventually become a distributor and dealer for Champion Aircraft.

During his work with the Citabria dealership and school, he was hired as Champion's new vice president of marketing and sales. He became a test pilot and air show pilot for the company at the same time. During this time period he became a member of EAA and IAC as he saw they had much in common with a factory producing aerobatic airplanes.

Later when he moved to the Chicago area, Doug found himself near an active IAC chapter and started attending contests. He became a judge and immersed himself in IAC work. Attending contests around the Midwest, Doug flew in Intermediate and earned six achievement awards. He judged at the IAC Championships in Fond du Lac and also served as chief judge of the U.S. National Glider Aerobatic Championships when they were held as a standalone event in the Midwest.

After meeting Bob Heuer, IAC's first president, Doug put his MBA and previous marketing experience to good use when he took on the memberships program for IAC. In the mid-1990s Doug served as the IAC's executive director and later became the treasurer for the IAC. He reorganized the IAC's financial statements so they would be easier to read and studied by the board of directors.

In 1998, when Doug was president of the IAC, he took on the task of membership development. IAC experienced tremendous growth under his leadership, expanding from 4,500 to 6,200 members under his administration. After leaving the presidency, however, Doug's dedication to IAC and the growth of its membership did not wane. He serves as IAC's membership director today as well as its vice president.

There have been few people who have accomplished so much in IAC, much of it behind the scenes and not visible to most members, yet so vital to our future.

Robert L. Heuer Award for Judging Excellence
Peggy Riedinger

Peggy has been a top-notch judge for several years at the U.S. National Aerobatic Championships, and 2015 was no exception. In 2015 she judged both Power and Glider categories and attended contests across the United States including Apple

Valley, Duel in the Desert, Beaver State, and Sebring.

Peggy is the type of judge others look to for her understanding of the technical aspects of judging, and has always been fair and unbiased. She is always willing to share her expertise and unfailingly pleasant. Peggy promotes the development of new judges and currency of standing judges by helping her chapter organize its annual judges school.

In a selfless move she stepped in at her own expense, at the last minute, to assist Marty Flournoy at the 2015 World Aerobatic Championships when another judge was unable to attend due to illness. This is a great example of her dedication and willingness to support the IAC and its U.S. judging team. Peggy will be assisting American judge Marty Flournoy at this year's World Advanced Aerobatic Championships in Radom, Poland, in August.

Peggy is an outstanding aerobatic judge and represents the best IAC has to offer.

Kathy Jaffe Volunteer Award

Tom Adams

Tom Adams has been flying aerobatic competition since the early 1970s and has been a volunteer at literally hundreds of contest through the years. Tom primarily volunteers in judge positions, including scoring judge at regional contests and the U.S. Nationals and chief judge at regional contests. He has been selected as a judge for several world championships. His judging experience and his willingness to teach new judges and assistants makes him a wonderful person to work with on the judging line.

In addition to his volunteerism as a judge, he has coached and mentored pilots at contests and on practice days. He has been available to anyone who desired some help in flying better figures. He readily introduces himself to new competitors and if they are interested in some coaching he will take them by the hand give to them practical ground coaching. Later he will encourage them to apply that knowledge in the cockpit and coach them via radio so their sequence is highly competitive in just a few flights.

Tom is the epitome of an IAC volunteer, whether he is coaching, mentoring, judging, or starting the contest starter. He is one of the longest serving members of the IAC board of directors and never failed to have new ideas for improving our sport. His willingness to step into any role and his vast experience over 45 years of being an IAC member make him the ideal recipient for this award.

Harold E. Neumann Award for Outstanding Contribution as a Chief Judge

Charlie Harrison

Charlie has served as Unlimited chief judge at the U.S. National Championships for years. Among his attributes as an outstanding chief judge he brings his attention to detail and a dedication to safety. He is known for his leadership qualities and fairness on the judges line.

He has spent many years selflessly volunteering and is patient and thorough in explaining the judging rules. He conducts each contest flight in a professional manner and is well known by his peers as having a high degree of knowledge and experience of IAC rules and judging criteria. He is a great credit to IAC and the U.S. National Championships.

Curtis Pitts Memorial Trophy

Eddie Saurenman

Building his first Pitts at 14 and having no previous Pitts flying time, Eddie Saurenman strapped himself into his first single-seat, open cockpit Pitts S-1 and started flying at 17 for two to three hours a day. He logged more than 1,000 hours in the world-renowned Pitts Special before the age of 20, squeezing in being issued a repairman certificate and earning his FAA low-level letter of competency at 18 years of age.

Eddie's aviation career started in 1975 working for Aerotek in Albuquerque, New Mexico, building 15-meter composite sailplanes with mentor George Applebay. Over the next several years, Eddie worked at many of the major aircraft manufacturing companies in Wichita, Kansas, such as Cessna, Beechcraft, Learjet, Raytheon, Bombardier, Helio Aircraft, and others. Eddie learned the industry from the ground up starting with de-burring parts at Cessna to working his way through tooling, aircraft assembly lines, manufacturing planning, scientific information systems, airframe and systems design, and aerodynamic and structural technical analysis.

Eddie's passion has always been aerobatics and aerobatic aircraft design. He has designed and modified airplanes for a number of today's premier air show pilots. These modifications, include wing design, tail design, fuselage modification, control system modifications and installation of turbojet engines as auxiliary thrust units. When you see John Klatt's *Screamin' Sasquatch*, Kyle Franklin's *Dracula*, Sean D. Tucker or Skip Stewart's airplanes you are seeing Eddie Saurenman's considerable expertise in action.

Now under Saurenman Aero Works Inc. (SAW), Eddie has designed the next great aerobatic airplane, the SAW Revolution, an all-carbon fiber biplane, in addition to a super-light aerobatic monoplane named SAW Revo.

Eddie's modifications and designs are making a lasting impression on the world of aerobatics. IAC

CONTEST CALENDAR

Mark your calendars for these upcoming contests. For a complete list of contests and for the most up-to-date 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.

HighPlanes HotPoxia Fest (South Central)
Friday, July 8 – Sunday, July 10, 2016
Practice/Registration: Friday, July 8 – Saturday, July 9
Glider Categories: Sportsman through Unlimited
Power: Primary through Unlimited
Location: Fort Morgan (FMM): Fort Morgan, Colorado
Region: South Central
Contest Director: Dagmar Kress
Phone: 303-887-4473
E-Mail: dagmaraerobatics@me.com
Website: http://www.iac12.org

IAC Open Championship East (Southeast)
Friday, August 12 – Saturday, August 13, 2016
Practice/Registration: Wednesday, August 10 – Thursday, August 11
Rain/Weather: Sunday, August 14
Glider Categories: Sportsman through Unlimited
Power: Primary through Unlimited
Location: Everett-Stewart Regional Airport (UCY): Union City, TN
Region: Southeast
Contest Director: Mike Rinker
Phone: 731-796-0849
E-Mail: mdr@vaughnelectric.com
Website: www.iac27.org

Beaver State Regional Contest (Northwest)
Friday, August 12 – Saturday, August 13, 2016
Practice/Registration: Wednesday, August 10 – Thursday, August 11
Glider Categories: Sportsman through Unlimited
Power: Primary through Unlimited
Location: Pendleton Regional Airport (PDT): Pendleton, OR
Region: Northwest
Contest Director: Sean VanHatten
Contact Information: Primary Phone: 15414807456 Alternate Phone: 1-541-480-7456
E-Mail: seanvanhatten@gmail.com
Website: www.iac77.com

Kathy Jaffe Challenge (Northeast)
Friday, August 12 – Sunday, August 14, 2016
Practice/Registration: Thursday, August 11 – Friday, August 12
Power: Primary through Unlimited
Location: South Jersey Regional Airport (VAY): Lumberton, NJ
Region: Northeast
Contest Director: John Fellenzer
Phone: 845-978-0511
E-Mail: jdf@fellp.com
Website: IAC52.org

Doug Yost Challenge (Mid-America)
Friday, August 19 – Sunday, August 21, 2016
Practice/Registration: Thursday, August 18 – Friday, August 19
Power: Primary through Unlimited
Location: Spencer Municipal (KSPW): Spencer, IA
Region: Mid-America
Contest Director: Justin Hickson
Phone: 651-338-3345
E-Mail: jhisbatman@yahoo.com
Website: www.iac78.org

Upper Canada Open (Mid-America)
Saturday, August 20 – Sunday, August 21, 2016
Practice/Registration: Friday, August 19
Power: Primary through Unlimited
Location: Saugeen municipal (CYHS): Hanover Ontario
Region: Mid-America
Contest Director: Ryan Chapman
Phone: 416-388-5850
E-Mail: ryangkc@hotmail.com

Rocky Mountain House Aerobatic Contest (International)
Saturday, September 3 – Sunday, September 4, 2016
Practice/Registration: Friday, September 2
Power: Primary through Unlimited
Location: Rocky Mountain House (CYRM): Rocky Mountain House, Alberta, Canada
Region: International
Contest Director: Dave Barbet
Phone: 403-875-3467
E-Mail: dbarbet@telus.net
Website: www.aerobaticscanada.org

Hill Country Hammerfest (South Central)
Saturday, September 3 – Sunday, September 4, 2016
Practice/Registration: Friday, September 2
Rain/Weather: Monday, September 5
Power: Primary through Unlimited
Location: Llano Municipal (AQO): Llano, TX
Region: South Central
Contest Director: Jeffery Poehlmann
Primary Phone: 512-423-5333
E-Mail: jeffery@texas.net
Website: iac107.org

Happiness Is Delano (Southwest)
Saturday, September 3 – Sunday, September 4, 2016
Practice/Registration: Friday, September 2
Rain/Weather: Monday, September 5
Power: Primary through Unlimited
Location: Delano Municipal Airport (DLO): Delano, CA
Region: Southwest
Contest Director: Stephen De La Cruz
Phone: 760-963-6426
E-Mail: fj40cruzer@me.com
Website: http://www.iacchapter26.org/

Apple Turnover (Northwest)
Friday, September 9 – Saturday, September 10, 2016
Practice/Registration: Thursday, September 8
Power: Primary through Unlimited
Location: Ephrata Municipal Airport (EPH): Ephrata, WA
Region: Northwest
Contest Director: Patrick Lavielle
Phone: 206-226-8738
E-Mail: patricklavielle@gmail.com

East Coast Aerobatic Contest (Northeast)
Friday, September 9 – Sunday, September 11, 2016
Practice/Registration: Friday, September 9
Power: Primary through Unlimited
Location: Warrenton Fauquier Airport (HWY): Warrenton, VA
Region: Northeast
Contest Director: Adam Cope
Phone: 703-623-9445
E-Mail: adam.cope@signatureflight.com
Website: https://www.facebook.com/IAC-Chapter-11-68851751698/events

Ace's High Aerobatic Contest (South Central)
Saturday, September 10 – Sunday, September 11, 2016
Practice/Registration: Friday, September 9
Power: Primary through Unlimited
Location: Newton City (EWK): Newton, KS
Region: South Central
Contest Director: Ben Van Kampen
Phone: 316-641-7836
E-Mail: taildraggerpilot@hotmail.com

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The U.S. Advanced Aerobatic Team will be challenging the world's best pilots at the 12th World Advanced Aerobatic Championship in Radom, Poland, August 4-14, 2016. Sending your team and their aircraft to Poland involves considerable expense. Unlike many foreign governments who subsidize their teams, the U.S. government provides no financial assistance. Our U.S. pilots must pay for their training, ship their own aircraft and get themselves and their support team to Poland. Your contribution will support them in their quest for gold.

The US Advanced Aerobatic Team is selected and administered by the International Aerobatic Club, Inc. IAC is a non-profit, IRS 501(c)3 corporation to which donations may be tax-deductible under the provisions of the Internal Revenue Code.

U.S. National Aerobatic Aerobatic Championships 2016 (South Central)
Friday, September 23 – Friday, September 30, 2016
Practice/Registration: Friday, September 23 – Saturday, September 24
Rain/Weather: Saturday, October 1
Glider Categories: Sportsman through Unlimited
Power: Primary through Unlimited
Location: North Texas Regional Airport/Perrin Field (KGYI): Denison, TX
Region: South Central
Contest Director: Gary DeBaun
Phone: 612-810-6783
E-Mail: b747inst@aol.com
Website: https://www.iac.org/us-national-aerobatic-championships-2016

ROCKY MOUNTAIN "OYSTER" INVITATIONAL AEROBATIC CONTEST (South Central)
Saturday, October 8 – Sunday, October 9, 2016
Practice/Registration: Friday, October 7
Glider Categories: Sportsman through Unlimited
Power: Primary through Unlimited
Location: Lamar (KLAA): Lamar, CO
Region: South Central
Contest Director: Jamie S. Treat
Phone: 303-304-7937
E-Mail: jamietreat@q.com
Website: www.IAC5.ORG

Mason-Dixon clash (Northeast)
Friday, October 14 – Saturday, October 15, 2016
Practice/Registration: Thursday, October 13 – Friday, October 14
Power: Primary through Unlimited
Location: Farmville (Fvx): Farmville VA
Region: Northeast
Contest Director: Daniel Bond
Phone: 910-279-9240
E-Mail: Racehp@netzero.com
Comments: Practice on 10/13

Borrego AKROFEST 2016 (Southwest)
Friday, October 14 – Saturday, October 15, 2016
Practice/Registration: Thursday, October 13
Rain/Weather: Sunday, October 16
Power: Primary through Unlimited
Location: Borrego Valley Airport (L08): Borrego Springs,CA
Region: Southwest
Contest Director: Kevin Elizondo
Phone: 562-577-5776
E-Mail: Kelizondo1@yahoo.com
Website: www.iac36.org

Sebring Fall (Southeast)
Thursday, November 3 – Saturday, November 5, 2016
Practice/Registration: Saturday, October 29 – Wednesday, November 2
Rain/Weather: Sunday, November 6
Glider Categories: Sportsman through Unlimited
Power: Primary through Unlimited
Location: Sebring Regional Airport (SEF): Sebring, FL
Region: Southeast
Contest Director: Don Hartmann
Phone: 561-644-1312
E-Mail: donchartmann@yahoo.com

Tequila Cup (Southwest)
Thursday, November 3 – Saturday, November 5, 2016
Practice/Registration: Tuesday, November 1 – Thursday, November 3
Glider Categories: Sportsman through Unlimited
Power: Primary through Unlimited
Location: Marana Regional Airport (AVQ): Marana, Arizona
Region: Southwest
Contest Director: Mark Matticola
Phone: 719-440-1965
E-Mail: mark.matticola.1@us.af.mil

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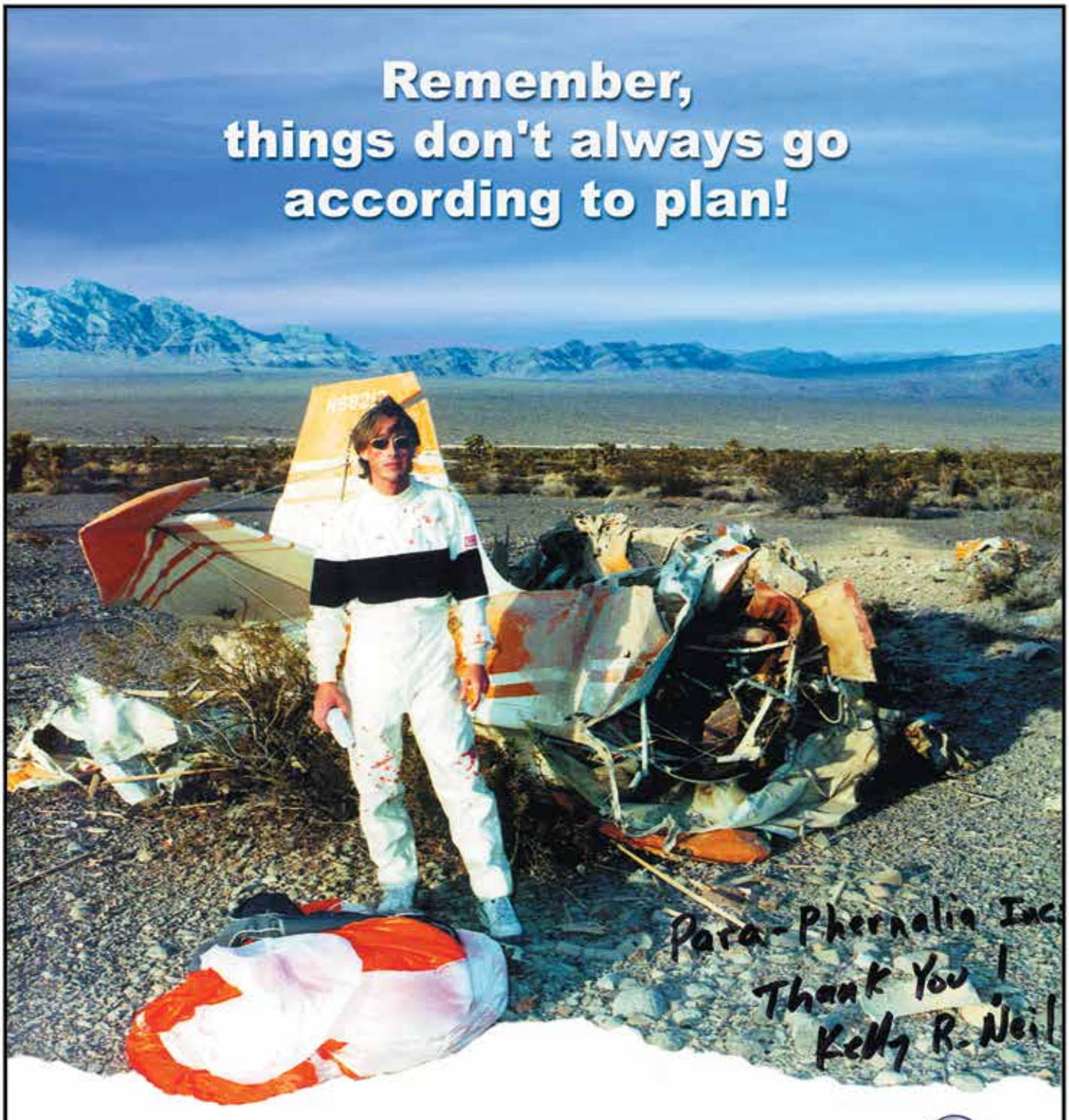

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