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**ON THE COVER:** An F-16 Fighting Falcon from the 115th Fighter Wing of the Wisconsin Air National Guard. General aviation pilots are welcome to fly into the Volk Field Air National Guard Base in Camp Douglas, Wisconsin, for the Volk Field Fly-In & Open House, Saturday, August 21, 2010, 0800 to 1600. Fly-in aircraft are required to pre-register with Volk Field, and radios are also required (UHF/VHF). To register call 1-800-972-8673. For additional open house information call 608-427-1899. The Wisconsin Department of Transportation, Bureau of Aeronautics, and the FAAST Team, will host VFR, IFR and aircraft maintenance seminars throughout the day. For seminar information contact Jeff Taylor with the Wisconsin Bureau of Aeronautics at 608-266-7347.

*Photo by Joseph M. Oliva, AvPhoto.*



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# Good Things Happening In Aviation... Be Proud & Enjoy!

by Dave Weiman

Just when I hear someone talking about the decrease in pilot numbers, I am reminded of all of the good efforts being made by individuals like you, aviation groups, businesses and airports to promote aviation. There is **SO MUCH** being done to promote aviation that most of us can take great pride in our involvement.

In this issue, we have an article about a women's pilot group in Minnesota that started a "Girls Day At The Airport" to encourage school-age girls to explore aviation. I would be very surprised if at least a couple of these kids did not take flying lessons, especially if they continue to be mentored, which can be so important in achieving one's pilot certificate.

What could be more fun than to be a teenager and attend a "young aviator's camp?" What an eye-opener for kids. In this issue, we report on such a camp in Racine, Wisconsin. The volunteers that get involved in the camp are to be



commended.

We have a number of reports on fly-ins and air shows in this issue, and as one airport manager told me, "a fly-in or air show is the one time of the year we can showcase our airports and the benefits of aviation to the non-flying public." Those aircraft owners that encourage kids and adults to touch, and even sit in their planes at these events, are to be commended. See our "Calendar" of events in this issue and online at [www.MidwestFlyer.com](http://www.MidwestFlyer.com) for an ever-changing listing of upcoming fly-ins and air shows.

Wondering where the future of aviation is? Wonder no more! Meet Sabrina Gonzalez Pasterski of Chicago in this issue. At age 9, she decided to learn to fly and took flying lessons in Canada due to that country's lower age restrictions. Then in 2006, at age 12, she started building a Zenith CH 601XL and completed it in 2008. Sabrina was recognized by the Illinois Aviation Trades Association (IATA) at the Illinois Aviation Conference this spring for her accomplishments, and will be heading to the Massachusetts Institute of Technology (MIT) this fall to pursue a career in aviation and aerospace. We look forward to following Sabrina's career.


CONTINUED ON PAGE 7



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## DIALOGUE FROM PAGE 5

Once we get our pilot certificates, we need to use them by flying for business and recreation. Enjoy our “Destinations” articles to Brazil and Door County, Wisconsin, and our “Fly & Dine” section featuring an airport with not one, but two restaurants!

Maintaining pilot proficiency is a must, and a little “aerobatic instruction” goes a long way in developing our skills so we may better handle our aircraft in emergencies and day to day. In this issue, professional pilot Mike Love describes what

aerobatic training entails and how every pilot can gain from learning at least the basics. Aerobatics are also one heck of a lot of fun!

Enjoy what’s left of summer, and then go for a fall colors trip to a favorite or new travel destination. □



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## NTSB Adds Aircraft Accident/Incident Notification & Reporting Requirements

by Greg Reigel  
Attorney At Law

**O**n January 7, 2010, the National Transportation Safety Board (NTSB) published a Final Rule amending its regulations concerning notification and reporting requirements for aircraft accidents or incidents. The Final Rule codifies the amendments that were originally proposed in an October 7, 2008 Notice of Proposed Rulemaking (NPRM). The NTSB believes the amendments contained in the Final Rule will improve aviation safety.

The Final Rule amends 49 CFR 830.5(a) to include several additional events that will require an aircraft operator to immediately report the event to the NTSB. The additional events include:

1. Failure of any internal turbine



Greg Reigel

engine component that results in the escape of debris other than out the exhaust path;

2. Release of all or a portion of a propeller blade from an aircraft, excluding release caused solely by ground contact;

3. A complete loss of information, excluding flickering, from more than 50 percent of an aircraft's cockpit displays, known as Electronic Flight Instrument System displays, Engine Indication and Crew Alerting System displays, Electronic Centralized Aircraft Monitor displays, or other such displays;

4. Airborne Collision Avoidance System (ACAS) resolution advisories issued either (1) when an aircraft is being operated on an instrument flight rules (IFR) flight plan and compliance with the advisory is necessary to avert a substantial risk of collision between two or more aircraft, or (2) to an aircraft operating in class A airspace;

5. Damage to helicopter tail or

main rotor blades, including ground damage, that requires major repair or replacement of the blade(s); and

6. Any event in which an aircraft operated by an air carrier lands or departs on a taxiway, incorrect runway, or other area not designed as a runway, or experiences a runway incursion that requires the operator or the crew of another aircraft or vehicle to take immediate corrective action to avoid a collision.

The Final Rule became effective March 8, 2010. If you would like further information regarding the Final Rule, contact Deepak Joshi, Lead Aerospace Engineer (Structures), Office of Aviation Safety, 202-314-6348.

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*EDITOR'S NOTE:* Greg Reigel is an attorney with Reigel Law Firm, Ltd., a law firm located in Hopkins, Minnesota, which represents clients in aviation and business law matters ([www.aerolegalservices.com](http://www.aerolegalservices.com), 952-238-1060, [greigel@aerolegalservices.com](mailto:greigel@aerolegalservices.com)).

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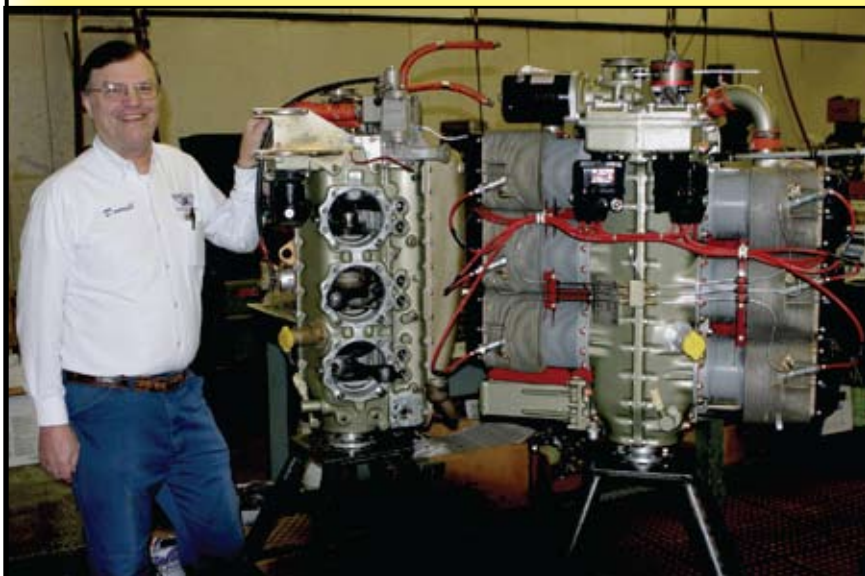
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# Aerobatic Training Can Make You A Better & Safer Pilot



by Michael C. Love

Walter Thurner

very different perspective. There is nothing like looking up and seeing the ground! During the course of learning aerobatics you also begin to understand what airplanes are actually capable of and how they behave beyond the 45-degree bank steep turns we do during that flight review every two years. As you gain experience with aerobatic maneuvers and unusual attitudes, training stalls lose the mystique that surrounded them during Private Pilot training, and spins become just another maneuver in an airplane.

The second question I often hear is, "Will I be able to handle the G forces during an aerobatic maneuver?" The answer to that is a resounding yes! First, let's talk a little about what Gs are, and what they do to the body.

When we are sitting in a chair, we are under one force of gravity, or 1 G. When we do a 60-degree bank in a level, coordinated turn, we are pulling 2 Gs. As we experience G

When pilots think about aerobatics, quite often images of Sean D. Tucker or Patty Wagstaff tossing their planes around the sky at EAA AirVenture in Oshkosh, Wis. come to mind. We have the vision of a tumbling aircraft trailing smoke and the engine singing out its high rpm song. Audiences hold their collective breath as they watch these high-performance machines and their pilots execute seemingly impossible maneuvers, wondering what it would be like to fly a plane like that.



Michael C. Love

"What's learning aerobatics like?" Aerobatics is like going on the best roller coaster ride in the world, and you get to control what it does. You get to see the world from a

Believe it or not, aerobatics are not only for air show pilots; you can experience the fun of aerobatic flight very easily. Pilots decide to learn aerobatics for a number of reasons that can range from wanting to become more comfortable with unusual attitude recovery, to a curiosity about what they see at air shows. Any reason is a good one and in the end, everyone has fun learning to fly an airplane through aerobatic maneuvers.

The first question many prospective aerobatic students ask is,



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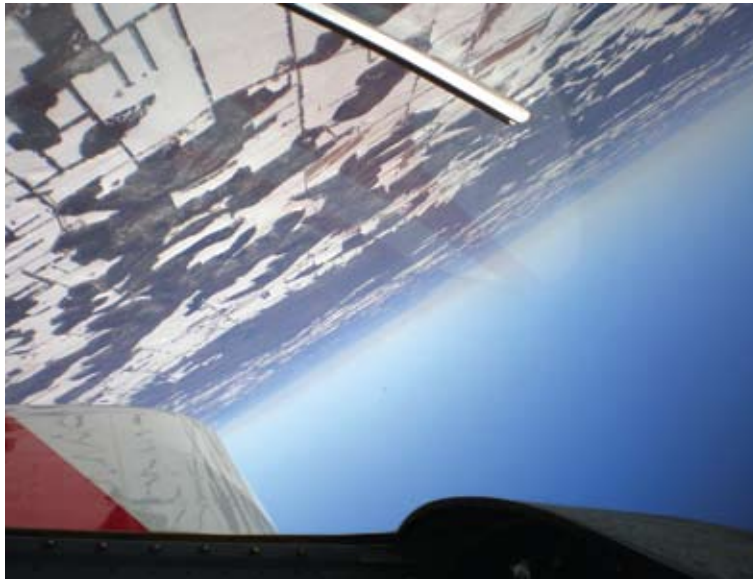


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forces greater than 1 G, we notice that we are pushed down slightly into the seat of the plane. During an aerobatic maneuver the Gs also cause the blood to pool in our lower body. By tensing our muscles we can reduce this pooling and the body quickly adapts to the sensations of aerobatics and Gs become such a natural part of aerobatic flying that we don't even notice them as training progresses.

Aerobatic training has a curriculum, just like any pilot rating, beginning with the fundamental maneuvers. I like to start students out with the most basic maneuver of all, the "aileron roll." This roll results in pulling no more than 2 Gs and always ends with a huge smile on the student's face.



After the aileron roll the next maneuver the student learns is the "loop." The loop is a big, graceful maneuver that everyone really enjoys. These two maneuvers, the roll and the loop, are the foundation for many more advanced aerobatic maneuvers. By combining the roll and

loop, we can execute Immelmans, Cuban 8s, Reverse Cuban 8s and a host of other aerobatic maneuvers.

For those who continue aerobatic training, we eventually progress to performing aerobatic sequences. Aerobatic sequences are what we see air show performers do at an air show. This involves doing a series of maneuvers one after the other, and teaches the student to manage airspeed and energy as they progress from one

maneuver to the next.

Using the Cessna 152 Aerobat I teach in at Morey Airplane Company, Middleton, Wisconsin, we start at a relatively high altitude and begin with a maneuver that will result in sufficient airspeed for the following technique. Typically the first



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maneuver is a one-turn spin. The next maneuver is often a looping technique of some type, like a normal loop or an avalanche (loop with a snap roll at the top). From there we can do additional aerobatic maneuvers as long as we have sufficient altitude and airspeed to complete them.

Aerobatic students always have a great time as they begin to string maneuvers together. It is a true sense of accomplishment when they fly through a series of five or six techniques knowing what the aircraft's attitude, altitude and airspeed are through the entire sequence.

For those interested in strictly unusual attitude training, the curriculum is somewhat different. We do not focus as much on specific aerobatic maneuvers, but more on how to get an airplane back to straight and level flight as safely and quickly as possible. The roll is the best maneuver for getting an aircraft upright after an accidental upset to inverted flight. During the initial

stages of unusual attitude recovery, the student learns how to roll the plane. When the student is proficient at complete rolls, unusual attitudes are introduced to teach the student how to recover back to the upright position. The aircraft is placed in an unusual attitude by the instructor, at which point the student takes the controls and returns the plane to an upright attitude. This type of training is a real confidence builder for those that are concerned about wake turbulence and the effects it can have on a plane, and those pilots who want to understand how an aircraft behaves past a 45-degree bank.

One of the common misconceptions I have encountered from students during training is that pilots believe if they are inverted, they can do a half loop to the upright by pulling the nose through from inverted flight to get back to level flight. There are two problems associated with this type of recovery from an accidental upset.

First, at normal cruise speeds

the plane will gain speed so quickly in this half loop maneuver that you are likely to over stress the aircraft causing potential damage that may result in the wings leaving the plane.

Second, if you are landing and find yourself suddenly inverted, you will likely not have enough altitude to complete the half loop before you impact the ground. Ultimately, unusual attitude training will help the student understand that the plane is still controllable in unusual attitudes and can be safely recovered to normal flight if they understand the correct procedures for the recovery.

Spin training should be part of the curriculum for both aerobatic and unusual attitude training. Spins are viewed by many pilots as an uncontrolled maneuver that a pilot is lucky to recover from. In reality, spins are no different, nor any more dangerous, than any technique you learned as a private pilot, as long as you receive proper training in an aircraft approved for spins. By



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knowing how to intentionally enter a spin, a pilot better understands how to avoid an accidental one.

Essentially, a spin is entered through an uncoordinated stall, which is why your primary flight instructor stressed keeping the ball centered during turns and stalls. This lack of coordination results in a yawing motion during the stall, which ultimately causes spin entry. Recovery from a spin is accomplished by making sure the power is at idle, the ailerons are neutral, full opposite rudder to the direction of the spin is applied, and forward elevator is initiated. When the aircraft stops its rotation, the rudders are neutralized and the nose is raised back to level flight. At that point power can be applied again and the airplane can be flown back to altitude.

In my experience as a flight instructor teaching spins, the student's anticipation of the spin is reduced through a thorough briefing about not only how to enter and recover from the spin, but also what they can expect to see and feel before, during and after the spin.

I had one gentleman come to me for training, very nervous about executing spins, but determined to do it. We spent a great deal of time briefing the flight, which was also to include aileron rolls and loops. We focused on the rolls and loops first, waiting to execute spins until later in the flight. When we finally did the first spin, it was very

anticlimactic; his comment being, it was very benign after rolls and loops.

I absolutely enjoy spins and try to infuse my students with the enthusiasm I have for them during the briefing and flight. I firmly believe every pilot should at least receive fundamental spin training to the point that they understand how to enter and recover from spins. I used to fly a Pitts Special S2-B, training pilots in not only aerobatics, but also spins. The Pitts Special is such a capable aircraft, I taught not only upright spins, but also inverted spins. I also taught accelerated spins, crossover spins and upright and inverted flat spins. For pilots that want to get into advanced aerobatics, this type of spin training is essential to safe flying.

At this point I'm sure you're excited and want to know more about what to do to begin training. Some things to consider as you look around for a flight school is: Does the flight school have the proper aircraft and safety equipment? Are the flight instructors qualified?

Aerobatic training is a unique undertaking and requires specialized aircraft. The planes most pilots fly are certified in the Normal Category, which by definition excludes aerobatic maneuvers. An aircraft certified in the Aerobatic Category is capable of withstanding up to 6 positive Gs and 3 negative Gs. The Cessna 152 Aerobat I teach in looks like any other Cessna 152, but it is built with heavier structures and is a much stronger aircraft than its cousins. How well the aircraft is maintained is also a consideration you should keep in mind. Some older aircraft like the Citabria were originally built with wood spars that over the years have caused problems as the aircraft ages. As you look around at potential trainers, ask if the spars of some of these trainers have been upgraded to metal spars. As far as safety equipment goes, you will want to make sure they use parachutes during training. The FAA requires that parachutes be repacked every 180 days, so you'll want to be certain that you check the repacking on the parachute before you fly.

The right flight instructor is as important as the aircraft and safety equipment when you look for aerobatic or unusual attitude training. As with any instruction, it's best if your personalities are compatible. If you have to sit in close confines with someone, it's best that you get along well with them. Find out what the instructor's aerobatic background is, as well. How long have they been doing it, and how many hours of aerobatic time do they have? If an instructor has participated in aerobatic competitions or performed in air shows, that demonstrates a level of proficiency that you should be looking for. Experience in competitions or air shows requires judging of a pilot's aerobatic performance and skills and to at least some degree shows a level of proficiency.

Flying air shows requires the performer to fly his/her routine in front of a designated examiner who then judges them as competent and safe to perform aerobatics

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at lower altitudes in an air show. Air show performers are also observed by the FAA every time they fly at an air show, again demonstrating some level of competency. There is no FAA aerobatic instructor certification, so asking these questions will give you some level of confidence in your potential instructor's aerobatic background.

Once you have found the right school and instructor, the training

you receive will not only make you a safer pilot, but you'll have fun in the process and that is ultimately what this training should be about. If you are interested in finding out more about spin training, unusual attitude training or aerobatic training, feel free to contact me at Morey Airplane Company by calling 608-836-1711. You can also find a brief video of what aerobatic training is like by visiting [www.moreyairport.com](http://www.moreyairport.com).

**EDITOR'S NOTE:** Michael Love has been a flight instructor and charter pilot for Morey Airplane Company since 2004. He began flying at age 15, and aerobatics at age 16. He has been competing in aerobatics since 1990, and flew his first air show in 1991 in a Pitts Special S2-B. He currently flies a Yak 52 in air shows in Wisconsin and Illinois. Love holds SEL, MEL, CFII, and A&P Certificates.

To contact Michael Love: [michael\\_c\\_love@tds.net](mailto:michael_c_love@tds.net) or Morey Airplane Company at 608-836-1711. □

## Newspaper Columnist Editorializes On What Happens When A Community Does Not Support Its Local Airport

In a June 19, 2010 editorial, *Faribault County Register* columnist, Chuck Hunt, expressed his dismay over the negative publicity his community of Blue Earth, Minnesota, got over interviews of local citizens and officials conducted by St. Paul television station, KSTP, which were aired May 13. This was the third negative story aired by the station in less than a year, slamming general aviation.

The reporter interviewed a farmer who owns land adjacent to the Blue Earth airport, who commented on the infrequency of takeoffs and landings, followed by an interview by a Blue Earth city councilman who commented that expanding the airport based on such infrequent use, doesn't make any sense to anyone with any "math skills."

Hunt stated that comments like those do not lend well to a community.

"It sure seems to make Blue Earth look bad," stated Hunt. "They seem to be saying there are no planes flying in or out of the airport here, and the city is simply greedy, trying to latch onto money to fix up an airport that doesn't need it. Wonder what the average Twin Cities resident thought of Blue Earth after seeing that broadcast? What kind of a small, hick town do they think we are?"

"My guess is they think it is one

*that has a small, unused airport that doesn't need to be improved. The truth is, it is much, much more than that."*

Hunt notes how the questions the reporter asked were loaded, and designed to get a predetermined response, and how the reporter did not use the interviews of knowledgeable people whose responses did not fit the story the reporter wanted to air.

Hunt agreed that the story was obviously slanted. "From a journalist's perspective, it lacked a

*lot of objectivity,"* stated Hunt. Hunt tried to set the record straight with his readers by noting the reasons for improvements at the airport, and that no individual tax dollars are included in the funding.

"If Blue Earth is to own assets such as parks, buildings, streets and airports, they need to be maintained," stated Hunt.

To see the podcast of the KSTP story, go to: [kstp.com/news/stories/S1559234.shtml?cat=1](http://kstp.com/news/stories/S1559234.shtml?cat=1) □

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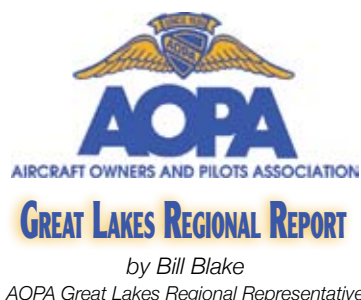
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Bill Blake



## Statewide Aviation Coalition Holds Great Promise!

I really enjoyed participating in a panel discussion at the Wisconsin Aviation Conference held at Waukesha, Wisconsin in May (2010) with other national and state aviation association representatives on promoting aviation. Programs discussed were GA Serves America, No Plane No Gain, Aviation Wannabe, Let's Go Flying, the Michigan Air Tour, and others. The goal was to give some ideas to the newly formed **Wisconsin Aviation Coalition** (of Wisconsin aviation associations) on how it might marshal the resources of its member organizations to make the biggest impact with their combined resources.

One idea discussed for the coalition was to prepare a calendar, which would suggest promoting a certain aspect of aviation each month. One month might be promoting flight training; another could be safe winter flying; another could be encouraging Wisconsin pilots to get to know their legislators. Other ideas were discussed as well. I suspect that it will take some time for a state-specific program to be developed. However, I think it has great promise. I look forward to seeing a program implemented.

Along those same lines, AOPA held a "webinar" on June 10 about promoting and protecting our airports. It was developed to further educate and assist our Airport Support Network volunteers, but was open to anyone who wanted to tune in. There was a three-member panel discussion of airport grant assurances, good zoning practices, how to

interact with elected officials, and resources available on protecting and promoting your airport, among other things.

Those who registered could ask questions live during the program. All who participated in the hour-long program were very complimentary and encouraged AOPA to hold more webinars in the future. For those of you who missed it or would like to see it again, a recording is available on the AOPA website at: <http://www.aopa.org/members/pic/webinars.html>. By the way, if your local airport does not have an Airport Support Network volunteer, please consider volunteering, or nominating someone you think would work hard to preserve your airport.

I am sure you have seen reports on the reduction of general aviation activity during this struggling economy. However, some have been reporting a glimmer of hope. It appears used aircraft sales are starting to firm up. I have talked with a couple of small flight training facilities that tell me business is not that bad. A couple of the aircraft manufacturers have reported more activity. As aircraft owners and pilots, we can help turn that glimmer into a flame. Promote the benefits of your airport and aircraft to both the flying and non-flying public, and to your elected officials at the local, state, and national levels. When you go flying, ask a non-flyer who you think you could get interested in flying to go flying with you. It is important to all of us to increase the amount of flying activity. Increased activity helps fund the quality of aviation services and facilities we have come to expect.

We are starting to see electricity-producing **wind turbine** proposed locations that would negatively impact airports. It has been proposed that a small airport in Indiana be closed so the land can be used for wind turbines. The proponents and some of the newspapers have been reporting how valuable the turbines would be to the community. Fortunately, the mayor and city council understand the value of their airport and their responsibilities under the federal grant assurances. If you see proposals for wind turbines at or near your airport, please let AOPA know, and let your elected officials know of your opposition and why.

*Midwest Flyer Magazine* had a detailed article on the annual spring **Illinois Aviation Conference** held in Schaumburg, Illinois in May. I just wanted to comment on the keynote speaker, Russ Meyer, Chairman Emeritus of Cessna Aircraft. His remarks about learning from the past, and using this slow time for aircraft sales to become more efficient and prepare for the future return to prosperity, were energizing. I was fortunate enough to be seated next to Russ at the luncheon after his speech and had a lengthy chat with him. What an inspiring leader! It is easy to see how Cessna has become synonymous with general aviation.

AOPA will work hard to do its part in promoting and protecting general aviation. I know you will do your part as well.

For more information on these and other issues facing general aviation, please visit: [www.aopa.org](http://www.aopa.org). □

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# Getting The Lead Out

by Craig Fuller

President & CEO

Aircraft Owners & Pilots Association

**J**ust about every pilot I meet has questions about the future of avgas, and I believe it's important for the entire GA community to stay on top of this issue, so I'll start with the least you need to know:

1. Supplies of 100LL will remain readily available;
2. The GA community is working cooperatively to find a fuel without lead;
3. We have embarked on a process that will take a number of years, but must, and will, lead us to an alternative fuel formulation.

Of course this is a complex and nuanced issue, and one that AOPA is deeply engaged in. You should also know that the GA community has not found a specific solution at this time, but is exploring all the available options, as well as searching for new ones.

With U.S. policy calling for the removal of lead from fuels and just one remaining provider of the tetra-ethyl lead used in avgas, we have to face the fact that 100LL probably won't be around forever. To date, researchers have investigated more than 200 possible fuel formulations, with more in the works.

What we need is a way to research potential solutions, resolve the unknowns, and better understand how each potential solution will affect production, distribution, the environment, aircraft performance and safety, and the economics of aviation. The ultimate solution must be a fuel that we can rely on for decades to come, just as we have long relied on avgas.

To help find that way forward, aviation and petroleum industry



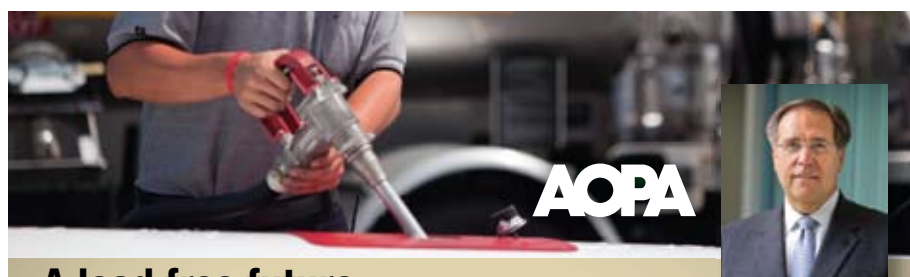
Craig Fuller

groups have banded together as part of an organization called the General Aviation Avgas Coalition. In addition to AOPA, the members include EAA, GAMA, NATA, and NBAA, as well as the American Petroleum Institute and the National Petrochemical Refiners Association. The members of this group have pledged to work together to find solutions that will keep the GA fleet in the air while being affordable, safe, and environmentally sound.

Together, we will evaluate the past 20 years of research, as well as new work, to find the best possible solution. And, in the coming weeks and months, we will continue to visit many of the key players in this issue, including suppliers, aircraft and engine manufacturers, and companies that are developing potential solutions.

The coalition is committed to working with the rest of the aviation industry as well as EPA, FAA,

**CONTINUED ON PAGE 62**



## A lead free future

The future of avgas is one of the hottest topics in general aviation today, but the details of the science and policy behind the search for an alternative to leaded fuel can be more than a little arcane. So here are a few fundamentals every pilot should know:

1. Supplies of 100LL will continue to be readily available.
2. The GA community is aligned in the search for a fuel without lead.
3. This process is sure to take a number of years, but it will lead to an alternative fuel formulation.

Researchers have already explored more than 200 possible fuel formulations in a search that has spanned 20 years. And new possibilities are in the works as well. We need to investigate potential solutions, resolve the unknowns, and better understand how each potential solution will affect production, distribution, the environment, aircraft performance and safety, and the economics of aviation. Only when we have those answers will we be in a position to make good decisions about changes to our fuel supply.

To help get us there, aviation and petroleum industry groups have joined forces as part of an organization called the General Aviation Avgas Coalition. In addition to AOPA, the members include EAA, GAMA, NATA, and NBAA, as well as the American Petroleum Institute and the National Petrochemical Refiners Association. We have pledged to work together to find solutions that will keep the GA fleet in the air while being affordable, safe, and environmentally sound.

Together, we will evaluate past and current research and continue to visit with many of the key players in the avgas issue, including suppliers, aircraft and engine manufacturers, and companies that are developing potential solutions.

And we are committed to working with the rest of the aviation industry as well as EPA, FAA, and other agencies. Because FAA is responsible for approving and certifying products that use any alternative fuel, we have asked the agency to convene a working group to help manage the safety, technical, logistical, and economic issues to ensure the best possible outcome for all concerned.

So, while we are very busy behind the scenes on this issue, don't expect to see any immediate changes. It's still far too early to decide how to replace leaded avgas. Together with our partners in government, science, and industry, I do believe we can find a workable solution. And, rest assured, AOPA will make certain everyone concerned takes the needs of the entire general aviation community into account at every step along the way.

\*For more information on the Aircraft Owners and Pilots Association and the issues that affect your flying go to [www.aopa.org](http://www.aopa.org) today.

Craig L. Fuller  
AOPA President and CEO

## Drug Half-Life – Why It Matters

by Dr. John W. Beasley, MD

Airmen Medical Examiner

Professor Emeritus and Clinical Professor,

Department of Family Medicine

University of Wisconsin - Madison

If you take a drug, how long does it last in your system? I have one pilot I certify who had to use occasional “hydrocodone” for episodes of acute back pain. Now, with good reason, the FAA will not allow people to perform the duties of a pilot while they are using narcotics. So, the question comes up: How long after one of these episodes is it before one can fly safely? Some years ago at a conference for Airmen Medical Examiner (AMEs), this question came up, and the answer was: “*Usually about five half-lives.*”



Dr. John Beasley

For those of you whose pharmacology is a bit rusty, a “half-life” is the time it takes to get rid of one-half of the drug from your body.

To use the example of hydrocodone, the half-life is about 4 hours (although there can be considerable variability). Thus, if you took a preparation of hydrocodone containing 10 mg, there would be 5 mg left at the end of 4 hours (neglecting time to absorb the

drug, etc), 1.5 mg left after 8 hours, 0.75 mg left after 12 hours, 0.375 mg left after 16 hours, and roughly 0.16mg left after 20 hours.

That said, there is a whole set of FAA rules pertaining to specific drugs. The FAA has different policies for different medications. Those friendly feds are, quite properly, concerned about the underlying condition requiring the use (e.g. the back pain), and whether it will affect piloting abilities. They are also concerned about habituation – which is the reason that occasional but not regular use is sometimes permitted. And finally, they are appropriately concerned about the effects of the drug itself.

I must admit that there are some policies that I have trouble understanding, such as those pertaining to “zolpidem” (Ambien) which although the half-life is only about 2.6 hours, pilot activities are prohibited if taking it more than twice a week and 24 hours after taking the drug.

Some issues that may surprise you: Took a “Benadryl” for some allergic problem? Well, the half-life of that drug is between 2 and 8 hours. Best then to wait 40 hours after the last dose to be safe. (By the way, Benadryl is NOT approved by the FAA for use while flying – “loratidine” and “fexofenadine” are). Using something

else? You can just go to Google and type in “half-life” of whatever drug you are wondering about and you will probably find what you need.

Some cautions: The metabolism can vary a LOT between individuals and moreover many drugs have active metabolites (products of the breakdown process) that also have effects.

Most drugs are metabolized in this way – but not all. Take for example, “ethanol.” The pharmacology is different. The metabolism doesn’t work by half-life,” but rather a constant amount is metabolized each hour. It’s more like the gas in my Mooney’s tank. The usage is a bit under 10 gallons per hour until I become a glider. It’s not 10 GPH the first hour, 5 GPH the second and so forth. *Dang!*

So, for example, if you go to a party one night and consume five 5-ounce glasses of wine (by which time you need a designated driver), you would have consumed about 6 ounces of ethanol. With considerable variability we could expect you to metabolize about 1 ounce per hour, so you may be clear of alcohol in about 6 hours.

The actual blood alcohol content will depend on many factors including body weight, rate of consumption, and gender. But that’s not all the story – the after-effects of alcohol also impair performance, perhaps up to twice the time it takes to reach zero blood alcohol. The 8-hour “bottle to throttle” rule may not be conservative enough. You could still technically be “under the influence” as far as aviation activities go. Of course, you’ve never had a hangover. Me neither.

What’s the take-home? If you do take any medications that could have adverse effects, keep the 5-half-life rule in mind. You can go to <http://www.aopa.org/members/databases/medical/druglist.cfm> to get a list of drugs that are allowed or not allowed. If in doubt, talk with your AME. It’s not possible here to list all the FAA policies – and many of them I would have to call the FAA myself to check. □



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# Home Away From Home In A TBM

by Guilherme Schmidt

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The Metar above wasn't the best way to start a trip, but I looked at John Roberts sitting on the copilot side, and he said, "Well, my minimum is that I need to see two stripes on the runway." We both felt comfortable with the takeoff, so we decided to launch. John is an FAA Designated Pilot Examiner, and has received the "Wright Brothers Master Pilot Award" for 50 years of safe flying. His wife, Jane, was sitting in the back, already immersed in what proved to be one of the many books she was going to read on this trip.

You may have read my report on the trip I took with my Daher Socata TBM 850 from Minneapolis, Minnesota to Cartagena, Colombia



DAHER-SOCATA TBM 850

(Feb/March 2010, *Midwest Flyer Magazine*). This time I decided to stretch a bit, and we were taking off from Flying Cloud in Minneapolis, heading towards Sao Paulo, Brazil, 5,230 nm away.

It was 5:30 pm on a Wednesday. The tower gave our taxi instructions, and asked us to report our position several times during taxiing, as they could not see us due to the intense fog. It takes a lot of discipline for a takeoff under these conditions, and

one cannot hesitate to move to the instruments as soon as you rotate. Our taxi and departure were uneventful, and at 7,000 feet MSL, we broke out on top, looking at a beautiful sunset. *Oh, how I love flying!*

This was going to be an emotional trip from many aspects. Our destination was SBMT (Campo de Marte, in Sao Paulo, Brazil). I learned to fly there some 25 years ago, and I hadn't been back flying in Brazil since 1993. So it was a bit nostalgic. It was also the first time flying my very own plane back to my former home country, and finally it had been 3 years since I was last in Brazil, so I was anxious to visit my aunts and uncles, who are undoubtedly witnessing the passage of time.

The first stop of the trip was Daytona Beach, Florida (DAB).

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(L/R) John and Jane Roberts with TBM 850 owner/pilot, Guilherme Schmidt.

#### **TBM 850 FLIGHT TO BRAZIL**

We climbed towards 31,000 feet, and although we had no push from the winds, at least they were not slowing us down much. It was mostly a crosswind. The TBM is

an incredibly capable machine, and we settled at 300 kts, and saw the night fall. There was a lot of weather over Georgia, but the combination of XM weather, stormscope, and onboard radar allowed us to navigate through it confidently. Truth is, we topped all the weather, and landed after 4 hours on the hobbs. It was 10:30 pm, so time to go to a hotel, and rest for our morning leg towards San Juan, Puerto Rico.

We launched the next morning under light rain towards San Juan (TJSJ), climbing again to FL310. We

were on top of an overcast, so we could not see much of the Caribbean. We had our life vests on board, a raft for four people, and a survival equipment bag. We were also carrying a PLB (Personal Location Beacon), in case of ditching, that we could bring with us to the raft. The bureaucracy of international flying started here as well. I filed two "traveler manifests" through the electronic Advance Passenger Information System (eAPIS) with U.S. Customs & Border Protection (CBP), in addition to my flight plans with the Federal Aviation Administration. Technically speaking, one does not need an eAPIS to fly to San Juan from the United States, but I was afraid that if I had to divert due to weather, and land somewhere else, border protection might be angry with me. So I filed an



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# TBM To Colombia...



## Faster & More Fun Than Flying On The Airlines

### High On Health!

#### Help your doc get it right!

by John W. Bessley, MD  
Professor Emeritus and Clinical Professor, Department of Family Medicine  
University of Wisconsin - Madison

A couple of days ago I was trying to get a medication order done right in the computer. Click here. Click there. Click... and the patient kept talking to me. "Try the way, my elbow is..." I looked at his elbow and back at the computer. Click here. Click there. Okay... I almost started my 78-year-old man on birth control pills. It's a bit like being on final approach and having a passenger who wants to chat.

Sometimes there is just too much to cope with at one time. In the cockpit, I have what the instrument tell me, what's on the left chart, the meter I made, sound of the airplane, and more. Dang, ATC just amended my clearance! There are many times when we are in a state of information overload – just too much stuff coming at us. And, some of the things that make it harder to handle the overload are interruptions. Interruptions cause what is known as a "break in task" and, as you can imagine, performance suffers. I reply to ATC and now my heading is off 20 degrees.

It's not too different in my office. Unless the issue is a really simple one (the equivalent of a VFR flight at cruising altitude), I'm trying to integrate information about the patient's problem from the chart (paper or computer), what the patient is telling me, what the tests results are (there he or she looks), what the nurse just told me, what I

So how can you help your "doc" avoid errors? First, be aware that being a doc with a patient makes the problem is trivial, it's a bit like being on the ILS final approach. He or she is trying to figure out what's going on (location, speed, heading, altitude) and working to achieve what we call, in both professions, "situational awareness." Where are we and where are we going? While the doc needs to give you time to explain what's bothering you, at the same time you need to give him or her time to think, compose questions, examine you, read consultant notes, make decisions or write prescriptions. I cannot both listen to your heart and have you talk at the same time. And I cannot make decisions about your heart when you're trying to talk about your elbow. And I may screw up your prescription if you keep talking while I'm entering it.

It really helps to come in with a list of things – all of them – that you want to discuss so that, if there is not enough time to address all of them, you and your doc can pick out the most important ones. The average appointment time is between 10 and 20 minutes and if you have four problems, that's about 2 to 5 minutes per problem. Not a lot of time to reach diagnoses and suggest treatment, let alone do all the computer work that's required. Time is limited and while I'm willing to spend more time with patients than is on the schedule, I'm very sensitive to the fact that patients have appointments too, and it is both of our jobs to try to keep on time. Most docs do their best to stay on schedule, but often we fail. Believe me, I'm tired of starting off every visit saying, "Gosh, I'm sorry I'm running late." It's one of the most stressful parts of my work.

If you are taking medicines, please bring them with you, the actual and in the bottle. Yeah, I know it is supposed to be in the computer, but you don't want me to rely on that. I know how things can get entered wrong, changes may

### GRASSROOTS AVIATION

#### From GA To The Airlines & Back... Jeff Skiles Buys A Waco!

Staff & Photos by Dave Weisman

What good is an EAA Young Eagles co-chairman if he doesn't have a general aviation aircraft to take kids flying? Especially when his profession, Harrison Ford, introduced young people to aviation using his old Havilland Beaver and helicopter?

Well, that's what Jeff Skiles thought, so after discussing it with his wife, Barb, and friends, he decided to buy a 1935 Waco YCC vintage cabin-class biplane, which is old airline



Jeff Skiles with his new 1935 Waco YCC biplane at Brookwood, Wis.

### Commercial Pilot Receives 160-Day Suspension For Altitude Deviation

by Greg Peigel  
Aviation Law

The NTSB has affirmed an administrative law judge's (ALJ) decision to impose a 160-day suspension of a commercial pilot's airman certificate for a 500-foot altitude deviation. In *Administrative v. Skaggl*, the FAA alleged that the airman was flying at flight level (FL) 170 when air traffic control (ATC) instructed him to climb and maintain FL 180. According to the FAA, the airman apparently descended to FL 180, but then descended to 17,500 feet, which resulted in a loss of separation between the airman's aircraft and another aircraft. The FAA issued an order suspending the airman's commercial pilot certificate for 180 days for violations of FARs 91.125(b) (altitude) and 91.125(c) (altitude and clearance).

The airman appealed the order to the NTSB. After an evidentiary hearing, the ALJ affirmed the FAA's order, but reduced the suspension down to 160 days based upon the airman's completion of additional training. Although the airman had filed a report under the Aviation Safety Reporting Program (ASRP), the ALJ determined that the airman was ineligible for waiver of sanction since the airman had received another ATC violation within the preceding 5 years. The airman then appealed the ALJ's decision to the full NTSB.

On appeal, the airman argued that the ALJ erred in allowing an FAA inspector's opinion that the airman had acted in a careless or reckless manner, because whether he acted in a careless or reckless manner was a legal

as a residual violation. Additionally, the Board found that the airman's "admitted act of turning around to assist his sick grandson while encountering turbulence amounts to a violation of 91.13(a)." As a result, the inspector's testimony, even if it were, was not dispositive of the issue.

With respect to sanction, the Board began by observing that the ALJ had already considered the airman's mitigating factors when he reduced the sanction from 180 days down to 160 days. It then noted that the sanction was within the guidelines established in the FAA's Sanction Guidance Table (Appendix B to FAA Order 2150.3B) and that the Board must defer to the FAA's choice of sanction. Finally, the Board referred to its precedent that failure to adhere to ATC instructions is a serious violation and the airman's "conduct on the flight at issue could have led to a sobering outcome." Consequently, the Board affirmed the sanction, as well as the violation.

This looks like it was an unfortunate set of circumstances for the airman. In hindsight, it raises several questions, at least in my mind. When the airman reached FL 180, why didn't he engage the autopilot and then deal with his grandson? Having had a similar situation with my son, I can sympathize with the airman having to deal with a sick, young passenger. However, the aircraft and the FAA can be very forgiving. You have to fly the airplane first!

What were the circumstances of the airman's prior ATC-related violation? Why wasn't the airman using proper radio phraseology and procedures? (I suspect, and mind you it is only a suspicion, that communication issues may have been involved in the previous violation.) Finally, would the sanction have been less if the deviation had not resulted in loss of separation? (Probably.)

What can we learn from this case? First, it is imperative

### Flight Service Specialists Union Concerned With Flight Safety As Lockheed Martin Consolidates Even More Stations... How Concerned Should We Be?

by Dave Weisman

Another round of changes has taken place at Flight Service Stations around the country, and the International Association of Machinists and Aerospace Workers (IAM) is not happy about it. While we are not opposed to cutting government waste and using technology to improve efficiencies, we are concerned with briefers who are responsible for regions of the country they are not familiar with and who lack practical flight experience. Gone are the days of the local Flight Service Station and the pilots that manned them.

Regardless of any desire to preserve flying the way it used to be, the consolidation of Flight Service Stations may be a natural progression of how we will obtain our services now and in the future.

Today, more and more pilots have turned to "self briefing" and filing flight plans online, drastically reducing the need for Flight Service Station services. So read what IAM is saying, read what Lockheed Martin is saying, and then decide for yourself if consolidation of Flight Service Stations is or is not the way of the future.

At the end of this editorial, you will be encouraged to state your position on the issue.

In October of 2005, the Federal Aviation Administration (FAA) outsourced its flight services in the United States (except for Alaska) to Lockheed Martin Corporation. At the time of the outsourcing, there were 78 flight service stations outside of Alaska, employing over 2,000 specialists. By August of 2007, with FAA approval, Lockheed Martin had closed 38 stations. A further contraction of the system took place in February of 2009 when the number of stations was reduced to 13, but the company wasn't done yet. Effective February 1, 2010, all but six (6) stations have now been closed.

IAM says that the FAA is putting the safety of pilots at risk again by agreeing to the further consolidation of services provided to general aviation. The six remaining

Continued On Page 8

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## SPORT PILOT - LIGHT SPORT AIRCRAFT

### Engine Selection For S-LSA: Rotax vs. Continental

by Ed Lennow



The Rotax 912ULS 100 hp engine dominates the S-LSA scene with about 85% of the market. In contrast, Rotax's latest design has both lower emissions and efficiency, with parts to be made in both states. Although the engine was made in a small factory, it's a great example of a small business competing with a multinational. It can be used to test factory performance and many parts of the engine.

The venerable Continental O-200 100 hp engine, now available in the "Light Weight" O-200, will the new engine prove to be as robust as the old one? Only time and experience in the field will tell. Stay tuned.

Rotax last month. Recognizing that this is about certainly one of those wing vs. low-wing, single vs. multi-engine, push vs. power kind of aviation topics, we offer the following analysis for consideration and debate.

When it comes down to it, only two 100-hp engines dominate the S-LSA market: the Rotax 912ULS and the Continental O-200. There certainly are other players, but in particular to beginning to make inroads, and I expect it to gain market share in the coming years. However, since its share is still quite small, with Rotax claiming perhaps 80% of the market, and Continental enjoying most of the rest, I leave the debate engine for discussion in a future column. (Since Iahn offers the \$5

Ed Lennow

### INSTRUMENT FLIGHT

#### The Scan

Knowing What to Do and When

by Richard Morley, CFI

A instrument pilot has heard over and over again that the key to being a good instrument pilot is "the scan." This seems simple enough, but simple does not mean easy. Developing a good scan technique takes work, and knowing what to scan and when to scan is essential. The following tips should help you develop or refine your scanning techniques.

First, let's define what we mean by "the scan."

In instrument flight, you are substituting the view outside the window for gauges on the panel. Instead of looking outside for guidance, you are forced to interpret the instrument to manage your flight. Assuming scan gauges rather than a glass cockpit, you need to interpret more than one gauge to maintain situational awareness. This process is called "the scan."

Heading means, not only scanning for the correct heading, but tracking the navigation aid selected. Full panel glance at the directional gyro and course deviation indicator. Partial panel glance at the compass, the turn coordinator, and course deviation indicator. But can include the vertical speed indicator as well.

"Looking for" keeps your mind in the game and ahead

Glance, Do Not Stare!

This is good advice in many social settings, but is absolutely mandatory in instrument flight. Staring at an instrument, or "fixating" in the FAA calls it, stops the scan. This means we are not glancing at what we should be. The FAA calls this "omission." Without the scan, you no longer have situational awareness. Without situational awareness, you are behind the aircraft... reacting, rather than guiding. Let your eyes linger on an instrument only long enough to interpret the instrument, then move on.

W.A.L.T. is your pal

This little mnemonic helps you keep your eyes moving and your scan going. W.A.L.T. stands for Heading, Altitude, Looking for. Using this helps you keep ahead of the aircraft, and minimizes fixations.

## From The Hudson To Toulouse, From Right Seat To Left... Flying The World's Largest Commercial Airliner - The Airbus A380

by Jeff Skiles

"Ok, flaps full. When I tell you we'll proceed there is a helicopter in front of you, you'll pull the stick all the way right and all the way to the sky and hold it." said Airbus A380 test pilot, Terry Lutz, "Helicopter" Terry said. I initially pulled the stick all the way to the left.




The aircraft rolls to a 45-degree bank angle and assumes about a 25-degree nose-up attitude. As the speed slows to 140 knots, the auto-throttles automatically come in to take-off thrust and the giant plane pitches up to the air slowly gaining altitude at 16,000 feet. The rugged Pyrenees Mountains separating France from Spain, give way to the green Mediterranean as we enter the sky. This maneuver is designed to demonstrate one of the selling points of a 450-tonne aircraft: it's impossible to stall. A380 is flying the world's largest airplane in the world. I was invited to join a race in October 2009 and given the opportunity to fly this grand aircraft with test pilot from the factory.

I arrived in this beautiful southern France city and met the man who would guide me through this process - Terry Lutz. Terry is an American veteran and former Northwest Airlines Captain based in Portland. A few years ago he was offered a job as an Airbus test pilot and he took it. Having seen the beauty of this area, I can see why. The US Air Force trained Terry as a test pilot. All these years later he has been putting that background to use as a test pilot.

## Getting Your Feet Wet... What To Do If You Have To Ditch

by Steve Schapiro



## FLIGHT ADVENTURES

### Skiplane Flying Takes Bite Out of Winter



Edny Hiltner





The Delta of the Amazon River.



Crossing the equator.

### **TBM 850 FLIGHT TO BRAZIL**

outbound traveler manifest from the United States to San Juan with an “alternate” of Grand Turk. I also filed an outbound traveler manifest for leaving the United States from San Juan.

The leg to San Juan went by fast. We had tailwinds and we settled at 370 kts groundspeed at 44 gph. *This is better mileage than my minivan!* It took us 3.3 hours to San Juan, and the weather wasn’t cooperating much. We ended up having to shoot an ILS to an 800 ft ceiling under rain. *Hey, the Caribbean weather is supposed to be better than this!*

We refueled in San Juan, and in no time we were climbing through the rain, and dodging a couple of storms to break out on top towards Trinidad and Tobago, our next stop (TTPP).

The flight to Trinidad was beautiful, the weather cleared up, and again we climbed to FL310. It was beautiful sightseeing even from up there. We flew over many islands – St. Vincent, Martinique, and many others. What a beautiful part of the world! John Roberts and I at that point felt sorry for those who do not fly GA, and miss all these wonderful experiences.

As we crossed the San Juan Flight Information Region (FIR) boundary, we got transferred to Piarco Control, based in Trinidad, and radar serviced was terminated. Now we were required to make the good old position reports over the fixes. Aircraft ID, Fix Name, Time Over Fix, Altitude, Estimate To Next Fix. The other change besides the accent of the controller (adding to mine) is the

various accents on the frequency, as most of the carriers are international airliners. After a few position reports, and requests for radials and DMEs from various VORs, we were ready to descend. Note, the controllers do not have you on radar, there is no transponder code to squawk, and they do not know when you need to descend. So you have to advise them of your TOD (Top Of Descend), and request a let down. This leg took us 2.3 hours, and we landed on a beautiful afternoon in Trinidad.

At the Piarco International Airport in Trinidad, we encountered our first problem with the international bureaucracy. They wanted a copy of my traveler manifest. I explained to the gentleman that the traveler manifest is now electronically filed, and all we have is an email receipt authorizing the departure. This apparently wasn’t enough, but after some time he came up with a printed traveler manifest form, and had me complete it on the spot. We filled the tanks – they had my fuel release that I had sent from UVAir, so no need to pay for it on the spot – and I used one of the many cans of Prist (anti-ice mixer) since their Jet A has no Prist (a common occurrence in all of Latin America). Then off we went to a local Holiday Inn, and after a relaxing dinner at a local mall, I took a well-deserved rest.

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The following morning the weather was beautiful, and we flew to Belem in Brazil (SBBE). This was an 1100 nm leg. We filed for FL310, and 4:00 hours, and we had 4 FIR boundaries to cross. The flight was uneventful, and the weather was nice.

We flew at FL310, initially flying along the coast of Venezuela after departing Trinidad, crossed the South America coast, and Piarco Control transferred us over to Georgetown in the Guiana. From there we kept making position reports until we crossed into Suriname, and were talking to the Dutch-speaking controllers at Paramaribo Control. The next handover was greeted with a *"Bonjour N924BB... This is Rochambeau Control. You are in radar contact."* The first radar contact since we left San Juan, and we finally had something to dial in the transponder again. Rochambeau is the Air Traffic Control Center for the French Guiana, and after a few minutes we crossed the border into Brazil, and spoke to Amazonica Control.

The flight was very scenic. We left the jungle of the Guianas, and flew over the mouth of the Amazon River, and crossed the Equator. Belem sits just 1 degree south of the Equator. There were a few storms around the airport, but the landing was uneventful.

I had been advised by many to hire a handler for the arrival in Brazil. After some hesitation, I paid the \$300.00 and got a local handler. I am so glad I did. The bureaucracy in Brazil is gigantic. There are no FBOs in Brazil; you taxi up to the airport ramp, unless you contracted with a private hangar. The public ramp is operated by the airport authority, which is a government entity called INFRAEREO. The handler met us there, and from there on they held our hand as we cleared with the immigration police, customs office, then to the Federal Police to clear the plane for entrance into Brazil; then from there to the Brazilian Federal Aviation Administration called the Automatic Number Announcement Circuit-National Civil Aviation Agency of Brazil (ANAC), where they asked for my airworthiness certificate, plane registration, pilot and medical certificates, and airplane insurance policy. With all that paperwork, they issued a letter of overflight, which allowed me to stay in the country flying around for up to 60 days.

From there we went to INFRAEREO to pay the user fees. After \$200.00 worth of ramp, parking, landing, communication, and aero navigation fees, I was given a release to take to the Flight Service Station personally in order to file my flight plan. Flight plans in Brazil need 45 minutes notice. I filed my International Civil Aviation Organization (ICAO) flight plan to the next leg, and met John and Jane Roberts, who were at the airport cafe, probably wondering if I was missing in action, since this process took about 2 hours even with the help of a handler. The battle with the bureaucracy delayed us, and we took off by 4:00 pm towards our next stop, SBBR - Brasilia, the capital of Brazil. The flight was due south, and we flight planned for 3.5 hours. The sightseeing was gorgeous, flying



Avoiding a thunderstorm enroute to Brasilia.


over savannas, huge dams, forests, and small towns.

Flying close to the equator at 5:00 pm also meant lots of thunderstorms. Evidently our XM weather was of no use in Brazil, but fortunately the TBM has onboard radar, which showed all its value. I had to be constantly working the tilt to avoid over scanning storms, and there were lots of deviations. The arrival in Brasilia was at night, and

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#### ***TBM 850 FLIGHT To BRAZIL***

there were numerous storms in the area. They were mostly isolated and scattered, so between the radar and all the lightning at night, it was easy to avoid. We landed about 7:30 pm, pulled up to the INFRAEREO ramp, and a fuel truck came to meet us.

What became a routine in Brazil, started again: fueled up; used my can of Prist to mix with the fuel; paid cash since they don't take credit cards (the average price was \$7.50 per gallon, although you give the fuel order in liters); then headed towards INFRAEREO and paid \$150.00 in user fees; and then to the Flight Service Station to file our flight plan. After that mission was accomplished, we headed to a local hotel for a good night's sleep. The next morning we had the final and shortest leg of our trip to Sao Paulo.

When filing the flight plan to our destination airport SBMT (Campo de Marte) in Sao Paulo, I learned that the field is now VFR-only, and you have to cancel your instrument flight plan 20 minutes out, and fly the VFR corridors into Sao Paulo. Well my "Jepps" did not have the VFR corridor charts. The flight planning room had one chart that we could look at but not take with us, so John Roberts and I took some notes of visual checkpoints. This was going to be interesting, I thought. I had learned to fly in Sao Paulo in the mid-1980s, but my memory was not very reliable, and procedures had definitely changed.



We will need some help from the controllers. With our “Y” flight plan filed, we took off. (Yankee stands for a mixed flight plan that starts IFR and converts to a VFR flight plan somewhere along the route).

The flight to Sao Paulo was gorgeous. It took us a little less than 2 hours, not a cloud in the sky, and we flew over one of the richest agricultural soils in the world. We saw lots of beans, sugar cane, and coffee farms. We flew over a small town in the interior of the country where my late father was born. That was a nice touch on the trip. Soon enough we contacted Sao Paulo Approach Control, and they had us descend to 5,000 feet, directed us over the VFR corridor gate, and told us to transition to VFR there. *Then the fun began!*

Approach control told us to follow corridor “Echo,” fly over the toll of the freeway, and then to the Juliet VFR corridor, and report over the freeway loop to Marte Tower. We confessed that we needed help with headings and distance to these waypoints. They were very helpful, and we were even able to identify the points.

Sao Paulo sits in a valley inside a plateau. As we crossed the visual checkpoint of the freeway loop, the city comes into sight. It is a sight not to forget. Sao Paulo has 14 million people, and Marte – is the only GA airport, located on the north side of the town. I was thankfully familiar with the airport location, reported it in sight, and cleared to the pattern.

I was required to report on base, gear down and locked (a mandatory phraseology in Brazil), and the landing was rough but uneventful. The taxiways are very narrow there, and we had pre-arranged with a private hangar where the manager was waiting for us.

It was nice to be back home to the airport where I first learned to fly. Home and still so far away from home. The trip down took 19 hours, and we left on Wednesday night, and arrived Saturday morning.

My wife and kids came on the

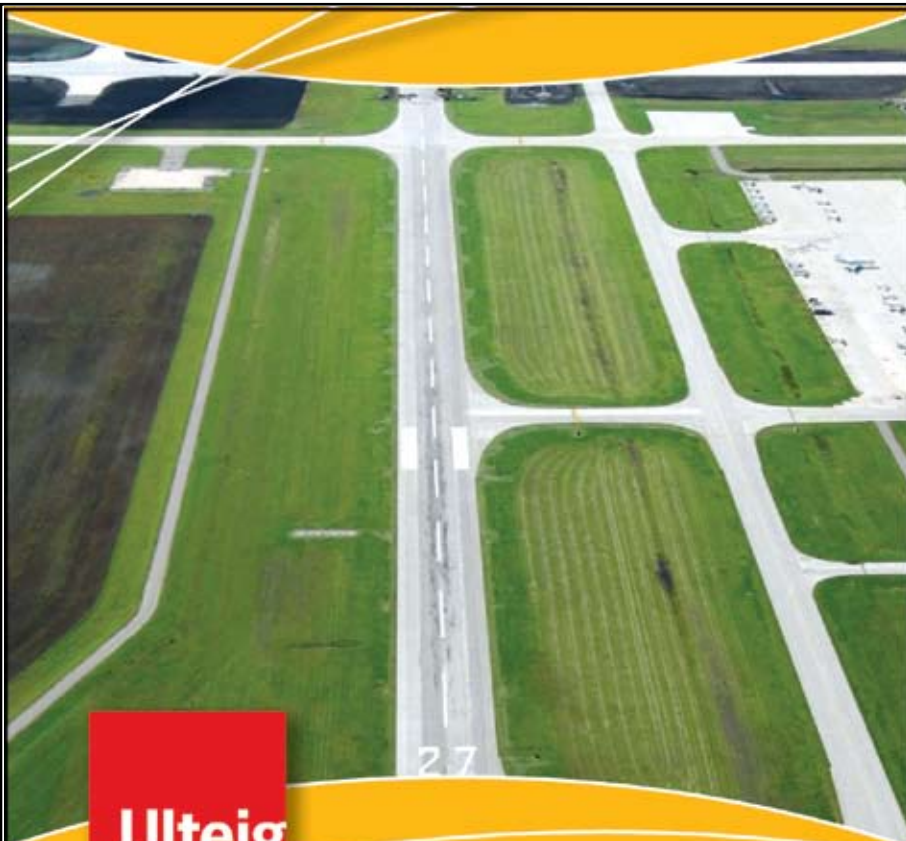
airlines. Their Delta flight left 3 hours late on Friday, they missed their evening connection in Atlanta, so they spent the night there, caught a flight on Saturday night to Rio, then connected on a flight to Sao Paulo to arrive on Sunday afternoon sans luggage, and with lots of stress. Unbelievable, but this time around flying the TBM to Brazil took about the same time as the airlines, and *they can't beat the fun!*

The stay in Brazil was very pleasant, and at the Campo de Marte Airport, I saw the Piper Cherokee 140 I soloed in in 1986, and it is

still flying. I also saw my old flight instructor, which was nice. But soon, it was time to come back.

The return route was very similar; just different landing sites. We flew from SBMT to Palmas SBPJ leaving on Sunday afternoon. Palmas is a planned city in the middle of Brazil. It is the capital of the state of Tocantins. The city is only 20 years old. The airport is modern, huge and in the middle of nowhere. We flew a DME arc approach, landed, refueled and took off at sunset toward Macapa (SBMQ) at the northern end of Brazil.

We overnighted in Macapa,



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There's no greater feeling than to be reunited with the first airplane you flew. Guilherme Schmidt with the Cherokee 140 he soloed in in 1986, which is still being flown at the Aeroclub of Sao Paulo.

the equator. From Grenada we headed towards Turks and Caicos, definitely one of the most scenic stops of the trip. You could see the bottom of the ocean forever there, and the water has that aquamarine color. Turks and Caicos is part of the English Commonwealth, and included in the landing fees was a \$15.00 "Her Majesty Fee." So I felt I did my bit to help Queen Elizabeth!

It was finally the last leg back to the United States. We slept in Turks and Caicos, and flew to Fort Lauderdale on Tuesday morning. This time the weather was clear, and we saw most of the Caribbean. In the flight from Turks and Caicos, you are always within gliding distance of an island. It is very nice. The U.S. Customs experience in Fort Lauderdale (FLL), although not friendly, was uneventful and quick. We were all glad to be back in the United States. The trip and places we visited were wonderful, but it also made us thankful for how easy and friendly it is to fly in the



Flying over the Caribbean enroute to Turks and Caicos.



The Turks and Caicos arrival.

#### **TBM 850 FLIGHT TO BRAZIL**

and left in the morning under beautiful weather towards Grenada in the Caribbean. That was a 4-hour leg, and the winds were light and variable as is common around

United States. I came back even more convinced that "user fees" are indeed a plague to be avoided.

The final leg from Fort Lauderdale to Minneapolis was a long one, as for the first time during this 40-hour trip,

we encountered heavy headwinds, which forced us to stop for fuel in Shelbyville, Tennessee. We were back home on Tuesday afternoon, two days after we left Sao Paulo Brazil.

When I pause and think about it, expanding our flight experiences as general aviation pilots, and adventuring in farther lands beyond what we normally fly, brings us not only more experience, and a better understanding of our aircraft and the aviation system, but more importantly memories that we will cherish for a lifetime! □



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## Door County For Fall Colors

**P**ilots looking for a fall excursion should consider flying to Ephraim-Gibraltar Airport (3D2), Ephraim-Fish Creek, Wisconsin, in the Door County Peninsula. There are an array of activities, from water sports, bicycling miles of bike trails, golfing, fine and casual dining, a drive-in



theatre and live/Broadway-quality theatres, lighthouse tours and historical museums, caves, quality shops, and some of the best fall colors Wisconsin has to offer.

For us “fly and diners,” try burgers and ice cream at Wilson’s Restaurant and Ice Cream Parlor in downtown Ephraim, established in 1906; Alexander’s Dining, located between Ephraim and Fish Creek on Highway 42, which specializes in hand-cut steaks and fresh seafood; the English Inn, also located between Ephraim and Fish Creek, with a full menu of seafood, steak, fish and poultry, open year-round; Good Eggs featuring omelet wraps, fresh bakery, and fruit smoothies; and Joe Jo’s Pizza and Gelato family restaurant.

Overlooking beautiful Eagle Harbor is the Old Post Office Restaurant in Ephraim, featuring fresh whitefish, chicken and ribs, potatoes, onions, cole slaw, homemade breads and cherry pie. Breakfasts include Belgian waffles, homemade coffee cake and cherry muffins.

Paulson’s Mill Road Café and Windflower Gifts in Ephraim, features espresso and specialty drinks, bakery goods and desserts.

Fred & Fuzzy’s Waterfront Grill in Sister Bay, features casual cuisine and scrumptious steak! When you get to the cemetery, turn right.

Other excellent restaurants include the Second Story Restaurant at Ephraim Shores with its panoramic view of Eagle Harbor; and Door County’s garden restaurant, the Summer Kitchen in Ephraim, known for its famous soup bar, salads, sandwiches, and homemade pies.

The scenery is breathtaking from the air, along the bike trails, or driving to the top of the peninsula along the Green Bay Shore on Highway 42. Peninsula State Park in nearby

Fish Creek is a must see!

A special event in the fall is the “Pumpkin Patch Fest” in Egg Harbor, October 9-10, 2010. The event provides family fun, storytelling for the kids, children and outdoor adult entertainment, sweet corn, pumpkin pie, cider, beer and brats.

The Sister Bay Fall Festival, October 15-17, 2010, features an antique boat show, music and food.

Places to stay in Door County are many, but none more accommodating than the Pine Grove Resort in Ephraim. The 100-year-old facility is one of few remaining resorts that still offer waterfront access and a private beach exclusively for guests. In 1978, the original structures were replaced with the current buildings. Each room has a balcony overlooking Eagle Harbor, and there’s an indoor pool and exercise room. For reservations call 800-292-9494 ([www.pinegrovedoorcounty.com](http://www.pinegrovedoorcounty.com)).

Two excellent bed and breakfasts are the Lodgings At Pioneer Lane in Ephraim ([www.lodgingsatpioneerlane.com](http://www.lodgingsatpioneerlane.com)), and the White Lace Inn in Sturgeon Bay ([www.whitelaceinn.com](http://www.whitelaceinn.com)).

The Ephraim-Gibraltar Airport (3D2) has two runways: Rwy 14/32 (paved), 2700 X 60 feet, and Rwy 01/19 (turf), 2345 X 80 feet. There is a new self-service fuel station, which is very user friendly! Tie-down is \$10.00 per night,

**CONTINUED ON PAGE 62**



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# Wings of Hope

by Melissa Kinsey

Several months ago, in a sparsely populated region of Nicaragua, Wings of Hope pilot Clint Hanley received a ham radio call requesting medical transport for a man in a remote village who had developed acute appendicitis. The man would almost certainly die if his appendix ruptured. Hanley and his wife, Marilyn, carefully preflighted their medical air transport (MAT) plane, a 1966 Cessna 172. They removed one of the passenger seats to accommodate a stretcher. Minutes later, Hanley was flying above a dense swathe of rainforest, broken only by clouds and serpentine rivers.

Staying in constant radio contact with his wife during the flight, Hanley arrived in less than half an hour to



A Cessna 172 gives the Miskito Indians in Nicaragua, Wings of Hope.

pick up the patient, a 170-lb. father of three whose abdomen was now visibly inflamed and distended. As the man was being carried to the aircraft, the stretcher suddenly collapsed. The poor guy fell head first, and someone managed to catch him just before his head hit the ground. Even so, the pain from the jolt knocked him out cold. The patient regained consciousness, and they proceeded to the hospital, where a surgeon performed a successful appendectomy.

Marilyn, a registered nurse, and Clint work in partnership with Wings of Hope to serve the Miskito Indians of northeastern Nicaragua. Wings is a nonsectarian, nonpolitical, not-for-profit charity with bases in the United States and more than 40 other countries. Out of an abundance of caution, its pilots observe FAA regulations whether they're evacuating a patient from Branson or Burma. FAA regs call for all non-ambulatory patients (that is, those who can't walk) to be transported on a litter (stretcher) that meets certain specifications. This rule is intended to ensure the safety of the patient, as well as the safe egress of seated passengers.

But aircraft stretchers, which are made to be lightweight and compact, consequently lack durability. Each time a hinge gives out, a new stretcher must be purchased, since the manufacturer does not sell replacement parts. Sometimes the

air ambulance must be grounded until funding can be procured. As long as the plane remains tethered, stranded patients may die of injuries and treatable illnesses.

But Frank Sybert, one of about 500 Wings of Hope volunteers in St. Louis, Missouri, came up with a solution. Using nothing but his mechanical skills, a machining tool, a solid brick of aluminum, and a dash of ingenuity, he fashioned an identical replacement hinge.

"The standard hinges are die cast," Sybert explains. "The new hinges are made of pure metal, so they're about four times stronger."

Sybert, a modest, unflappable man who speaks only when he has something downright important to say, is 76 years old – incidentally, that's the average age of a Wings of Hope volunteer. He had no AutoCAD program with which to model the new hinge, but he did have 50 years of toolmaking and machining experience for General Motors and the U.S. Air Force, including 4 years of Korean War service. Sybert scoffed at the idea of relying on fancy software. He simply sat down with the broken hinge and a pencil and paper, drew out a plan, and got busy fabricating a prototype.

One day a week, Sybert reports to work inside the 16,000-sq. ft. hangar and adjacent office building in suburban St. Louis that serve as the headquarters for Wings of Hope. With its metal halide lights gleaming on the spotless white linoleum, the hangar might be mistaken for a BMW showroom if it weren't for the Cessna 206s and Piper Arrows housed there. The volunteer pilots, EMTs, and other staff at Wings of Hope operate the only free air ambulance in the Midwest. In addition, from 150 bases in Central and South America, the Caribbean, Africa, Southeast Asia, and elsewhere, the group provides



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humanitarian aid and medical care to people in isolated villages. Flying small fixed-wing aircraft or helicopters, they evacuate patients to in-country regional hospitals.

Sybert's new hinge, complete with a locking mechanism that engages when the stretcher is unfolded, worked brilliantly. But then there was the matter of ferrying it, along with a few spares, to the Hanleys' base in Tronquera, Nicaragua. Shipping the hinges was not an option. Nicaragua is second only to Haiti as the poorest country in the Western Hemisphere, and corruption is widespread. Supplies sent from the United States are almost certain to be "lost" and ransomed. Few travelers are foolhardy enough to check their luggage on commercial flights into Managua, the only international airport in the country.

Instead, Wings of Hope made arrangements for the hinges to hitch a ride in the carry-on baggage of a missionary who was returning to Nicaragua. He escorted the package to a regional airport and quietly handed it off to Hanley as if it were contraband. Hanley loaded the new set of hinges, along with medicine, radio equipment, and other supplies, into his plane and headed back to his 3,000-ft. grass and gravel airstrip on the outskirts of Tronquera.

Hanley, an IFR-rated pilot with 2,000 hours of flight time, evacuates about two patients a week from villages hemmed in by marshes and lagoons, rainforest, impassable roads, and swollen rivers. Injuries often occur in the continual struggle to subdue this unforgiving terrain. Last year, for example, a man fell while working on his land, impaling himself on his own machete. "Friends carried him back home, put him in a boat, and he traveled the rest of the day and all through the night to reach the nearest medical help," Hanley recalls. "But the doctor realized the man's injury was far beyond the limited capabilities of his small clinic." He summoned Hanley, who arrived in less than an hour to evacuate the patient, as well as a 14-year-old girl with a broken foot, speedily conveying them to a regional hospital.

About half of the patients Hanley transports are women with complications of pregnancy or childbirth. Recently, for instance, two women with high-risk pregnancies in the nearby village of Lapan, went into labor at about the same time. One was thought to be pregnant with twins. "These

ladies had been carried to the airstrip through a swamp that's often knee deep," Hanley explains. "It took four guys to carry the larger woman in a hammock suspended from a board."

Even in the best circumstances, he says, it's a 30-minute slog from the village to the runway. "Some people have enough money to buy boots to wear, but they fill with mud and water because they sink in to their knees. The roads are not passable for several months of the year, and this was one of those times. But a quick 25-minute flight from their airstrip, and I had them at the hospital in Puerto Cabezas [on the Atlantic Coast]. They both delivered healthy babies, thanks to the medical care they received there." Without transport, says Hanley, the mothers, their babies, or both would have died.

In developing countries, death is not flashy. No reporters rush to the scene, no code blue is called, and no hunky resident is there to straddle the patient on a gurney while thumping out chest compressions. Ordinary, humble people die stoically of garden-variety illnesses like measles and asthma. But now and then, their lives are saved with the help of a few compassionate people, a dependable airplane, and one very sturdy stretcher.

*EDITOR'S NOTE:* Melissa Kinsey is a medical writer with Nicholson & Stillwell ([www.nicholsonstillwell.com](http://www.nicholsonstillwell.com); [melissa.kinsey@nicholsonstillwell.com](mailto:melissa.kinsey@nicholsonstillwell.com); 314-601-3348), and a volunteer for Wings of Hope ([www.wings-of-hope.org](http://www.wings-of-hope.org)). □



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# Taking Flight...



## Young Aviators Camp Gives Students Lessons In Flight & Life

by Steve Schapiro

A student flies a Cherokee 140 by a Racine, Wisconsin lighthouse.

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**T**he last student walked into the Experimental Aircraft Association (EAA) building at John H. Batten Field in Racine, Wisconsin, 15 minutes late. And he wasn't the only one who wasn't on time.

With that, the eight high school students in the "Young Aviators Camp" got their first lesson.

"I taught them what a pilot is bound by – not only time, but being early," said Stephen Myer, a pilot of 52 years and a retired Vice President of Lockheed Aircraft Company. "At the Skunk Works, if you were 10 minutes early, you were 5 minutes late."

Myers and the other instructors expect the students in this 5-day summer program to be prepared and ready to go 15 minutes early. "No one was late the rest of the week."

The mission of the Young Aviators Camp is to light the spark of young people's interest in aviation, science, technology, engineering and math. But

the campers get much more than that.

"What we're trying to inspire is a lifelong experience," said Jerry Kirkland, Aviation Department Manager for SC Johnson, and a member of the camp's board. "This particular program gives kids an opportunity to say, 'I really didn't like it,' or 'This is what I want to do.'"

Students can explore whether they are interested in aviation-related careers while building their confidence and learning skills like discipline, responsibility and being prepared that will serve them in anything they do in life.

"Aviation is not like a car where you can pull off the road," said Phillip Fountain, the camp's flight simulator instructor. "If something is not right, there are consequences."

"We learned how to preflight an aircraft and how important it is to be in perfect condition," said Dan Rankin, a 16-year-old sophomore who participated in the camp last year. "I





Students work on an aircraft engine. (L/R) Dan Sellers, Matt Blank, Dan Rankin and Jake Bissen.

didn't know how important that was."

Students rotate between different activities. At any given time two students are in the air, while the other six may be in ground school, getting time on an FAA-approved flight simulator, or receiving instruction on mechanics. The highlight is getting an hour of actual flight instruction each day.

"It's really cool that they let you fly the plane," said Rankin. "The instructor tells you what to do and then you do it."



Jake Bissen at the controls of the simulator with Phil Fountain overseeing the instruction.

Dan Sellers, also a 16-year-old sophomore at Prairie High School, said he really enjoyed landing the plane, even though he thought that was the most difficult part of camp.

"The first time landing, I was tense; it was a little stressful. Once I did it, I realized it wasn't that difficult and I had a real sense of accomplishment," said Sellers. "It is the hardest skill in flying."

Sellers has been flying with his father in the family's Cessna 182 since he was young, but much of what he learned was new to him. He pointed out that he had never done any flight planning or navigation before.

"I didn't realize how much multi-tasking there is in navigation, with the maps and coordinating radials,

communicating with the airport and juggling all that."

Rankin thought the flight maneuvers were the hardest part. "Stalling the aircraft – I was really nervous. But the instructors, the confidence they have, helps you overcome your fear and anxiousness," he said. "In the end, it wasn't too bad."




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\* Source New York Times, October 20, 2006



(Front Row L/R): Dan Sellers, Matt Blank, Austin Beuhrens. (Back Row L/R): Ken Kaebisch, Ken Romzeis, Valerie Iverson, Jacob Lamb, Ryan Breaker, Jake Bissen, Dan Rankin and Phil Fountain.

Scott Sellers, Dan's father and the creator of the camp, pointed out that both boys were ready to solo by the end of camp, but since they were only 15 years old last year, they were not able to. Both boys intend to start flight training this summer and hope to solo soon.

"With the flight simulator and the immersion in the material, it is amazing how quick they learn," said the elder Sellers.

EAA Chapter 838 based at Batten Field has put thousands of dollars into making its flight simulator state of the art. The FAA has certified the simulator so time can be logged as simulated instruction and the LOA (Letter of Authorization) is framed and hangs on the wall.

The simulator is available for any pilot to use for flight training. You must be a member of the local EAA chapter, which costs \$35 plus \$5 for a nametag, and then it is \$20 an hour for simulator time.

It uses two computers and two monitors – one for the pilot and one for the instructor controlling the simulator. It has all the instruments you would find in a cockpit – a control yoke, rudder pedals and throttle quadrant, as well as radio and navigation stacks.

The instructor can control the pilot's view – selecting either a cockpit view showing the six main instruments (even though it's a computer, it's not a glass cockpit), or the view from just behind the aircraft,

which most students prefer. After the simulation, Fountain uses graphic depictions to show students how they were controlling the plane.

"The simulator gives them a chance to make mistakes," said Fountain.

The youngest student last year, the first full year of the camp, was 13-year-old Valerie Iverson. She would watch the other students as they flew the simulator to see what they were doing and compare herself to them.

"I really worked to encourage her," said Fountain. "Initially, she seemed a little scared, but she was determined."

Sean Dwyer, a retired chemist, teaches a portion of the ground school. His goal is to get kids to think by presenting information with lots of hands-on interaction.

One example is using a brown grocery bag from Piggly Wiggly to demonstrate *Charles Law*, which states a gas expands in direct proportion to its absolute temperature. Therefore, a bag of hot air has fewer molecules of air than the same volume of cold air, making a hot air balloon lighter than air.

"The kids think they're being entertained," said Dwyer. "But they are learning the chemistry and physics of aviation, about cause and effect."

In addition to learning the principles of flight, the students learn about weight and balance, basic flight planning, emergency procedures and mechanics.

Kirkland explained one of the goals is to include other parts of aviation. "Not everyone wants to be a pilot. Maybe a student will want to design planes, or fix them or be a navigator," he said.

Students toured the DeltaHawk factory across Batten Field to get a hands-on lesson in mechanics. They got to take apart the diesel aircraft engines that are made there, and learn how aircraft engines are similar to car engines and how they are different.

One of the things that Scott Sellers really liked as a parent, is how much of the camp included hands-on

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activities. "A lot of things for kids now are virtual reality. In this program they get to work with tools and a lot of different kinds of things."

Rankin noted, "The camp didn't just teach us how to fly. It gave us a little taste of everything." He is now considering a career in aviation, even though he isn't sure yet. "I would like to fly large airplanes somehow," he said.

For some parents, it might take a leap of faith to allow their child to participate.

"It's one thing to put your child in an after-school program," said Nancy Pierce, the organization's secretary. "It's something else to enroll your child in a program where they are going to fly in a small plane."

Sellers noted how serious and focused the kids were. "Every single one of them took the responsibility seriously," he said. "It was great to see them take this first step into mature adults."

Anyone involved in aviation knows that "safety" is one of the core principles, and it is stressed throughout the camp. All of the eight ground school and flight instructors have worked professionally in aviation.

One instructor is a retired Northwest Airlines pilot; another is a retired corporate pilot who flew Cessna Citations; and one of the flight instructors currently flies for SC Johnson. Since the Young Aviators Camp is a non-profit organization, the instructors are all volunteers, with the exception of the CFIs, who are paid by the camp for their services during the week.

This year the camp will be held August 9-13. To participate, students must complete an application, and say why they are applying. The camp costs \$550, which includes the five hours of actual flight instruction and five hours of simulated flight instruction, both of which can be logged.

Compared to regular summer camps, which can cost in the neighborhood of \$1,200, this is a bargain, noted Pierce. The flight time alone would cost more than the price of the camp, and that isn't including time in the simulator or ground school. Of the eight students last year, half received either a full or partial scholarship. Pierce said they hope to provide even more scholarships this year with two fundraisers.

The camp has already changed the direction of one of last year's students. Jacob Lamb, a Prairie High School graduate planned to major in information technology in college. As a result of the camp, he changed his major to engineering.

"They'll leave here with a little different mindset," said Fountain. "Even if they don't become pilots, they'll take this (experience) with them the rest of their lives."

For more information on how to



Young Aviators Camp board members (L/R): Jerry Kirkland, Steve Myers, Nancy Pierce and Phil Fountain in front of Steve Myers' Lancair.

apply or support the camp, visit the Young Aviators Camp web site, [www.young-aviators.com](http://www.young-aviators.com). □

## EAA Names Schapiro Senior Editor

OSHKOSH, WIS. – The Experimental Aircraft Association (EAA) has named Stephen A. Schapiro of Chicago, Illinois, senior editor of publications effective July 2010. In his position Schapiro is responsible for editing *EAA Sport Aviation*. Schapiro is a graduate of American University with a Master of Arts Degree in Print Journalism.



Stephen Schapiro

He has been an editor for a number of congressional and political publications, has been a volunteer and lecturer at NASA Goddard Space Flight Center, program director for the AIDS Marathon Training Program, and assistant editor for *Air Cargo World*. Most recently Schapiro has written for *Airport Journals*, *Aero Brush Magazine*, and *Midwest Flyer Magazine*. Schapiro is a private pilot, and owns a 1968 Piper Arrow. □

A photograph of Greg Reigel, a man in a suit and tie, smiling. He is positioned in front of a red structure, possibly part of an aircraft.

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## Girls Day At The Airport



by Karen Workman

((L/R) Karen Workman, Jessica Miller, Jean Knox, Patti Sandusky and Nadine Sudgen.

**I**t started with the excitement Kjersti saw in a young girl's eyes when she learned that her favorite softball coach could fly an airplane! Word quickly spread among the team. The idea of a "Girls Day at the Airport" was born.

Kjersti Boe, a member of the Minnesota Chapter of the Ninety-Nines, rounded up friends and fellow

Ninety-Nines to help with tours of the Minneapolis reliever airport, Airlake, a single strip, non-towered airport on the outer edge of the suburbs. Local EAA Chapter 25 was recruited to give EAA Young Eagles rides as well.

It was difficult for Kjersti to get a firm count of how many girls would show up. Her best guess was maybe 10, give or take five.

At 9:30 in the morning, April 10, Ninety-Nines and EAA members started showing up at the airport. A little after ten o'clock, a woman walked through the FBO door with three girls in tow. Then another small group came in, then another. One little girl, about 8 years old, stopped firmly at the threshold and asked, "Do I *have* to fly in an airplane today?" She was assured that it was perfectly okay for her to stay on the ground if that was what she wanted, and if she changed her mind, that would be okay too. Satisfied, she entered the FBO to join the excited buzz of the other girls.

The next few hours passed with a flurry of activity. People came and went. Those staying were either in the lobby of the FBO or on the sunny ramp-side patio, or escorted in small groups to hangars and tied-down aircraft for educational tours. Clusters of girls ranging in age from 4 to 15 chattered and fidgeted while waiting for their turn to get in an airplane. They watched other girls, focused and silent, get their pre-flight briefing



from an EAA Young Eagles pilot. Girls returning from their first flight with smiles that radiated through their entire body, were mobbed. "What was it like?" "Weren't you scared?" "Where did you go?" "What did you see?" "What was it like?"

As the flying came to an end, Kjersti's girls with their sisters and friends had a picnic lunch while they recapped the thrill of their morning adventure. In a corner of the room, though, was a girl in tears. Her dad was explaining to her that he was sorry she missed her opportunity, but the flights were done for the day. The EAA members had packed up their materials and left. Apparently, the girl hadn't wanted to fly until she saw the excitement of the others when they landed. This was witnessed by the husband of a Ninety-Nines, who had stopped by to lend a hand. He couldn't provide an EAA Young Eagles certificate, but said he would be happy to give the girl a ride if she wanted one. Her dad agreed. The girl lit up, grabbed a friend by the hand and scurried out to the Piper Tri-Pacer parked on the ramp. She got her flight and the thrill of seeing her town from 2,000 feet. She was beaming when they landed. As soon as everyone exited the plane, she ran over to the pilot, squeezed him in a bear hug and said, "THANK YOU!!"

Almost 30 young people flew that day. It was a morning that the girls will long remember, and their grateful enthusiasm will long be remembered by everyone who helped share the joy of aviation. □

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# Wondering Where The Future of Aviation Is?

## Wonder No More!

### Meet Ms. Sabrina Gonzalez Pasterski

by Jim Bildilli

SCHAUMBURG, ILL. – The Illinois Aviation Trades Association (IATA) honored Sabrina Gonzalez Pasterski, a 16-year-old student from Chicago, for her commitment to pursue a career in aviation as well as her accomplishments thus far, during the Illinois Aviation Conference, May 18-19, 2010, at the Chicago/Schaumburg Marriott Hotel. IATA President Andy Priester of Priester Aviation, Wheeling, Illinois, presented Pasterski with an award of recognition.

When other kids her age were still playing with dolls, Sabrina embarked on an adventure that is still ongoing. At the ripe old age of 9, she decided that she wanted to learn how to fly and started taking flying lessons in Canada due to its lower age restrictions. According to her mother, Maria, Sabrina's fascination with aircraft and spaceflight began when she was only 4 years old. Her father, Mark, who is an attorney, an electrical engineer and a pilot, encouraged her to follow her dreams.

Confessing her desire to design spacecraft, her mentors suggested that besides learning to fly, she might want to build an aircraft to gain experience. In 2006, at the age of 12, she purchased a Zenith CH 601XL kit aircraft of her own. She admits it was a little intimidating and confusing at first, but through a network of other builders and the Internet, she began the project.

Within the first month, she assembled an engine from the parts of three others. At that stage, the FAA designated the engine a "Sabrina 0-200A." For the next seven months she constructed the fuselage, wings and tail section. In the subsequent four months, she worked on the interior. During the process of construction, Sabrina became a certified Light Sport Aircraft (LSA) mechanic.

By October 2007, she had essentially completed as much of the aircraft that could be accommodated in her parents' suburban Chicago garage. It was then disassembled and taken to the Aurora Airport where it was painted and reassembled for flight.

In January 2008, with her father at the controls, her Zenith CH 601XL made its maiden flight. Since receiving a valid registration certificate from the FAA, the agency has issued SAIB CE-10-08 in response to several accidents involving the aircraft's structure. Sabrina is currently making the necessary modifications to comply with the findings.

Sabrina graduated from the Illinois Math and Science Academy near Aurora. With perfect attendance and nearly perfect ACT and SAT college entrance examination scores, she applied for admission to her "most favored" institution, the Massachusetts Institute of Technology (MIT). Of course, being one of only 23 women selected



Sabrina Gonzalez Pasterski with the Zenith CH 601XL she built in her parents' garage.

as a semifinalist for the U.S. Physics Team, only added something extra to note on her application. Although she did not turn 16 until June, Sabrina received notification that she had been accepted by MIT for admission this fall.

The recognition of her accomplishments by IATA is well deserved. Considering what she has accomplished so far, it's reasonable to expect that she will be involved in America's efforts to visit Mars, establish a permanent base on the moon or any other goal involving travel by spacecraft. *Way to go Sabrina!!* □

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Trojan Horsemen



(TOP PHOTO) F-18 Super Hornet  
(BOTTOM PHOTO) Balloon Glow!



(TOP PHOTO) Dan Buchanan's hang-glider routine.  
(BOTTOM PHOTO) John Mohr flying his stock Stearman.

## Perseverance Pays Off For Organizers of Thunder On The Lakeshore!

*Story & Photos by Geoff Sobering*

**T**hree days of almost perfect air show weather greeted fans who flocked to Manitowoc County Airport, Manitowoc, Wisconsin, June 5-6, for the 2010 edition of "Thunder On The Lakeshore." As usual, a great group of civilian and military aviators entertained the crowd. The headliners had to be the Air Force A-10 "Warthog" and Navy F-18 Super Hornet demonstration teams, but the civilian performers were not easily out-done.

Air show performer, Gene Soucy, flew his highly modified Grumman "ShowCat" biplane in three

separate acts: first a solo aerobatic performance, then with wingwalker Teresa Stokes, and finally in a brand-new, two-plane extravaganza with John Mohr. Mohr also flew his own aerobatic routine, taking his 220 hp stock Stearman biplane right to the edge of its performance envelope (and maybe a bit beyond).

For the aficionados of aerobatics, "Thunder" had three outstanding performers: Jim "Fang" Maroney tumbled his Super-Chipmunk around the aerobatic box, showing the stick-and-rudder skills that helped him earn the #1 spot in the 1983 Navy "Top

Gun" class. Bob Davis demonstrated why the Russian-built Sukhoi Su-29 was the dominant plane in aerobatic competition for many years. Mike Love showed the aerobatic capabilities of another Eastern Bloc aircraft, the Yak-52 trainer, flying his "Yakrobatics" routine.

Fans of the sweet sound of the V-12 Merlin engine and the clean lines of the P-51 Mustang got their fix from Vlado Lench. Vlado is one of the original "Heritage Flight" pilots from the U.S. Air Force's 50<sup>th</sup> Anniversary celebration in 1997, and one of a select group of civilian pilots allowed to fly formation with current military aircraft. In addition to his smooth individual aerobatic performance with his P-51 Mustang "Moonbeam McSwine," Lench also flew a "Heritage Flight" with the A-10.

Somewhere there is a rule that every air show must have a formation team. This year the T-28 team, the "Trojan Horsemen," filled that requirement. They are a six-ship team flying to publicize the work of the "Veterans Airlift Command," a non-profit organization providing




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For “something completely different,” Dan Buchanan flew his hang-glider aerobatic routine. Buchanan is towed aloft by a pickup truck on the runway, and performs an amazing set of aerial maneuvers starting while still attached to the towline, and continuing after being released. His hang-glider is festooned with streamers, smoke generators, and an American flag. He ends his act landing on the grass right in front of the crowd.

Rounding out the civilian side of the show were three privately owned jets. Fowler “Big Dog” Cary brought his beautiful T-33 “Shooting Star” painted in the colors of the U.S. Air Force Thunderbirds. Paul Keppler and Carl Schwerman also brought their T-33s and flew a formation routine.

In addition to the flying acts, there were many airplanes on static display. Two DC-3s were parked on the ramp, along with a Canadian Air Force CT-156 Harvard II trainer, and many other aircraft. One special visitor was Joe Shepherd’s beautiful 1936 Lockheed 12A “Electra Junior” (*Dec 2009/Jan 2010, MidwestFlyer.com*). This aircraft was used in the 2009 film “Amelia” starring Hilary Swank and Richard Gere. Working with the plane’s history, the show had an “Amelia Earhart look-alike contest” Saturday morning.

And, somewhere in between flying and the static display, was Steve and Joan Hay’s Ornithopter. An ornithopter is a machine that flies by flapping wings, like a bird – or in Steve and Joan’s case, “tries to fly” is a more apt description. Steve is better known for his meticulous reproduction of early airplane engines (“early,” as in the 1903 Wright Flyer). He indulged his whimsical side by creating the stone-age looking ornithopter, complete with a wing-walking stand for Joan. You may have seen them putting around the grounds at EAA AirVenture-Oshkosh, or you



Steve and Joan Hay’s Ornithopter.

may have seen Steve, Joan, and their contraption in a recent television cell-phone commercial.

In addition to all the fun, there were a few somber moments. The 2010 show was dedicated in memory of one of the founders of “Thunder on the Lakeshore,” Bob Vanover, who passed away in January. Around the airport he was known only as “Crazy Bob,” a nickname earned when he announced before the first air show that he was going to call the Pentagon to get a jet demonstration team. The response was, “You’re crazy, Bob,” and it stuck. His persistence paid off and the show got its first, then its second, and then its third single-ship jet demonstration team, helping

to establish the show. In honor of Bob, the “Trojan Horsemen” flew a missing-man formation during Saturday’s show.

The success of the show was doubly important this year. Poor weather for a number of years had expended the “rainy day fund” and the show’s board of directors set a minimum fund-raising level before they would allow planning to proceed.

Luckily, long-time sponsors stepped up. Chairman Curt Drumm reports that everybody he approached said they couldn’t imagine not having the show. That kind of support is really the best indication of how much the event matters to people, and it starts at the grassroots, too.

Last year, even with a morning temperature of 50 degrees, overcast, and winds gusting to 20 knots, there was still a crowd of fans hunkered-down on the flightline under blankets, waiting for the show to start. “Thunder” also has a strong relationship with performers. Many of them are “regulars,” and quite a few have been performing at Manitowoc since the inception of the show 18 years ago. That connection was evidenced this year, as many of the performers held the date open on their calendars, even when it was not clear the show would even happen.

Hopefully the weather this year was the start of a series of great-weather shows in the coming years. In any case, I know where I will be the first weekend in June next year! □

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## Middleton-Morey Fly-In Provides Strong Defense For GA



An RV-8A owned and flown by Jay Martin of Madison, Wisconsin.

was approached by a mother and her grown son who explained that they had never been to the fly-in before, and came for an airplane ride. They were as excited as any of us the first time we went to the local airport to fly in a general aviation airplane. They wanted to experience the thrill and sights we pilots now take for granted.

Later while having breakfast in the hangar with friends, the pilot described that positive encounter and asked why it is that we in aviation find ourselves always on the defense, when everyone seems to enjoy flying, whether it is in general aviation aircraft or

on the airlines to go on vacation. A Delta Airlines pilot responded, “*we in the airlines are trying our best to change that* (positive image of flying).”

Some 990 breakfasts were served, down a bit from the all-time record of 1,182 in 2009, according to EAA Chapter 1389, sponsors of the fly-in. All proceeds go to chapter activities intended to make a contribution to aviation, especially in the form of EAA Young Eagles rides.

The chapter has learned that in order to attract a good crowd and a lot of fly-in aircraft, they have to serve a good breakfast, and they did. Not just pancakes, but your choice of fried or scrambled eggs, sweet rolls, juice, white and chocolate milk, and coffee – all for \$6.00 a plate.

Watching planes land and takeoff was thoroughly entertaining for aviators and non-aviators alike, and the variety of airplanes on the ramp, interesting.

The largest plane was a T28A Trojan owned by Ron Grosso of Cottage Grove, Wisconsin. Chuck Knutson of McFarland, Wisconsin, was the crew chief. Grosso and Knutson encouraged visitors to ask questions and sit in the cockpit.

MIDDLETON, WIS. – Fly-in breakfasts provide a festive atmosphere for both pilots and the non-flying public. Upon his arrival to Middleton-Morey Airport (C29), July 11, 2010, for its annual EAA Chapter fly-in breakfast, one pilot



Bobby Davis of Madison, Wisconsin, encouraged kids to sit in his Acro Sport II.

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(TOP PHOTO) Leroy Brandt of EAA Chapter 1389, serves up a plate of pancakes.

(BOTTOM PHOTO) Ron Grosso of Cottage Grove, Wisconsin, taxis his T28A Trojan.

(TOP PHOTO) A Cessna 150F on takeoff.

(BOTTOM PHOTO) Families watch planes taxi and takeoff.

Winning the most “colorful” aircraft of the day was an Acro Sport II owned by Bobby Davis of Madison, Wisconsin, not to be confused with air show performer, Bob Davis of Woodstock, Illinois. Bobby was especially “kid friendly,” and helped dozens of children into the cockpit of the aerobatic biplane.

Jay Martin of Madison, Wis., displayed his pride and joy – an RV-8A – and there were plenty of modern and vintage Cessna, Piper, Beech and Cirrus aircraft on the ramp, as well as light sport aircraft.

Aside from the flying attractions at the fly-in, the new “Confectionique” gift shop, located in the main terminal building at Middleton-Morey Airport, gave many people a different reason for attending the fly-in.

Anastasia Korbitz and Jessica Regele are two crafting sisters dedicated to finding forgotten vintage trinkets and crafting them into handmade treasures with a European vintage flavor. Besides their own craft-pieces, Confectionique features

crafts of other crafters and artists. Call ahead for hours and special events: 608-206-4590 ([www.Confectionique.com](http://www.Confectionique.com)).

Parking and spectator safety remains a high priority for EAA Chapter 1389 members. □

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# Field of Dreams Air Show... A Tribute To Veterans




Geoff Sobering

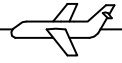
Mike Niccum flying a Staudacher S-300.

by Wayne Flury

There's no better way to promote an airport to the community and built goodwill than to produce an air show, and Brian Weidendorf and Matt Johnson have been doing just that at Weidendorf's "Field of Dreams" airport in Hinckley, Minnesota, since the airport



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(TOP PHOTO) Veterans enjoyed the day at Hinckley.  
(BOTTOM PHOTO) Air show announcer Wayne Flury (right) interviews Dr. Tom Stillwell (left) regarding the group of WWII, Korean and Vietnam veterans that he and other volunteer pilots brought to Hinckley to enjoy the day.

opened in 2003. It's a small town air show that's getting bigger each year! The show was held this year on July 11.

Located next to the Grand Casino facility, the airport regularly attracts gambling guests. On this Sunday, those that flew in were much more interested in aerobatics than games of chance.

Though the weather forecast called for strong possibilities of rain, the day started with scattered to overcast conditions and lots of optimism for a fun day. The Hinckley Fire Department provided visitors with an excellent pancake breakfast, and a car show offered mobile artistic statements to a ramp full of airplanes.

Dr. Tom Stillwell of Minneapolis chose the Hinckley airport for this year's destination in a "tribute to veterans," as he and several other volunteer pilots through Club Cherokee brought a large group of World War II, Korean and Vietnam veterans to the show. This is the 10th year that Dr. Stillwell has organized such an outing as a way to thank our veterans for their service to our country.

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Performing in the show was Mike Niccum of Webster, Minnesota, flying a Staudacher S-300; Christine "CC" Gerner from Lakeville, Minnesota, flying an Extra 300L; and Bryan Jensen, also of Lakeville, flying a modified Pitts Model 12 that he affectionately calls "The Beast." Wayne Flury of Buffalo, Minnesota, once again did the play by play over the public address system.

Finishing with a patriotic theme this year, the air show finale was flown by Clyde Zellers from Springfield, Illinois, flying a 1943 North American SNJ-5. Zellers promotes his presentation as a "Navy Aerobatic Air Show," but in reality it is a tribute to each of the armed services.

Starting his performance to the music of each of the service anthems, and following with the "Battle Hymn of the Republic" and "Amazing Grace," there is no narration while he flies. Zellers asked that each person watching his

flight reflect upon the sacrifices that others have made so that we were able to be at Hinckley enjoying the day.

While there was murmured appreciation of Zellers' flying skills as he demonstrated the maneuvers that young aviators were taught in his World War II trainer, the crowd was remarkably quiet. The music from the loudspeakers complemented the roar of the airplane. As Zellers landed and taxied to the ramp, the last bagpipe notes of Amazing Grace faded to silence. A few moments later the P&W R-1340 radial engine went quiet, the canopy opened, and Clyde Zellers was greeted with a strong round of applause. Now that's showmanship, ladies and gentlemen!

Clyde had noted that he hoped his performance and the show's recognition of the veterans would bring tears to our eyes. Looking around at the audience, it was readily apparent that he succeeded! □

## Performer Pride Prevails At Price County Fly-In & Air Show



(L/R) Pilots Darrel Massman, Peter Tallarita, Cheryl Dooley, Bill Cowden, and Mike Love.

PHILLIPS, WIS. – There was someone obviously missing at this year's Price County Fly-In & Air Show, July 2-3, 2010, Price County Airport, Phillips, Wisconsin. Air show performer, Joe Dooley, 56, of Hutchinson, Minnesota, who nurtured the show from its infancy, was absent. Everyone who knew Joe Dooley knew that the 2009 show would likely be his last, and it was. Cancer took his life on December 25, 2009.

Taxiing to the ramp, we could still feel Joe's presence, and who knows, with a spirit as strong as his, who's to say



Mike Love flying a Yak-52.

Geoff Sobering

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### PRICE COUNTY FLY-IN & AIR SHOW

that he was not there. An American Eagle hovering above certainly sent us a message.

Performers this year included Darrel Massman of Waupaca, Wis., in his Panzl aerobatic monoplane; Mike Love of Middleton, Wis., in his Yak-52 warbird; Peter Tallarita of New Richmond, Wis., flying a Pitts S-2B biplane; and Bill Cowden of Menomonie, Wis. in his RV8 monoplane. Serving as air boss was Joe Dooley's widow, Cheryl Dooley, who flew her Glasair to the show. There was a twilight show on July 2, and a day show on July 3.

A fly-in breakfast was held at the Harbor View Pub & Eatery, located adjacent to the airport on Long Lake. Docking was available for floatplanes at Harbor View. Harbor View owners, Duane and Bonny Grube, are

corporate sponsors of the show.

Also absent for the first time this year was the show's producer, Price County Airport Manager Chris Hallstrand, who was deployed to Afghanistan with the Minnesota Air National Guard. Hallstrand is a crew chief on a C-130 Hercules based at Minneapolis-St. Paul International Airport. Hallstrand says that the fly-in and air show is the one time of the year he and the airport commission can showcase the airport to the community. The air show remains free to the public, and is sponsored by Price County Airport and the Phillips Area Chamber of Commerce.

Monitoring the show from the Milwaukee FAA Flight Standards District Office was Wesley Hakari of Luxemburg, Wis. □

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Dear Fellow Pilots:

My experience participating in the "Midwest Flyer Canadian Fishing Fly-Out" brought together many of the things that, for me, make flying so enjoyable and exciting: the utility of a small aircraft to go somewhere inaccessible by automobile...the adventure of flying long distances over sparsely populated areas...and the challenge of advanced flight planning and preparation for flying into another country.

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# North American B-25 Mitchells Gather For 68<sup>th</sup> Doolittle Reunion



On Sunday, April 18, the 17 B-25s completed a mass take-off and fly-over to honor three of the surviving Doolittle Tokyo Raiders after a memorial service, held in the museum's memorial garden.

(L/R) MSgt David J. Thatcher; Lt. Cole Richard E. Cole and Major Thomas C. Griffin.

*Photograph, with permission,  
National Museum of The United States Air Force, Dayton, Ohio,*

B-25s to arrive from around the United States. The presence of these B-25s was the largest gathering of privately-owned B-25s since the end of World War II (WWII). Prior to flying to the museum on the morning of April 17, the crews of "The Grimes Gathering of B-25s" practiced formation flying, and offered aviation enthusiasts and military veterans rides and tours of the bombers on static display.

The crowds were huge and even though cold, aviation enthusiasts and WWII veterans walked up and down the parked row of Mitchells.

*by Lt Col. George A. Larson  
USAF (Ret.)*

**T**he National Museum of the United States Air Force at Wright-Patterson Air Force Base in Dayton, Ohio, hosted the 68th reunion of the Doolittle Tokyo Raiders. Museum Director Major General Charles D. Metcalf, United States Air Force (USAF), Ret., said: "It was a great privilege for the museum to be selected as the site for the Doolittle Raiders' reunion. The Doolittle Raiders are living legends and their story is a fascinating part of American history. By hosting their reunion at the museum, the public will have a chance to meet them and perhaps get an autograph, but most importantly, thank them for their courageous and admirable service to our nation."

To honor and give tribute to this reunion, the Doolittle Tokyo Raiders Association had hoped to bring 25 North American B-25 Mitchell medium-range bombers to the runway behind the museum. They succeeded in bringing in 17 B-25s, the type that

Colonel Doolittle's unit flew to attack Japan off the aircraft carrier, the USS Hornet, on April 18, 1942, to conduct the first U.S. bombing of Japan after the attack on Pearl Harbor. The following is the story of these B-25s at the museum.

Ohio was the site of this historic aviation event with Urbana's Grimes Field the initial arrival point for the



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## DOOLITTLE REUNION

At 7 a.m. on April 17, 2010, a mass flight of 17 B-25s started landing on Wright Patterson AFB's inactive runway, temporarily opened for flight operations to allow their arrival. Four of the eight surviving Doolittle raiders were given a private close-up inspection of the B-25s. The four in attendance were Retired Lt. Col. Richard E. Cole, 94, of Comfort, Texas; Major Thomas C. Griffin, 92, of Cincinnati, Ohio; Lt. Col. Robert L. Hite, 90, of Nashville, Tennessee; and MSgt David J. Thatcher, 88, of Missoula, Montana. The honorees signed books, aircraft photographs and wings of model B-25s for two hours each day on Saturday and Sunday. On Friday evening a dinner, honoring these veterans, was held with over 400 in attendance. At the dinner, USAF Secretary Michael B. Donley commented: *"The Doolittle Raiders have a very special place in the history of our Air Force. They've provided such great examples to us of leadership, of audacity, of innovation and personal courage of World War II."*

The gathering and static display of the B-25s at the museum opened to the public at 10 a.m. Prior to this, Doolittle Raiders, their families and guests were allowed to view these aircraft without crowds and jostling. It was a cold and windy day, with countless rows of cars parked on the grass near the parked line of B-25s. Crowds were estimated at between 10,000-12,000, as they constantly milled around the gleaming B-25s on display. One cannot cover all the B-25s on display, so the following were selected as representatives of the WWII medium-range bombers flown to the museum.

"Miss Hap," the United States Army Air Forces (USAAF) General Hap Arnold's personal aircraft, is the oldest Mitchell in existence, and it drew large crowds throughout the day. The aircraft (serial #40-2168) was accepted by the USAAF in February 1941 and assigned to the 17<sup>th</sup> Bomb Group (BG). As General Arnold's personal aircraft, 1943 to 1944, it was designated as the RB-25 VIP transport.

The lineage of the aircraft is interesting: Charles R. Bates of Chattanooga, Tennessee, January 22, 1947-1948; civilian registration XB-GOG, reserved but not used; issued ferry permit but not used; registered as NL7583 in April 1947. Bankers Life & Casualty Company of Chicago, Illinois, on November 4, 1948. Registered as N7581. Hughes Tool Company of Houston, Texas on June 28, 1951 to 1962. Hughes/Acme Aircraft Company of Lomita, California, June 1962-64. Last FAA inspection in November 1956. Removed from U.S. civil registration as salvaged in March 1965. JRT Aero Service at Wichita Falls, Texas, October 1966-1971. Registered as N2825B. John P. Silberman of Savannah, Georgia on August 25, 1971-1974. SST Aviation Museum of Kissimmee, Florida, 8 October 1974-1979. Chuck Thompson/Mustang Productions of Polk City, Florida, June 1975-1976. Grover R. Summers and Samuel E. Pool of Lake Wales, Florida, February 1977. Charles "Dewey" Miller of Mobile, Alabama on August 28, 1977 to 1983. Delivered from Kissimmee, Florida to Mobile, Alabama on December 12, 1978. Restored to airworthy condition. First flight on September 9, 1980. Flew as "Proud Mary." Alan Clarke/Fighting Air Command/Flytex Inc., of Dallas, Texas, July 1983-1987. Solid nose replaced with Plexiglas nose. Flew as 02168/The General. Jeff Clyman/TBF Inc. of Tenaflly, New York, November 1989-2002. To American Airpower Museum at Farmingdale, New York. Flown as 02168/"Avirex Express" on starboard side and "Miss Hap" on port side.

"Axis Nightmare" appeared on the flight line in WWII Royal Air Force (RAF) camouflage, complete with RAF markings. Delivered to the USAAF, aircraft number 45-8898. H.H. Coffield/Rockdale Flying Service of Rockdale, Texas. August 1959-1983. Sold at auction, October 15, 1983. Carol Scholl/Aerotrader of Chino, California, October 15, 1983. Trucked to Ocotillo Wells, California for storage. Vern Raburn /Binary Warriors Inc. (i.e. Eclipse Aircraft) of Weston, Massachusetts, November 1985-1997. Registered as N8998BW. Trucked to Kissimmee,

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The B-25 "Miss Mitchell" of the Minnesota Wing of the Commemorative Air Force, based at Fleming Field, South St. Paul, Minnesota.



B-25s on Wright-Patterson's inactive runway. Crowds were huge and even though cold, aviation enthusiasts and WWII veterans walked up and down the parked row of Mitchells.

Florida for rebuild. Used center section of aircraft number 44-28765/N9443Z. First flight 1988. Donald J. George of Springfield, Illinois, July 2, 1997-1999. Mike George/Warbirds Inc. of Springfield, Illinois, April 8, 1999-2002. Tri State Warbirds of Cincinnati, Ohio 2004. The WWII camouflage gave the aircraft a dramatic draw for visitors throughout the day with professional aviation photographers setting up their cameras with tripods. One local photographer was using a 1930s vintage single reflex camera, which in turn drew the attention of visitors with their modern digital cameras and handheld video cameras.

Probably the most colorful nose art decorated B-25/PBJ on the flight line was "Betty's Dream." Built by North American, August 1945. Not accepted by the USAAF, delivered to RFC, Walnut Ridge, Arkansas, October 31, 1945. Lodwick Aircraft Industries of Lakeland, Florida, February 28, 1946. Registered as NX69345. Bendix Aviation Corporation of Teterboro, New Jersey, June 1946-1966. Registered as N69345, 1948. Radar and avionics testing required modifying radar nose. Bendix Field Engineering Corporation of Columbia, Maryland, November 1967-1972. Ernest H. Koons of Edmonton, Alberta, August 1972. Registered as CF-DKU. Aurora Aviation LTD of Edmonton, Alberta, December 1972-1978. G & M Aircraft LTD. of St. Albert, Alberta, 1978-1993. Registered as C-FDKU. Flew as tanker #1 (later #336). Aero Trader Inc., of Chino, California, September 1993. Delivered for resale. Chris and Patrick Harker/C & P Aviation Services of St. Paul-Anoka County, Minnesota, June 1994. Restored to airworthy condition at Chino, California, 1994-1999. Bomb bay doors fitted on the aircraft. First flight, March 1999. Flown as "Betty's Dream." Registered as N5672V. The aircraft is equipped with eight nose mounted .50 caliber machine guns, representing the lethality of firepower a B-25 could pour out onto ground targets in combat. It also carried camouflage paint scheme and attracted many veterans and their families.

"Miss Mitchell," delivered to USAAF, aircraft number 44-26869. Stored at Davis Monthan AFB, Arizona, December 1957-1958. Lindale Flying Service of St. Paul, Minnesota, October 1958-1970. Registered as N3160G. Stored uncovered at Anoka, Minnesota, 1963-1970. Robert Kundel of Rice Lake, Wisconsin, June 1970-1978. Stored. Harvard Corporation/Confederate Air Force (now Commemorative Air Force) of Minneapolis, Minnesota, December 1978. Commemorative Air Force of Harlington,

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## DOOLITTLE REUNION

Texas, August 13, 1979-1991. Facility moved to Midland, Texas, June 1991. Underwent long-term restoration for return to flight status. Minnesota Wing of the Commemorative Air Force at South St. Paul, Minnesota, May 1991. Restoration completed at Fleming Field, Minnesota. First flight, April 16, 1993. Registered as N27493. The aircraft's aluminum skin shined in the morning and afternoon sun, highly polished by its flight crew. There was not a streak of oil, fuel or grease on the aircraft, which was symbolic of the dedication of CAF members. The Plexiglas nose was clear, without scratches, allowing close-up photographs of the bombardier's forward section of the aircraft. This aircraft only had one .50 caliber machine gun mounted in the nose for

the bombardier's use.

There was one additional Mitchell at the B-25 gathering, but in the museum's WWII Air Power Gallery. The aircraft is an impressive diorama as if the B-25 was tied down to the flight deck of the carrier USS Hornet, with engines covered to prevent fouling by salt water sea spray over the flight deck. The two figures near the aircraft are Colonel Doolittle to the right and Admiral William Halsey to the colonel's side. Captain Cole, copilot of the aircraft, is leaning out the window. The bombardier is inside the nose. The Norden bombsight had been removed, and replaced by a simple metal triangle, with v-shaped sight for the bombardier to release bombs at low-level.

Delivered to the USAAF, 31 October 1943, B-25D. Modified

into F-10 for photographic mapping. Assigned 91<sup>st</sup> Photographic Mapping Squadron at Buckley Army Air Field, Colorado. Assigned to 3705<sup>th</sup> AAFB Unit, Air Training Command, Lowry Air Field, Colorado, December 1944. Redesignated RB-25D. Transferred to 1360<sup>th</sup> Air Base Group at Orlando, Florida, 1956. Retired to Air Force Storage Facility at Davis-Monthan AFB, Arizona, September 1957. North American Aviation reconfigured the aircraft to a B-25B. Flown to the museum by General Jimmy Doolittle and Lt. Col. Richard E. Cole in April 1958.

On Sunday, April 18, 2010, the 17 B-25s completed a mass take-off and flyover to honor three of the surviving Doolittle Raiders after a memorial service held in the museum's memorial garden. □

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ROCHESTER, MINN. – While some airports are hard pressed to have one restaurant, Rochester International Airport has two – one inside the terminal building called "331 Express," and another on the airport perimeter called "331 Bar & Grill" on Airport View Drive SW.

The 331 company just recently took over management of the terminal restaurant. During the next month or so, 331 Express will be serving from the Gate #3 section of the terminal.

Pilots should plan on parking at Signature Flight Support while visiting either restaurant. The terminal restaurant is the closest, while 331 Bar & Grill is located less than 1 mile

from Signature. A bit inconvenient, but we were told, the selection of entrees is better.

There is a \$20.00 handling charge to park your aircraft at Signature, but this fee is waived with any purchase of 7 gallons or more of fuel using full service (\$5.99 as of 5-21-2010), or a minimum of 2 gallons using self-service (\$4.99). □

## ASK PETE

by Pete Schoeninger

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Wisconsin Aviation has operations at Watertown Municipal Airport, Watertown, Wis.; Dodge County Airport in Juneau, Wis.; and Dane County Regional Airport in Madison, Wis. It is the largest full-service fixed base operation in Wisconsin. In addition to charter and flight training, Wisconsin Aviation has aircraft maintenance, an avionics department, and fuel.

Wisconsin Aviation's charter department includes 25 aircraft, ranging from single-engine aircraft to long-range jets. The flight training center offers students instruction from sport pilot through airline transport pilot, and features a full FAA Testing Center ([www.wisconsinaviation.com](http://www.wisconsinaviation.com)).

Solverson Aviation is owned by Ryan and Britt Solverson, and was started in March 2005. The city-owned airport has a long history dating back to the early



(L/R) Britt Solverson, Ryan Solverson, and Jeff Baum.

1930s. Services include flight training and aircraft rental ([www.SolversonAviation.com](http://www.SolversonAviation.com)).

The partnership came about as a result of networking among fixed base operators at the Wisconsin Aviation Conference held in April of each year. Solverson Aviation owners Britt and Ryan Solverson had never met Wisconsin Aviation President & CEO Jeff Baum before that event in 2008. A business friendship evolved, as did a sharing of concerns and ideas.

The partnership will mean that flight students in Reedsburg will have more flight instructors available to them, instructional aids, and aircraft. Offering air charter through Wisconsin Aviation will be a new service at Reedsburg. Flight training scheduling and charter reservations will be done at Solverson Aviation. The partnership will result in more business for both operators, and greater service to the community of Reedsburg. □

Don Winkler, AirVue

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# Aeronautics Report

**Wisconsin Bureau of Aeronautics**

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## What Is NextGen & What Does It Mean To Me?

by Jeff Taylor  
WisDOT Aviation Consultant

**A**viation uses many acronyms and shorthand expressions. One of the newest is “NextGen,” which refers to the FAA’s Next Generation Air Transportation System. NextGen is a wide-ranging transformation of the National Airspace System (NAS) from a ground-based radar air traffic control system to a satellite (GPS) based air traffic management system.



Jeff Taylor

A key part of the program is equipping aircraft with Automatic Dependent Surveillance-Broadcast (ADS-B) avionics. Onboard equipment for ADS-B “Out” uses global positioning system (GPS) navigation to determine an aircraft’s position and then broadcasts it – along with the aircraft’s altitude, speed, heading, call sign, and type – to air traffic control and other aircraft. ADS-B “In” equipment takes the next step by allowing an aircraft to also receive area traffic information and use it in various applications, such as merging and spacing and surface movement management.

### What is the difference between ADS-B Out and ADS-B In?

ADS-B Out is the ability to transmit a properly formatted ADS-B message from the aircraft to ground stations and other ADS-B equipped aircraft.

ADS-B In is the ability of the aircraft to receive information transmitted from ADS-B ground stations and other aircraft. ADS-B In is not mandated by the new rule. If an operator chooses to voluntarily equip their aircraft, ADS-B In will also require the installation of a compatible display.

With the implementation of full ADS-B capability, aircraft operators, according to FAA, are expected to enjoy the following benefits:

- Improved visual acquisition to maintain separation in marginal weather;
- Reduced runway incursions and safer surface operations in low-visibility conditions;

- Enhanced visual approaches;
- Closely spaced parallel approaches;
- Reduced spacing on final approach;
- Reduced aircraft separation en-route; and
- Improved ATC services in non-radar airspace.

While that all sounds great, the natural reaction many pilots have is to ask, “*More required equipment; what will that cost, and do I really need it?*”

### How will the new ADS-B Out rule affect me?

On January 1, 2020, when operating in the airspace designated in 14 CFR §91.225 (outlined below), you must be equipped with ADS-B Out avionics that meets the performance requirements of 14 CFR §91.227.

### ADS-B Out Airspace:

- Class A, B, and C.
- Class E airspace within the 48 contiguous states and the District of Columbia at and above 10,000 feet MSL, excluding the airspace at and below 2,500 feet above the surface.
- Class E airspace at and above 3,000 feet MSL over the Gulf of Mexico from the coastline of the United States out to 12 nautical miles.
- Around airports identified in 14 CFR part 91, Appendix D.
- The ADS-B Out rule does not apply to any aircraft not originally certificated with an electrical system or that has not subsequently been certified with such a system installed, including balloons and gliders.

### What equipment is required by the new rule?

The rule specifies ADS-B Out equipment certified to either Technical Standard Order (TSO) TSO-C154C (Universal Access Transceiver) or TSO-C166b (1090ES). Equipment certified to TSO-C166b will be required to operate in Class A airspace and equipment certified to either TSO can be used while operating in the designated airspace outside Class A.



### **When do I have to equip?**

The rule (14CFR §91.225) requires ADS-B Out performance on January 1, 2020 when operating in designated airspace (14CFR §91.227). If you never fly into the ADS-B designated airspace, then there is no requirement to equip. However, implementation of the ADS-B ground infrastructure is already under way with full implementation of the system expected by the end of 2013. This implementation schedule allows early adopters of the technology to realize the benefits of the new system long before the mandate.

### **Do my current avionics meet the performance requirements of the rule?**

Your avionics shop and equipment manufacturer can help you determine if your current equipment meets the performance requirements of the rule, and they can advise you on available options and any costs associated with needed upgrades. Likewise, they can advise you on the equipment needed for use with available ADS-B In services. Refer to Advisory Circular 20-165, for information about equipment certification and installation requirements.

### **What is the ADS-B In broadcast service?**

ADS-B In services consists of the Flight Information Service-Broadcast (FIS-B) and the Traffic Information Service-Broadcast (TIS-B).

FIS-B provides a broad range of textual/graphical weather products and other flight relevant information to Universal Access Transceiver (UAT) data equipment users (FIS-B is not available on 1090ES) to enhance situational awareness. FIS-B includes the following:

- Aviation Routine Weather Reports (METARs)
- Non-Routine Aviation Weather Reports (SPECIs)
- Terminal Area Forecasts (TAFs) and their amendments
- NEXRAD (regional and CONUS) precipitation maps
- Notice to Airmen (NOTAM) Distant and Flight Data

Center

- Airmen's Meteorological Conditions (AIRMET)
- Significant Meteorological Conditions (SIGMET) and Convective SIGMET

- Status of Special Use Airspace (SUA)
- Temporary Flight Restrictions (TFRs)
- Winds and Temperatures Aloft
- Pilot Reports (PIREPS)
- TIS-B service status

TIS-B is an advisory-only service available to both 1090ES and UAT equipment users, which aids in the visual acquisition of surrounding transponder-based traffic to increase situational awareness.

### **I have traffic and weather advisory information now. How is ADS-B In broadcast services different?**

The main difference is that the new ADS-B In broadcast services do not require subscription or usage fees. If you choose to equip, the available traffic, weather, and aeronautical information services can be used free of charge!

At this time it's very hard to say how much it will cost to equip a typical GA aircraft. There are many variables and in Wisconsin if you never fly in or over Green Bay, Madison or Milwaukee, or above 10,000 feet MSL, you don't need ADS-B equipment. With the FAA's recent publication of the final rule outlining performance requirements for ADS-B Out, avionics manufacturers can proceed in developing and producing the equipment, which should bring costs down. At this time, the FAA is requiring ADS-B Out and transponders, meaning pilots will have to pay for and maintain two systems. The final rule does indicate that the FAA may, at some future date, consider whether transponders could eventually be removed.

The northwest part of the state, roughly from La Crosse to Hayward, has had limited radar coverage where ATC typically can't see aircraft below 5,000 feet MSL. The Wisconsin Bureau of Aeronautics has been working with the FAA to ensure that the build-out of NextGen closes that hole, which should greatly improve safety and the efficient movement of aircraft on IFR flight plans. □

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## **Life-Saving Pilot, Dorothy Douglas**

MADISON, WIS. – Pilot and professor, Dr. Dorothy (DJ) Douglas, 82, died February 10, 2010. Beginning at age 15, Douglas entered the Civilian Pilot Training Program during WWII, where she taught Army Air Corps cadets in Stearman and AT6 aircraft. Because of her expertise in emergency care, she was commissioned as a Lt. in the Navy Nurse Corp, sent to Vietnam and flew as a medical crew chief on Army rescue helicopters. Eventually, she became a multi-engine and instrument flight instructor, safety

counselor for the FAA, and Commander of the Wisconsin Wing-Madison Senior Squadron of the Civil Air Patrol, and flew many search and rescue missions.

Among her numerous awards was the "U.S. Air Force Life Saving Award" for in-flight directions to a non-pilot in an emergency situation over Peoria, Illinois. Douglas, a professor in the School of Nursing at the University of Wisconsin-Madison, was the eighth woman Judo black belt in the U.S. She also raced track bicycles in the 1940s and '50s, climbed Mt. Ranier, and loved sailing. She is survived by her partner of 40 years, Rory Ward. □



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**Christopher Roy, Director**

**Dan McDowell, Editor**

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## Alan Hoffert Joins FAA Safety Team (FAAST) In Minnesota

by Christopher Roy  
Director

**W**e have a new force for “aviation safety” here in Minnesota. Alan Hoffert has joined the FAA Safety Team (FAAST) as the Operations Safety Program Manager for Minnesota. Alan comes to us from the Minneapolis Flight Standards District Office where he was an Operations Inspector and joins Jim Niehoff who is our Airworthiness Safety Program Manager. The FAA Safety Team has become the focal point for safety programs in Minnesota and we welcome Alan to the team and encourage you to contact him at [Alan.Hoffert@faa.gov](mailto:Alan.Hoffert@faa.gov) or 612-713-4244 to welcome him aboard!

It is remarkable to look at how



Christopher Roy

things have changed since the FAAST program started. Prior to the FAAST program the majority of safety seminars were live seminars presented by FAA and Mn/DOT representatives.

Now there is a network of FAAST representatives that prepare and present safety programs and the number of programs has grown from around 20 a year to more than one a week. In addition to these live safety seminars, there are great on-line programs available through the FAAST website ([FAAsafety.gov](http://FAAsafety.gov)) and AOPA, as well as other providers. If you want a safety presentation for a group of pilots, the FAAST program managers have a cadre of speakers available on a wide variety of subjects



Alan Hoffert

and they are happy to set up a program for you.

The FAAST Wings Program consists of safety seminar programs combined with flying. While talking about flying safely is important, piloting skills are only maintained through regular use. To that end, Mn/DOT, in conjunction with the Minnesota Council of Airports, has established the “*Passport*” program that rewards pilots for visiting airports around the state. Details for the Passport program can be found on our website at [mndot.gov](http://mndot.gov). Click on the airplane and then scroll down until you see the red Passport book.

If you are looking for a reason to go flying, check out the list of airport fly-ins and events using the link in the right hand column. We have a beautiful system of airports here in Minnesota and fly-ins are a great way to experience them. □

## Hyperbolic Positioning: The Way of the Future

**H**yperbolic Positioning is also known as “*Multilateration*.” It is the triangulation process designed to locate an object by accurately computing the time difference of arrival (TDOA) of a signal emitted from the object to three or more receivers. The U.S. military and select civil agencies already use transponder multilateration in surveillance operations for locating stationary objects, vehicles, and aircraft.

In the words of the Federal Aviation Administration (FAA),

“Multilateration is a surveillance technology that works by employing multiple small remote sensors throughout an area to compensate for terrain obstructions, and is another tool the SBS program uses to enhance air traffic surveillance. The data from multilateration sensors is fused to determine aircraft position and identification. This data is then transmitted to air traffic control for use in providing surveillance separation services.”

Multilateration can also be used by a single receiver to locate

itself, by measuring the TDOA of signals emitted from three or more synchronized transmitters at known locations. This can be used by navigation systems. In fact LORAN-C functioned using TDOA of signals from multiple synchronized transmitters. GPS can function in a similar manner.

Quite simply, Multilateration uses the signals transmitted from the aircraft, accurately pinpointing the aircraft’s position. The system utilizes existing aircraft transmission systems including Mode A, Mode C, and



Mode S transponders. This essentially eliminates the need for aircraft owners to purchase new or additional equipment for their aircraft to effectively use the system.

that controllers will see a smooth progression of the target without the target jumps, which were caused by the 4-12 second radar sweep and refresh.

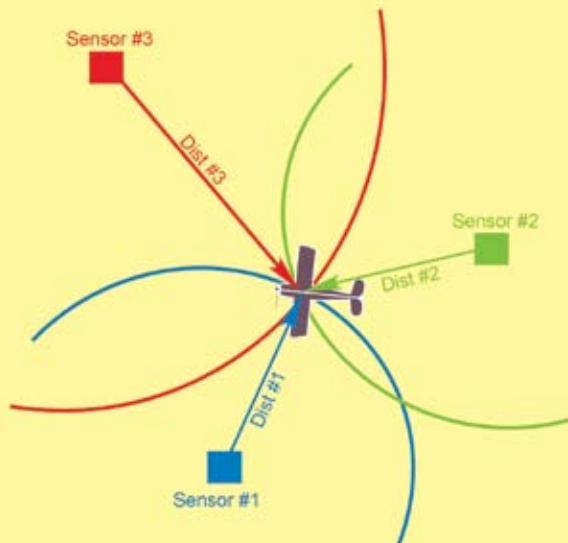
Another advantage of WAM is that it can provide surveillance coverage over areas where current radars may be inadequate, non-existent, or not available below a base altitude of several thousand feet above ground level. This is a situation caused by natural terrain, and sometimes even man-made obstructions.

WAM is being used throughout Europe and the United Kingdom with economy and effectiveness. Several countries chose WAM as a replacement for their "Legacy" radars. They have discovered that WAM installations can be provided at significantly lower costs of installation and maintenance and it provides more accurate tracking even with stations located 100 km apart!

One might ask if WAM and ADS-B systems are similar, and the answer is, they are similar, but are differentiated by several factors. Both systems listen for an aircraft's transponder signal and both send data to an ATC center. But an ADS-B (single) station utilizes the GPS position information transmitted within the aircraft's ADS-B message, while the WAM system triangulates between several known ground stations and the aircraft, to determine the aircraft's position. This is done by computing the time difference of arrival (TDOA) of the signal.

Multilateration is finding different use potentials. Airports are exploring the possibility of using it for surface management to increase airport efficiency, resource utilization, and safety. Its use, particularly at larger air service airports, could help to significantly reduce runway incursions and on-field accidents by ground vehicles and aircraft. □

### How It Works



WAM provides surveillance through a network of small sensors. These sensors send out interrogation signals to aircraft and the aircraft transponders transmit in response. WAM system computers analyze the signals and determine the precise location of the aircraft through triangulation.

Using the same type of (ground) equipment and procedures, larger areas can be monitored to cover enroute and approach phases of flight. This system is called Wide Area Multilateration (WAM). One advantage of WAM is

## Good News For General Aviation

*1<sup>st</sup> Signals From New Generation of GPS Satellites!*

**O**n May 27, 2010, the United States Air Force successfully launched the first of 12 new generation GPS satellites. At 11 p.m. EDT, a United Launch Alliance Delta IV rocket rose from the launch pad at Cape Canaveral Air Force Station. In just over two and a half hours from launch, the first signals were received from the new satellite.

The GPS IIF-1 satellite was deemed to be healthy by the Air Force 19<sup>th</sup> Space Operations Squadron and Boeing's Mission Operations Support Center in El Segundo, California. GPS signals will be turned on for testing of and fine tuning.

The constellation of GPS satellites currently numbers 30 spacecraft, according to the U.S. Department of Defense. When in place, the 12 new GPS IIF satellites will be able to provide more powerful and accurate signals to the nearly 1 billion military and civilian worldwide GPS users. The new

generation of satellites will also have a longer design life.

### Improved Accuracy

"The inaugural launch of the GPS IIF-1 is a milestone in Boeing's 30 years of support to the Air Force that goes back to the first days of this program," said Craig Cooning, vice president and general manager, Boeing Space and Intelligence Systems. Cooning added, "The new GPS IIF satellites bring key improvements including... a new civil signal to enhance commercial aviation and search-and-rescue operations, and significantly improved signal accuracy, (as more of these new satellites go into operation)."

Boeing is producing the next 11 GPS IIF satellites. The next launch is currently scheduled for later this year. □



## Pilot Has Passion For Flight Training, But Loves Cows Too!

by Dave Weiman



Mark Nelson of Hawk Aviation, Inc.,  
Rush City, Minnesota.

RUSH CITY, MINN. – There is something to say about learning to fly in a small, rural community versus a big city. There is very little air traffic at a small town airport, so getting down the basics, practicing touch and goes without having to worry about talking on the radio, and executing instrument approaches on your own without radar vectors, may be easier and more efficient. Flying in large cities with air traffic

control services and dense traffic is undoubtedly the real world and important to learn at some point during one's training. But to start, a quiet country airport makes a lot of sense.

Obviously with a smaller population in rural America, the local flight school needs to work harder at recruiting

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students. But the kid down the road is probably more likely to walk into the office and say, “*sign me up*” because everyone lives within close proximity to the airport, and everyone probably attends the annual fly-in breakfast. The local airport is part of the fabric of a rural community.

Hawk Aviation, Inc. is the fixed base operation in Rush City, Minnesota, and Mark Nelson and his wife, Carrie, own the company. Hawk Aviation offers flight training for Sport, Private, Instrument, Commercial, Multi-Engine, Instructor, and Airline Transport Pilot certificates and ratings. It also offers ground school every 12 weeks to help students prepare for their knowledge tests. Hawk Aviation currently has five instructors on staff. Flight training, airman testing, and charter are the primary sources of revenue. Hawk Aviation has a pilot shop that carries VFR and IFR charts for the whole country. Carrie is the Testing Center Supervisor and helps out in the office when she is not working as a medical transcriptionist.

Mark and Carrie both grew up in the Rush City area. Their grand parents settled in the area in the early 1900s, and Mark continues to farm the family farm of 300 acres and milks 60 cows.

Mark Nelson’s brother-in-law introduced him to flying. “*My first flight was bumpy and I didn’t like it much,*” Nelson said. “*But after a couple of lessons, I really started to enjoy the training.*” Nelson is an instrument and multi-engine flight

instructor. He started taking flying lessons in 1993 and bought his first airplane – a Cessna 172 Skyhawk – in 1996.

Hawk Aviation, Inc. now owns two Cessna 172s and one Cessna 150, which may not have all of the bells and whistles that new aircraft do, but as Nelson says, “*they are affordable!*” The C-172s rent for \$100.00 wet, and the C-150 for \$80.00.

Construction of the current FBO office began on September 10, 2001. The World Trade Center came down the next day and flying came to a standstill.

“*I began to wonder if this was going to work out based on the events of September 11,*” Nelson said. “*But it did.*”

Also, Hawk Aviation got a pipeline patrol contract shortly before 9-11, and Nelson and another pilot were allowed to continue to fly their route between Mason City, Iowa and Duluth, Minnesota, while other traffic was grounded at that time. Shortly afterwards, instrument flight training was allowed, so that portion of Hawk’s flight school was up and running again. Nelson averages between 25-30 hours a week instructing in addition to other commercial flying.

The recent economic downturn has not affected the farm-based communities as much as it has urban communities, so flight training has remained about the same, and you cannot find any airport with gas any less expensive than at Rush City – about \$2.00 a gallon less than most for

self service.

On average, Hawk Aviation has 15–20 students in various stages of training and they attract students from a 150-mile radius. There are 75 active pilots at Rush City, so there’s a good base for recurrent training, biennial flight reviews, and advanced ratings.

With 50 planes on the field, Rush City Regional Airport (ROS) has one paved runway (16/34), which is 4400 X 75 feet. A second runway (7/25), 3200 X 75 feet, is in the final planning stages. The airport has GPS and NDB approaches, Automatic Weather Observation Service (AWOS), and a Ground Communications Outlet (GCO) to Flight Service. The airport manager is Don Swanson.

Mark and Carrie Nelson have three kids – all age 13. Would you believe triplets? Kevin, Kayla and Kyle.

Between the airport and the farm, it would suit Mark and Carrie Nelson just fine if life stayed the same. They are not looking to grow much because the more they grow, the less actual instruction and flying Mark would be doing, and they would both be managing people, rather than teaching people to fly.

So if you think you would like a relaxed, country approach to learning how to fly or to stay current, give Mark and Carrie Nelson at Hawk Aviation a call: 320-358-3665 ([www.hawk-aviation.com](http://www.hawk-aviation.com)). Accelerated training is available for the asking, and I am sure they would get you a room in the local hotel, and treat you to some of Rush City’s finest dining! □



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# SPORT PILOT – LIGHT SPORT AIRCRAFT



John Craparo

John Craparo's restored 1930 Model A closed cab pickup truck sits in his hangar just a few feet away from his 1946 Ercoupe 415C.



Jasen Golden

One team works to get an accurate revised weight and balance on a Kitfox as they lift a wing so a scale can be placed under the main landing gear.

## The Light Sport Repairman: A Story of Alchemy & The Peanut

by John S. Craparo  
EAA Life Member

Since the advent of the Light Sport rules in 2004, many have benefited from its versatility. Sadly, others believe it is limited by a lack of commercial opportunity, but to quote George Washington Carver, *"Fall in love with the peanut and soon it will reveal all of its secrets to you."*

Many have built businesses around manufacturing and selling LSA aircraft, kits, engines and accessories; others have profited from publishing books and software about the rules and how to obtain the airman's certificate. There are those who have found opportunities as flight instructors. These are all ways to turn a seemingly non-commercial set of rules into profits.

This peanut has revealed much to me in the form of the Light Sport Repairman with a Maintenance rating for Airplanes (LSRM-A). With 120 hours of training, a qualified person can perform maintenance and annual condition inspections on Special Light Sport Aircraft (S-LSA) and Experimental Light Sport Aircraft



Brian and Carol Carpenter take a short break from their mutual teaching duties.

(E-LSA). As an LSRM, the holder of the certificate can maintain their aircraft and also perform such work for hire. The LSRM rules do not allow the holder to maintain or inspect Standard Category LSA-qualified aircraft like the Ercoupe 415C, Luscombe 8A or Piper J3 Cub. There is a 16-hour course that allows the holder of that privilege to perform

condition inspections on their E-LSA; this is the Light Sport Repairman with an Inspection rating (LSRI). It does not qualify the holder to work as a repairman for hire or work on an S-LSA.

While attending EAA AirVenture a few years ago, I stopped at the Rainbow Aviation Services booth. I had recently read Carol and Brian Carpenter's book, *"Sport Pilot Airplane: A Complete Guide."* Their firm was offering the first FAA-approved LSRM-A training program. Unfortunately, my work schedule would not allow me to attend the 120-hour course over three consecutive weeks. The Carpenters took my information and I grabbed a brochure. That spellbinding pamphlet shifted back and forth across my desk for months. Two years after our brief discussion, Carol telephoned. *"Hi John...still interested in the 120-hour repairman course? I just received word from the FAA that we can offer it over three non-consecutive weeks?"* I was impressed with the follow-up. My



deposit was mailed the next morning.

I attended the first week of class in September in Oshkosh, Wisconsin, and then the second and third weeks in October and February in Corning, California. This gave me the unique opportunity to experience the course at the headquarters of both EAA and Rainbow Aviation Services.

My LSRM class included a diverse group. Included were a recent high school graduate starting a career; a Designated Pilot Examiner; a U.S. Air Force veteran of the Iraq war, currently employed by one of the new LSA aircraft companies; a circuit court judge running for re-election; the owner of an LSA manufacturing company; and several doctors of both the medical and research species. Experienced homebuilders, and general enthusiasts like me, rounded out the group.

All proved talented when it came to the work that brought us together. The cohort size is kept to about 12 people. Much of the work is done in teams, and pre-planning is done by the staff to match experienced people with those who are a bit greener. My mechanic experience was limited to a flivver project. I completed the ground up restoration of a 1930 Model A Ford 10 years earlier; however, no prior experience is needed to enter the program, not even a pilot certificate. Camaraderie formed quickly, everyone was eager to learn, and patience was the norm. No one was left behind.

While I worked toward the Airplane rating, Rainbow also offers this training for Weight Shift and Powered Parachute aircraft. Lighter-than-Air and Glider are future possibilities governed by the rule (FAA Order 8000.84A). An individual can earn any aircraft rating or a combination. The hours and cost would differ, but again, therein lays the versatility. The rating includes three Core modules and at least one Elective (choose one or more Airplane, Weight Shift, Powered Parachute). Each module includes a



Gene Olinger is pleased with the rib stitching, baseball stitches and inspection holes he has made in a salvaged stabilizer.

mix of lecture and hands-on practical experience.

Here is a brief view of the modules in the Airplane course, the minimum time required, and an abridged list of the elements:

Module 1 (Core) is a 16-hour Regulatory Maintenance Overview unit including elements on the ASTM consensus standards by which LSAs are certified, requirements of the rules governing LSRM, record keeping, and safety.

Module 2 (Core) is a 24-hour Airframe General unit including elements on hands-on weight and balance, performance of minor repairs and alterations, inspection of structures, and the electrical system.

Module 3 (Core) is a 45-hour Engine and Propeller unit including elements on 2 and 4-cycle engines, service and inspections, trouble-shooting, propeller theory and maintenance, propeller repairs, electrical and mechanical engine instruments, and accessory removal and replacement.

Module 4 (Elective) is a 35-hour Airplane Class unit including elements on theory and operation of flight controls (remember there is no requirement to be a pilot in order to earn this certificate), aircraft rigging of flight controls, inspection, removal and recovering of cloth on wings and tail surfaces, removal and installation of the engine and accessories, trouble shooting and adjustment of carburetors and magnetos, composite materials and repairs.

While designed around light maintenance and inspections, the potential for broader privileges exist. Under

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(ABOVE PHOTO) John Craparo completes a repair of a propeller.



(RIGHT PHOTO) Bill Totty carefully plumbs a pitot-static system to manufacturer specifications using Nylo-seal fittings.

the rules, an LSRM can take on heavy maintenance if they receive specific training and a Letter of Authorization from the manufacturer of the LSA aircraft. An LSRM can potentially do engine overhauls.

Rotax has audited the Rainbow course and after a student passes a Rotax specific comprehensive examination, a Service Specialty Certificate is issued to the LSRM-A graduate. Rotax determined that Rainbow properly prepares its graduates to perform line maintenance on the 912 line of engines. The Service Specialty and LSRM-A program are pre-requisites for Rotax Heavy Maintenance training and certification. Rainbow wants to ensure its program is robust and provides broader privilege potential.

Our textbooks consisted of specially prepared slides, the FAA's Aircraft Inspection, Repair & Alterations: acceptable methods, techniques & practices (sic) - FAA AC 43.13-1B/2B, and various

manufacturer and aircraft parts manuals. Supplemental material included EAA videos and FAA FAAST online courses completed as homework in the computer lab. All materials and textbooks used in the course are included in the tuition. You have the option of bringing some of your own hand tools. Carol and Brian act as a teaching team and their technical assistant, Jason Golden, provides practical advice on everything from looking up part numbers, to teaching proper wing stitching technique.

Both locations offered three settings – a classroom, a lab, and a hangar. Safety is emphasized at all times. Lectures and many workbook exercises are conducted in the classroom. Carol's lectures center around regulations and jurisdiction, use of checklists, compliance with safety directives, aircraft type certification, tools, workshop safety,

ASTM Consensus Standards, sound business practices, and record keeping. The exercises include continuous emphasis on finding current maintenance procedures for particular aircraft, compliance with manufacturer instructions and directives, and writing proper logbook entries.

Lab work includes setting up an online IACRA account and starting the 8610-2 rating application for issuance of the certificate by the FAA. In the bench lab, activities like safety wiring of carburetors and propeller

hubs takes place. One exercise had the class measure, identify and find the part numbers for about 60 bolts, nuts, rivets and other hardware items. Emphasis was placed on accurate measurement and metal identification. Here we also analyzed the contents of oil filters using various chemical re-agents. Tube fitting, fastening and fabrication were practiced and we built out a pitot-static system with working instruments. Two lab projects involved fabricating complex aluminum parts from plans, which required calculations to ensure accurate cutting and bending. The metal brake was used to form the parts with the correct placement and radius of bends. Parts were attached with bucked rivets. Individual work was rated based on proper symmetry, riveting technique and compliance with the strict plan tolerances. One quickly realizes how lopsided a complex part becomes due to a one millimeter measuring error.

We had access to a variety of airplanes and large assemblies in the hangar including a new Remos, Kitfox, an experimental Ranger, Diamond motor-glider, and a Standard Category Ercoupe. Work involved engine accessories. This included retiming magnetos, gapping piston rings, performing compression checks, and synchronizing dual

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carburetors on the Rotax 912 series engine. We practiced doing full weight and balance calculations after placing aircraft on scales; repairs and balancing were conducted on wood, metal and composite propellers; rib stitching and fabric repairs were completed; and inspection holes, drains and covers were installed. One element included repairs to fiberglass surfaces after Brian used an auger bit to form a nice gash in a complex curved part like a salvaged wheel fairing or wing tip. After scarfing the surface around our damaged part, we did an epoxy and glass cloth multi-layer repair to bring it back to original condition per 43.13-1B 3-3. Sanding and finishing were required and a grade was assigned for difficulty of the repair, its strength and the aesthetic result.

Practical elements of the students' work are continuously graded over the 120 hours. The instructors never hesitate to say, *"Do the whole thing over please,"* nor do they hesitate to sit down and help you through the rough spots. On the last day of the course, a timed 50-question FAA multiple choice written examination is administered. By the time the exam comes around, the student is well prepared to pass.

The course and elective modules are offered several times a year, both at EAA headquarters in Oshkosh, Wis., and at Rainbow headquarters in Corning, Calif. Rainbow also offers the 16-hour LSRI discussed earlier in the article. Comfortable value-priced accommodations are plentiful, minutes from both venues. Drive-time to either location is about two hours from the major airports serving Oshkosh and Corning. Downtime can be spent exploring things like the EAA aviation museum, meeting new people at barbecue fly-ins and pancake breakfasts, touring aircraft factories, and even taking a tour of an olive farm and processing facility in Corning. Who would have known that all olives are soaked in lye to make them edible! Many of these group

activities are arranged in advance by Rainbow.

Adding to the versatility of the LSRM rating, the holder of the certificate can log all work performed and after 30 months, apply to take the licensing examination for the A&P Certificate. The LSRM attests to his or her own work and does not have to work as an apprentice or attend a resident course of study. One of Rainbow's former students received his A&P this way.

The course is challenging and

fast paced. It is taught by intelligent, interesting and caring people who are tremendous advocates of general aviation and the Sport Pilot movement. I fell in love with this peanut and it will certainly turn into gold as I continue to gain experience.

*EDITOR'S NOTE:* John Craparo is a private pilot, rated in balloons and gliders and holds sport pilot privileges in ASEL and ASES. He is an advanced ground instructor who recently attained the Light Sport Repairman Maintenance – Airplane certification. He can be reached at [john.craparo@gmail.com](mailto:john.craparo@gmail.com). □

## Sport Pilot Rule Changes Finally Take Effect... Generally Positive Results Are Good News!

by Ed Leineweber

**F**ive and a half years after the Sport Pilot/Light Sport Aircraft rules went into effect, giving birth to a new movement in general aviation, the first changes to these rules took effect on April 2, 2010. Taken together, the rule-making process just completed demonstrated that this new movement, while still in its infancy, is a healthy, growing child, and likely will continue to mature into a sturdy member of the aviation



Ed Leineweber

family, fulfilling in large measure the hopes of its creators, albeit through a series of slow, steady steps.

In all, the FAA originally proposed 22 changes. Following the comment period, and after taking into account the concerns expressed by the Experimental Aircraft Association (EAA) and others, the FAA modified or withdrew several of these proposals. A brief review of changes withdrawn and those finally enacted, organized by those affecting piloting, flight training, and Light Sport Aircraft (LSA) maintenance, will show the basis for my confident prediction that Sport Pilot/Light Sport Aircraft is a segment of aviation that is here to stay.



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## Piloting Rule Changes

Most of the more significant action concerns the Sport Pilot Certificate and pilots with higher certificates who choose to exercise Sport Pilot privileges. And what was not finally adopted is as significant as those changes that did in the end make it into the Federal Aviation Regulations.

First and most importantly, the FAA's proposal to replace Sport Pilot privileges with aircraft category and class ratings was withdrawn by the agency in the face of resistance by EAA, which argued that no safety concerns had been demonstrated as to why the original system of adding privileges through proficiency checks and endorsements by flight instructors, was not adequate. The FAA ultimately agreed that the burden of revising the system was not worth the cost, but it remains concerned that there is not adequate documentation of airmen and their respective endorsements. Those holding Sport Pilot Certificates should go to the FAA Airmen Registry and verify that their current privileges for category and class are correct, and contact the FAA if they are not.

The FAA also backed off from its proposal that flight instructors no longer be authorized to conduct proficiency flight checks for the addition of category and class privileges to Sport Pilot Certificates, which would have required all such checks for additional ratings be performed by Designated Pilot Examiners. Consistent with its decision to withdraw the proposal to require category and class ratings discussed above, and facing EAA opposition for the same reasons expressed above, the agency agreed that, given the lack of safety concerns, the burdens of the change would not justify the cost. EAA had also argued that the current lack of Sport Pilot instructors and Designated Pilot Examiners for some aircraft



Recent changes to the rules concerning maintenance of light sport aircraft allow owners to obtain Experimental Light Sport Aircraft (E-LSA) airworthiness certificates for aircraft originally certificated as S-LSAs, enabling them to perform their own maintenance, deviate from dictates of the manufacturers' maintenance manuals, and even perform their own condition inspections after attending a 16-hour course. Such aircraft can no longer, however, be used for flight training or rental.

categories and classes in many parts of the country, would have altered and severely impaired the original intent of the SP/LSA rules.

A consequence of the first two proposals being withdrawn was the withdrawal also of a related proposal which would have eliminated the need for Sport Pilots to carry their logbooks with them while in flight to demonstrate their category and class privileges. The original rule remains in effect, but EAA recommends that pilots carry copies of the relevant logbook endorsement entries, rather than the original records, in case the records are lost, destroyed or stolen while being carried by the Sport Pilot on his or her person or in the aircraft.

The FAA proposal, concurred by EAA, to remove the requirement that persons exercising Sport Pilot privileges have make and model endorsements in a specific set of aircraft (e.g. tailwheel, less than 87 knots Vh; tailwheel, more than 87 knots Vh; tricycle gear, less than 87 knots Vh, etc.) was adopted, finding that the now-repealed requirement was redundant of other training and proficiency checks. ("Vh" is defined by the FARs to be maximum speed in level flight with maximum continuous power.)

However, the agency also adopted, over EAA objections, a new regulation, which requires, apparently, that ALL

pilots operating aircraft with a Vh of less than 87 knots receive training and an endorsement to operate such aircraft, if they don't already have such experience. Perhaps reacting to the early accident reports of pilots with higher pilot certificates and experience in heavier airplanes transitioning to very lightly wing-loaded Sport-Pilot eligible airplanes, the FAA did not believe that experience in faster airplanes would adequately prepare a pilot to operate a low-speed, high-drag airplane with a Vh of less than 87 knots without

additional training. I suspect that aviation insurance companies probably agree.

In the opinion of EAA, this new requirement "effectively obliterated" this segment of aviation, since it will be prohibitively burdensome, it argues, to find an instructor with an airplane with a Vh of less than 87 knots in which to provide this training. Time will tell how this potentially significant change plays out in practice.

## Flight Training Rule Changes

Several significant changes, and withdrawal of proposed changes, pertain to Sport Pilot training activities, including those discussed already concerning administration of proficiency checks for additional Sport Pilot privileges, flight training in sets of aircraft, and flight training in aircraft with a Vh of less than 87 knots. Other important developments should also be mentioned.

In perhaps its most dramatic position reversal concerning Sport Pilot flight instructors, the FAA abandoned its proposal to place all flight instructors, including those with Sport Pilot flight instructor certificates presently regulated under subpart K of Part 61, together in subpart H, where all other flight instructor certificates are regulated. The decision to not pursue



this consolidation arose out of the decision to not pursue adopting category and class ratings for Sport Pilots, but to continue to issue additional privileges to those certificate holders through logbook endorsements. The unfortunate consequence of this outcome is that dual flight instruction received from a subpart K Sport Pilot flight instructor can only count toward the issuance of a Sport Pilot Certificate, and not to the eventual attainment of a higher pilot certificate.

A flight training issue that was confusing in the regulations before the recent rule-making process unfortunately remains unclear even after this process has been completed, and needs further FAA clarification. This is the issue of flight training on the control and maneuvering of an airplane solely by reference to instruments (i.e. basic instrument training). The FAA states that current regulations for the issuance of a Sport Pilot Certificate do not require such training, but FAR 61.93(e)(12) seems to suggest otherwise, although a minimum flight training time is not specified.

EAA points out that since the inception of the Sport Pilot rule, not a single fatal accident has been attributed to inadvertent flight into instrument meteorological conditions. Further, the FAA agrees that flight instructors with the Sport Pilot rating do not have the necessary instrument training to adequately train other pilots for flight by reference to instruments. Besides, many Sport Pilot-eligible aircraft do not have such instruments in the first place. Stay tuned for further developments, but do not expect such training to be required, except, perhaps, for airplanes with a Vh of more than 87 knots.

In a similar vein, the regulations have been modified to make it clear that if an aircraft is not equipped with radios for VFR navigation and two-way communication, training in such procedures is no longer required.



Recent changes to the rules concerning maintenance of light sport aircraft allow owners to obtain Experimental Light Sport Aircraft (E-LSA) airworthiness certificates for aircraft originally certificated as S-LSAs, enabling them to perform their own maintenance, deviate from dictates of the manufacturers' maintenance manuals, and even perform their own condition inspections after attending a 16-hour course. Such aircraft can no longer, however, be used for flight training or rental.

Gone also is the requirement that flight instructors log at least five (5) hours of flight time in a make and model of light sport aircraft before providing flight training in any aircraft in the same set. While common sense dictates that a flight instructor be proficient and current in any aircraft in which he or she proposes to provide flight training, this change will reduce the financial burden on flight instructors and help to make Sport

Pilot flight training more accessible.

Two final changes concerning flight training for the Sport Pilot Certificate are worth noting. First, the time required to be logged within two calendar months prior to the practical test, has been reduced from three to two. Second, aircraft with Special Light Sport Aircraft (S-LSA) airworthiness certificates may now be used in Part 141 flight schools. Both of these

changes, while minor, should increase the availability of Sport Pilot flight training while potentially lowering its cost.

### Light Sport Aircraft Maintenance Rule Changes

Two changes concerning maintenance of Light Sport Aircraft are worth mentioning, especially given

*CONTINUED ON PAGE 62*

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## AUGUST 2010

- 1 **LONGVILLE (XVG), MINN.** - Pancake Breakfast 8am-Noon. 218-363-3267.
- 1\* **CRESCO (CJJ), IOWA** - Breakfast 7:30am-Noon. 563-547-3434
- 7\* **HUTCHINSON (HCD), MINN.** - Airshow & Joseph P. Dooley Terminal Dedication 2-4pm. Gates open at Noon. Food & Beverage On-Site. (Rain Date August 8) 320-296-6088 / 320-583-1396.
- 7 **ESCANABA (ESC), MICH.** - Pig Roast 11am-6pm at Delta County Airport. 906-786-4902.
- 7 **SANDUSKY (Y83), MICH.** - Dawn Patrol in conjunction with the Sandusky Car Show 7am-Noon. 810-414-3009.
- 7\* **ELBOW LAKE (Y63), MINN.** - Ribeye Steak Sandwich Meal 9am-1pm. In conjunction with Flekkefest Celebration. 218-685-6594.
- 7\* **WEST BEND (ETB), WIS.** - Breakfast 7-10am. 262-338-8411.
- 7\* **NEW HOLSTEIN (8D1), WIS.** - Wheels & Wings Fly-In Breakfast & Lunch 7am-4pm. 920-203-1569.
- 7-8 **YPSILANTI (YIP), MICH.** - Thunder Over Michigan Air Show. 9am-5pm. [www.yankeearmuseum.org/airshow](http://www.yankeearmuseum.org/airshow)
- 7-8 **MILACA (18Y), MINN.** - "Tribute to Veterans" - 7<sup>th</sup> Skydiving Demo & etc. Under Wing Camping. 8<sup>th</sup> - Breakfast 7am-Noon. 320-492-8246 or 320-266-3822.
- 8 **CHETEK (Y23), WIS.** - BBQ Chicken Fly-In 10:30am-3pm. Aircraft & Car Display. 715-456-8415.
- 8 **LA CROSSE (LSE), WIS.** - Belgian Waffle Breakfast 7-11:30am.
- 8 **RED WING (RGK), MINN.** - Breakfast 8am-Noon. 715-594-3999.
- 8\* **VIROQUA (Y51), WIS.** - Pancake Breakfast. 608-632-1112.
- 8\* **HUMBOLDT (OK7), IOWA** - Breakfast 7am-Noon. 515-332-4012.

- 8\* **WALKER (Y49), MINN.** - Breakfast 7:30am-12:30pm.
- 8\* **BOULDER JUNCTION (BDJ), WIS.** - Musky Day Land & Sea Fly-In 9am-4pm. 715-385-2979.
- 13-15\* **ST. HELEN (6Y6), MICH.** - Breakfast Fly-In. [www.sainthelenchamber.net](http://www.sainthelenchamber.net)
- 14 **CAMERON / RICE LAKE (RPD), WIS.** - Pancake Breakfast & Lunch 7am-1pm. Military Aircraft & Static Display. 715-651-6878.
- 14 **KINDRED (K74), N.D.** - Pancake Breakfast 7am-? in conjunction with Kindred Days. Aerobatic Show so check notams. 701-388-2126.
- 14\* **SOUTH ST. PAUL, MINN.** - Wings of Hope Charity Open House at Fleming Field 11am-4pm Hangar #3. [www.cafmn.org](http://www.cafmn.org)
- 14\* **CLOQUET (COQ), MINN.** - Breakfast 8:30am-Noon.
- 14-15 **GLADWIN (GDW), MICH.** - Pancake & Sausage Breakfast 7am-Noon in conjunction with The Gladwin Carriage Festival (parade at 11am at fairgrounds). 989-426-4201.
- 15 **WATERFORD (PTK), MICH.** - Pancake Breakfast 8am-Noon at the Oakland County Int'l Airport. 248-789-5026.
- 15 **TAYLORVILLE (TAZ), ILL.** - Breakfast 7-11am. 217-824-9313.
- 15 **LAKE ELMO (21D), MINN.** - Pancake Breakfast 7am-Noon. Aircraft Display. [eaa54.org](http://eaa54.org)
- 15\* **MANKATO, MINN.** - Breakfast 7:30am-12:30pm. 507-345-3767.
- 15\* **PAYNESVILLE (2P3), MINN.** - Breakfast 7:30am-1pm. Two Airshows 10:30am & 12:30pm.
- 15\* **PONTIAC (PTK), MICH.** - Pancake Breakfast 8am & Open House 10am-4pm at the Oakland County Int'l Airport.
- 18-22 **MIMINISKA LODGE, ONTARIO** - "Midwest Flyer Canadian Fishing Fly-Out." For details email [info@midwestflyer.com](mailto:info@midwestflyer.com), or call 608-835-7063 (see [midwestflyer.com](http://midwestflyer.com) and [wildernessnorth.com](http://wildernessnorth.com)) Reservations are handled directly through Wilderness North in Thunder Bay 1-888-465-3474.
- 20-22 **DEKALB (KDKB), ILL.** - Corn Fest. [www.cornfest.com](http://www.cornfest.com).
- 20-22\* **WISCONSIN RAPIDS (ISW), WIS.** - Balloon Rally & Music Fest. 20<sup>th</sup> Events 5pm. 21<sup>st</sup> 6am-midnight, Pancake Breakfast 6:30am. 800-428-5000.
- 21 **CAMP DOUGLAS (VOLK FIELD), WIS.** - Fly-In Open House Pancake Breakfast with IFR/VFR & Maintenance Seminars Sponsored by WisDOT Bureau of Aeronautics 608-427-1899. If Flying In, You Need To Pre-Register 800-972-8673.
- 21 **FOREST LAKE, MINN.** - Corn on the Cob, Brats & Ice Cream 10am-4pm. Car Show. New location south end. 651-776-1717.
- 21 **MARSHALL (MML), MINN.** - Pancake/Sausage Breakfast 8am-12:30pm. 507-537-

- 21\* **BEMIDJI (96M), MINN.** - Floatplane & Wheel Plane Fly-In BBQ Lunch at Mobergs Airbase 9am-2pm. 218-835-6497.
- 21\* **STURGEON BAY (SUE), WIS.** - Pancake Breakfast at the Cherryland Airport 8-10:30am. 920-743-6082.
- 21\* **WILD ROSE (W23), WIS.** - Light Plane Fly-In 8am-8pm with Pilot Proficiency Events 10am (brief at 9am). Camping Available 20<sup>th</sup> & 21<sup>st</sup>. 715-536-8828.
- 21\* **ANKENY (IKV), IOWA** - Breakfast 7-11am. 515-554-8187.
- 21\* **POPLAR GROVE (C77), ILL.** - Dogs & Brats Fly-In 11:30am-1:30pm.
- 21\* **MASON (TEW), MICH.** - Aviation Day, Pancake Breakfast 7:30-11:30am. & Grilled Steak Lunch Noon-4:30pm.
- 22 **BOYCEVILLE (3T3), WIS.** - Breakfast 7-11am Airshow 11am. Sesquicentennial Parade 1pm. [nerlingaviation@centurytel.net](mailto:nerlingaviation@centurytel.net).
- 22\* **TOMAHAWK (KTV), WIS.** - Pancake Breakfast & Brats, Dogs, Burgers Lunch 7:30am-5pm. 715-966-1874 / 453-2886.
- 22\* **LITCHFIELD (LJF), MINN.** - Breakfast 7am-Noon. 320-693-6189.
- 28 **GLENCOE (GYL), MINN.** - Sweet Corn & Bratwurst Feed Fly-In 10am-2pm. 320-583-8367. [stuselch@myclearwave.net](mailto:stuselch@myclearwave.net).
- 28\* **HARTFORD (HXF), WIS.** - Wisconsin Brat Fry & Wisconsin Soaring Society at the Friendly Airport Noon-4pm. (Rain Date 29) 262-408-0801 / 707-1301.
- 28\* **PRAIRIE DU SAC (91C), WIS.** - Sauk Prairie Airport Fly-In & Community Day 7am-4pm. 608-577-3754.
- 28\* **GUTTENBERG, IOWA** - Annual Abel Island Fly-In, Float-In, Potluck & BB1 at Abel Island Airpark. Noon - 3pm. 319-480-0913. [www.abelisland.com](http://www.abelisland.com)
- 29 **CUMBERLAND (UBE), WIS.** - Pancake Breakfast 7-11am. Aerobatic Demonstration 11am-Noon. Camping on Field. 715-204-4474. In conjunction with Rutabaga Festival 715-822-3378.
- 29\* **BURLINGTON (BUU), WIS.** - Pancakes & Eggs Breakfast/ Brats & Burgers Lunch 7am-1pm. 262-537-2513.
- 29\* **IOWA CITY (IOW), IOWA** - Breakfast 7am-12:30pm. 319-338-9222
- 29\* **GREENFIELD (GFZ), IOWA** - Iowa Aviation Museum Wings Fly-In 7:30-11am. Pilots in command eat free. 641-343-7184.
- 29\* **OWATONNA, MINN.** - French Toast Breakfast 7am-Noon. 507-444-2448 or 507-521-4735.
- 29\* **WINDOM (MWM), MINN.** - French Toast/ Pancake Fly-In Breakfast 7am-1pm. 122.9. 507-830-0273.

## SEPTEMBER 2010

- 3-6 **SIDNAW (6Y9), MICH.** - "6Y9 Labor Day Weekend Fly-In" at the Southern Houghton County Airport (Prickett Grooms Airfield). 4<sup>th</sup> is the Main Day. [www.sidnaw.org](http://www.sidnaw.org) 616-554-8860.
- 4\* **SHELL LAKE (SSQ), WIS.** - Town & County



- Days Flight Breakfast 7:30-11:30am.  
952-935-3598 / 715-468-4592.
- 4\* **NEW LISBON (82C), Wis.** - Breakfast Lunch & Events 6:30am-2pm at the Mauston New Lisbon Airport. 608-565-2136.
- 4\* **COUNCIL BLUFFS (CBF), Iowa** - Great Plains CAF Wing Museum Open House & Breakfast 8am-4pm. 712-366-3505.
- 4\* **GAYLOR (4Y4), Mich.** - Lakes of the North Auto & Air Fair 8am-4pm. 586-295-3400. [www.lakesofthenorthhoa.com](http://www.lakesofthenorthhoa.com)
- 4-6 **CLEVELAND, OHIO** - Cleveland National Air Show. 216-781-7810. [www.clevelandairshow.com](http://www.clevelandairshow.com).
- 5\* **MONDOVI, Wis.** - Annual Fly-In at Log Cabin Airport 9:30am, Lunch at Noon. 715-287-4205. [logcabinairport@tcc.coop](mailto:logcabinairport@tcc.coop)
- 5\* **DUNSEITH (S28), N.D.** - USA - Canada Int'l Fly-In at the International Peace Garden Airport. 701-328-9650
- 9-12 **MOUNT VERNON (MVN), ILL.** - Gathering of Ercoupes. [www.ercoupe.org](http://www.ercoupe.org)
- 10\* **SOUTH ST. PAUL, MINN.** - CAF Vintage Fashion Show & Wine Tasting 6:30am-8pm at Fleming Field Hangar #3. 651-455-6942.
- 11 **MIDLAND (IKW), Mich.** - Pancake Breakfast 7-11am at Barstow Airport. 989-835-3231.
- 11 **NILES (3TR), Mich.** - "Salute to Veterans" Breakfast 7am-Noon at EAA hangar on east side of Jerry Tyler Memorial Airport. 574-339-9991.
- 11 **OSCEOLA (OEO), Wis.** - Pancake breakfast, burger and brat lunch 8am-4pm. Airplanes on display and transportation to classic car show and craft show. Contact: Jeffrey Meyer 715 294-5622.
- 11 **SUPERIOR (SUW), Wis.** - Pancake Breakfast at Richard I. Bong Airport 7:30-11am.
- 11\* **WEST BEND (ETB), Wis.** - Breakfast 7-10am. 262-338-8411.
- 11\* **MERRILL (RRL), Wis.** - Pancake Breakfast, Flea Market & Hangar Dance 8am-11pm. 715-536-2024.
- 11\* **MINOT, N.D.** - Minot Air Force Base Open House. 701-723-2754.
- 12\* **NEW ULM (ULM), MINN.** - New Ulm Lions Club 37th Annual Fly-In Pancake Breakfast, Sunday, 7 AM to 1 PM. 507-354-5781.
- 12\* **MT. MORRIS (C55), ILL.** - Breakfast 7am-Noon at Ogle County Airport. 815-732-7268. [glenlorr@verizon.net](mailto:glenlorr@verizon.net)
- 12\* **DUBUQUE (DBQ), Iowa** - Pancake Breakfast 7am-Noon. [www.eaachapter327.org](http://www.eaachapter327.org)
- 12\* **MAPLE LAKE, MINN.** - Pork Chop Dinner Fly-In Serving 11:30am-2pm. 763-670-6021. [wflury@wh-link.net](mailto:wflury@wh-link.net)
- 12\* **TOMAH (Y72), Wis.** - Breakfast 7-11am & Brats & Dogs Lunch 11am-2pm. 608-372-4728.
- 12\* **CARROLL (CIN), Iowa** - Breakfast 7am-Noon. 712-792-4980.
- 12\* **FORT MADISON (FSW), Iowa** - Pancake Breakfast 7-11am. 319-372-2243.

- 18 **DOWAGIAC (C91), Mich.** - Pancake Breakfast / Swap Meet, Classic Airplanes, Cars & Antique Tractors 7-11am. 269-449-5393.
- 18 **OCONTO (OCQ), Wis.** - Breakfast (7-10am) & Static Display 7am-5pm at J. Douglas Bake Memorial Airport. 920-246-5620.
- 18\* **FARIBAULT (FBL), MINN.** - Pancakes, Eggs & Sausage Breakfast 7am-Noon. 507-744-5111.
- 18\* **SOUTH ST. PAUL, MINN.** - Fall Bombers Moon Ball at Fleming Field Hangar #3 Doors Open 6pm Dance starts 8pm. 651-455-6942. [www.cafmn.org](http://www.cafmn.org)
- 18\* **POPLAR GROVE (C77), ILL.** - Dogs & Brats Fly-In 11:30am-1:30pm.
- 18-19 **BURLINGTON (BRL), Iowa** - Fly Iowa 2010 "Celebrating 100 Years of Iowa Powered Flight" at Southeast Iowa Regional Airport 5am-3pm. Pancake Breakfast, Static Display, Free Airshow, etc. 319-759-4935. Email: [office@brlairport.com](mailto:office@brlairport.com)
- 18-19 **ERIE (3H5), ILL.** - Challenger Fly-in. All planes welcome. On site primitive camping, evening cook out. 309-659 2721. [www.erieairport.com](http://www.erieairport.com).
- 19 **TAYLORVILLE (TAZ), ILL.** - Breakfast 7-11am. 217-824-9313.
- 19 **HINCKLEY (OC2), ILL.** - Breakfast 7-11:30am. [www.eaa241.org](http://www.eaa241.org)
- 19\* **TURTLE LAKE (91N), N.D.** - Breakfast. 701-448-2253.
- 19\* **HECTOR (1D6), MINN.** - Flight Breakfast 7:30am-12:30pm. 320-848-2745. 122.8
- 23-25 **MT. VERNON (MVN), ILL.** - Annual Midwest LSA Expo at the Mt. Vernon Outland Airport. [www.midwestlsashow.com](http://www.midwestlsashow.com).
- 25\* **MANITOWISH WATERS (D25), Wis.** - Cranberry Colorama 9am-3pm. 715-543-8488 [www.Manitowishwaters.org](http://www.Manitowishwaters.org) (Rain Date 26.)
- 25\* **ANTIGO (AIG), Wis.** - Breakfast 9-11am, Lunch 11am-3pm & Airshow 1pm. (Rain Date 26th). 715-623-4525.
- 26 **PORT HURON (PHN), Mich.** - Wings, Wheels & Watercraft 7-11am at St. Clair County Int'l Airport. 810-364-6890.
- 26\* **BOSCOBEL (OVS), Wis.** - Breakfast 8:30am-Noon. 608-375-5001.
- 28-29\* **KANSAS CITY, Mo.** - FAA Central Regional

Airports Conference at the Westin-Crown Center. 816-795-6616

## OCTOBER 2010

- 2\* **RIO (I28), Wis.** - Fall Color GPS Search Tour 8am-2:30pm. Homemade Chili. Search tours of Door, Brown & Kewaunee counties. 608-375-5001.
- 2\* **ROCKFORD (1C8), ILL.** - Regional Aircraft Course Event 8am. 815-877-8849.
- 2\* **ROCKFORD (1C8), ILL.** - Lunch 11am-?. 815-877-8849.
- 3\* **IOLA (68C), Wis.** - Fall Colorama Chili Fly-In at Central County Airport 9am-3pm. 920-596-3400 / 634-9784.
- 10\* **MR. MORRIS (C55), ILL.** - Pork 'N' Pie Feast. Old fashioned Pig Roast with all the trimmings and homemade pie at the Ogle County Airport. 815-732-7268. [glenlorr@verizon.net](mailto:glenlorr@verizon.net)
- 16\* **SOUTH ST. PAUL, MINN.** - Craft Fair & Chili Feed at Fleming Field Hangar #3 11am-4pm. [www.cafmn.org](http://www.cafmn.org) 651-455-6942.
- 17 **WATERLIET (40C), Mich.** - Chili Hop Fly-In. 269-463-5532.
- 17 **TAYLORVILLE (TAZ), ILL.** - Breakfast 7-11am. 217-824-9313.
- 17-21\* **GALLOWAY, N.J.** - IES (Illuminating Engineering Society) Annual Aviation Lighting Seminar at Seaview Resort. Contact John Ellerton 315-682-6470 or [info@iesalc.org](mailto:info@iesalc.org) <http://www.iesale.org>
- 30\* **SOUTH ST. PAUL, MINN.** - CAF Halloween Benefit at Fleming Field Hangar #3 7am. [www.cafmn.org](http://www.cafmn.org) 651-455-6942.

## NOVEMBER 2010

- 11-13 **LONG BEACH, CALIF.** - Aircraft Owners & Pilots Association (AOPA) Aviation Summit. [www.aopa.org](http://www.aopa.org)

## THE FOLLOWING AIRPORTS HAVE SOMETHING SPECIAL ONCE A WEEK.

- IOLA (68C), Wis.** - Lunch is served at Noon On Fridays. (The Friday Lunch Menu is usually updated by Tuesday or Wednesday <http://netnet.net/~wiknjan/>.)
- EPHRAIM-FISH CREEK (3D2), Wis.** - Grizzly Scenic Air Tours will again be preparing pizza at 3D2 on Fridays (Pizza Friday) from 12:00 to 1:30pm. June through mid October.



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**1969 Piper Cherokee 6-300** – 5025 TT, 1485 SMOH, Dual MK-12D NavComs, ADF, Narco 890 DME, GX-50 GPS, Autocontrol III with S-Tec 30 Altitude Hold, WX-900 Stormscope, Knots 2U, 7 seats, Clean ..... **\$69,900/TRADE**

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**1977 Piper Archer II** - 7000 TT, 2468 SFOH,



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### GETTING THE LEAD OUT FROM PAGE 15

and other agencies. Because FAA is responsible for approving and certifying products that use any alternative fuel, we have asked the agency to convene a working group to help manage the safety, technical, logistical, and economic issues to ensure the best possible outcome for all concerned.

### DOOR COUNTY FROM PAGE 25

restrooms are open 24/7, and bicycles are available for use free of charge. For additional information or assistance with ground transportation, call 920-854-9711 ([www.friendsofephraimgibraltarairport.com](http://www.friendsofephraimgibraltarairport.com)).

Off the tip of Door County is "Washington Island," known for its annual fish boil, held in mid July. You can

So, while we are very busy behind the scenes on this issue, don't expect to see any immediate changes. Rest assured AOPA will make certain everyone concerned takes the needs of the entire general aviation community into account at every step along the way.

*EDITOR'S NOTE:* Learn more about this and other issues that affect your flying at [www.AOPA.org](http://www.AOPA.org). □

### SPORT PILOT RULE CHANGES FROM PAGE 57

the problems being encountered in the field with on-going airworthiness of these aircraft caused by illegal or non-compliant maintenance procedures. First, and of greatest importance, the regulations have been changed to make it clear that aircraft originally issued S-LSA airworthiness certificates which have been downgraded to Experimental Light Sport Aircraft (E-LSA) by their owners, need not comply with the maintenance manuals and procedures prescribed by the manufacturers for S-LSAs.

In addition, converted E-LSA owners may now do their own maintenance, and perform the annual condition inspection with the 16-hour training and Light Sport Repairman Certificate with the "inspection" rating, rather

than requiring an A&P or Light Sport Repairman with the "maintenance" rating do the repairs and make the inspection, as was required when the aircraft held a S-LSA airworthiness certificate.

The second significant change for maintenance of S-LSAs requires owners and operators to retain a record of the current status of applicable safety directives issued by manufacturers. This will help ensure the continued airworthiness of these aircraft, and allow owners and operators to better track these directives and address some of the paperwork compliance issues that have been noted in earlier articles in this column.

### Other Changes or Withdraw Of Proposed Changes

The changes discussed in this article are those felt to be of most significance to the most pilots, flight instructors and aircraft owners. Other action, either rule changes or withdraw of proposed changes, occurred which might have a big effect on some readers, especially those operating or providing flight training in powered parachutes and weight-shift controlled aircraft, or those flying in mountainous areas. If this might be you, be sure to look further into these additional items.

### All In All, Not Too Bad!

While the Sport Pilot/Light Sport Aircraft movement hasn't taken the world by storm, as some predicted, almost six years into this new era, no one can doubt that it is here to stay, has become an established segment of aviation in its own right, and will continue to grow and play an even larger role in the future. That the Sport Pilot rules have come through their first major review still substantially intact, with many actual improvements made, is additional proof of these facts. The basic design and philosophy of the Sport Pilot/Light Sport Aircraft concept has survived this major test with flying colors! □



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