





Warding off Tragedy P1



The Force of Thunderstorms P4



Avemco Webinar P7

# WARDING OFF TRAGEDY WITH **AIRMAN CERTIFICATION STANDARDS**

IMPROVING FAA KNOWLEDGE TESTS TO SAVE LIVES

"John, Dr. Williams is dead. I thought you'd want to know." The news hit me like a thunderbolt. The caller was an FAA inspector. Just two weeks earlier, I had asked him to talk with Dr. Williams. Dr. Williams was a towering figure. He was a physician, a radiologist, and an Episcopalian priest. He was a pillar in his community. But as a pilot, he had worried me.

By John and Martha King Reprinted with permission of John King and Flying Magazine (originally published in June 6, 2016)

Martha and I were teaching two-day ground schools, and Dr. Williams had been in my class. He just didn't follow the normal conventions of classroom behavior. He was impatient and in a hurry. He returned late from breaks and blurted out comments in class. I was worried he might behave impatiently in his flying. In fact, I was so concerned that when the FAA inspector came to administer the knowledge test, I asked him to speak to Dr. Williams.

"John," my FAA friend said, "I can't just pick someone out of your classroom and lecture him because you told me I should. He'll call his congressman. You talk to him."

"He won't listen to me," I said. "I'm just a traveling ground instructor." So neither one of us talked with him. He died on a solo cross-country. On the



first leg, he got lost and wound up in the mountains. Asking for help on the radio, he said, "There are clouds around me with trees in them." He landed safely at his destination.

Greatly relieved to see him, the folks at the Flight Service station literally begged him to come in to talk. He didn't have time, he said. He was scheduled to make a speech after he returned to his home airport. Without shutting off his engine, he took off on the return leg. He died in the same mountains on his way back.

I was devastated. I felt terribly guilty. I had foreseen that this might happen, yet I hadn't spoken to him. I considered quitting teaching flying. I felt that I didn't want to continue teaching people to do something that could kill them. Martha and I were traveling on a circuit of cities, teaching more than 2,000 pilots a year. All too often we returned to a city to learn that a pilot we knew had died. It was getting to me, and Dr. Williams was the tipping point.

Moreover, I was deeply discouraged that many of the questions we

needed to prepare pilots for on the knowledge test were obscure, trivial and even tricky. As a result, we were being forced to teach obscurity while pilots were coming to grief because they did not know how to identify and mitigate the risks of flying. Being part of that failed and dysfunctional system was depressing.

I loved flying and loved teaching it. It would be, I decided, my job to teach pilots how to identify and mitigate the risks of flight. I made one more resolution: I would never again fail to speak out when doing so offered any chance of saving someone's life.

The unanswered question is: What would I have said to Dr. Williams that would have gotten a positive result? I still don't know. That's probably the real reason neither my FAA friend nor I spoke with him. An even more pertinent question is: What, if anything, could have been done to head off that catastrophe? I believe the answer would have been to teach him aviation risk management, but it would have needed to start with his first fliaht lesson.

Physicians are not unaccustomed to the idea of managing risk. Dr. Williams had been a radiologist. There are all sorts of risks associated with radiology. Dr. Williams and other goal-oriented people can develop the habit of identifying and mitigating risks in aviation as they do in the rest of their lives if that habit is cultivated from the very first flight lesson.

As time progressed, it became apparent that Martha and I were far from the only people who had these concerns. In its March 2001 issue, Flying published an interview of me by Lane Wallace titled "Battling the 'Big Lie." This gave me the venue to speak out to the aviation community. I wanted pilots to know that we should recognize that the activity of flying is risky, and we should manage the risks. It was a provocative interview, and it took courage for Flying editor Mac McClellan to run it.

In response to the story, Jim Lauerman, then head of Avemco Insurance Company<sup>1</sup>, later wrote a letter proposing that we work together to help pilots manage risks. The folks at Avemco had been mourning the all-toooften loss of pilots and customers as Martha and I had. In response, we developed a series of practical risk-management courses, and Avemco

grants a premium credit to pilots who take them.

At about the same time, Bob Wright, who was head of the FAA's General Aviation and Commercial Division, spearheaded the implementation of the FAA-Industry Training Standards (FITS), with a goal of incorporating scenario-based training and risk management into flight training programs.

Still, the accident rate remained high, and the FAA knowledge tests continued to be profoundly irrelevant. In May 2011, the Society of Aviation and Flight Educators (SAFE) organized a landmark conference in Atlanta, which brought together hundreds of concerned pilots and instructors. Among them was Van Kerns, head of the FAA's Regulatory Support Division, which is responsible for airman testing standards. Van listened while person after person railed about the poor quality and irrelevance of the knowledge tests.

That evening Van bumped into Susan Parson, who is special assistant to the director of the FAA's Flight Standards Service. Susan, always deeply disturbed by the irrelevance of the exams, was by then steaming as a result of the ATP written exam she had recently taken. Van and Susan agreed that this needed to change.

Not one to ignore opportunity, Susan seized on the momentum provided by this perfect storm of events. She organized the Airman Testing Standards and Training Aviation Rulemaking Committee (ARC) to reform the way airmen are tested and evaluated.

Susan recruited folks from nearly every segment of the aviation training community, including even me, and the right people from the FAA, and set us all to work. The result of the five-year effort from the ARC and the two ACS Working Groups that followed was the development and implementation of the Airman Certification Standards (ACS). The ACS incorporates everything a pilot is required to know or be able to do for a specific certificate or rating into single document.

I am delighted to report that beginning in June<sup>2</sup>, the ACS will replace the Practical Test Standards for the Private Pilot-Airplane and Instrument Rating-Airplane practical tests.

The first thing folks will notice when they prepare for a check ride is that now, for the first time, there are standards for the knowledge a pilot is expected to demonstrate on both the knowledge test and practical test. The knowledge required of pilots will be relevant to a pilot's ability to get utility from the aircraft, and to identify and mitigate the risks of flight. No longer will pilots be tested on the trivial and obscure.

Plus, pilots will be evaluated on the ability to actually apply the knowledge they have learned to identify and mitigate the risks of flight. Pilots with this habit will be situationally aware and far less likely to be caught by surprise by events that, with risk-management skills, they would have seen coming.

I now have hope that extremely goal-oriented pilots like Dr. Williams will get the help they need to ward off tragedy. If the ACS had been in place when Dr. Williams was learning to fly, perhaps he would have learned to identify and mitigate the risks associated with scheduling a speech right after a solo cross-country.

John and Martha King have revolutionized the way pilots learn, and are regarded by pilots throughout the world as their personal aviation mentors. For decades they have taught nearly half of the pilots learning to fly in the United States, Each of them has taught more pilots than any other instructor in the history of aviation. The Kings continue to be avid students of aviation and are the first couple to both hold every category and class of FAA rating on their pilot and instructor certificates. Martha is the first and only woman to achieve this.

They have circled the globe and piloted aircraft in every continent of the world, except Antarctica, and in environments ranging from the high arctic to tropical rain forests and to remote deserts. They have pioneered improvements in the risk management practices of pilots and spoken to thousands of pilots worldwide on the subject. For additional safety-based information please go to www.kingschools.com.

<sup>1</sup> Jim Lauerman was President of Avemco Insurance Company from 2007 to 2012. <sup>2</sup> This article is presented in its entirety and the information is referencing the June 2016 replacement date, when the FAA replaced the Practical Test Standards for the Private Pilot Airplane certificate and the Instrument-Airplane rating with the corresponding Airman Certification Standards, or ACS. See https://www.faa.gov/ training testing/testing/acs/media/acs briefing.pdf for complete information.



< Check out this course from Kings Schools. It will serve as your guide to simplify and clarify the complexities of FAA Medical Certificates and the FAA BasicMed rule.



## "Sometimes the Simplest of Things Turn Out to be the Most Valuable"

"I went to the AOPA Fly In in Bremerton (August 2016), planning to camp under the wing of my Boeing Stearman. The only way I would go is with separate tents on opposite sides of the plane, due to a father-in-law that snores.

At midnight, I couldn't sleep due to his snoring. I could hear him clear on the other side of the plane. It was starting to be a fitful night until I remembered the Avemco keyring I got at the vendor booth that had a set of ear plugs in it; after that I slept great and was definitely more alert in the morning for a safer flight home due to a good night's rest. You really came through when I needed it, I'm glad you were there."

-- Curt Jacobson, Ridgefield WA

Editor's Note: We had to share this story with our readers! Not only was it amusing, but yet so true. As our Vice President, Marci Veronie, stated when she shared this story with her team - "We never know how the small things we do will help others". Avemco is proud to have contributed in a small way to a safe journey home for Curt Jacobson!



# TRAVELING NEAR THUNDERSTORMS SHOULD NOT BE TAKEN LIGHTLY. IF YOU DON'T TAKE THE RIGHT PRECAUTIONS, YOU'D FLY RIGHT INTO A CUMULO-NIMBUS, OR BOUNCE TOO CLOSE TO A SUPERCELL, AND THAT WOULD END YOUR TRIP REAL QUICK.

Thunderstorms combine all the hazards of aviation weather: turbulence, strong winds, reduced visibility, hail, ice, lightning strikes. These handy packages of danger crop up suddenly, forming from clear skies in minutes, or they can build and surge for hours at a time along a strong cold front.

The current FAA Aeronautical Information Manual (AIM)1 in Section 7-1-28 gives the following time-tested recommendations for flying in thunderstorm season:

**DON'T** land or takeoff in the face of an approaching thunderstorm. A sudden gust front or low level turbulence can cause loss of control.

**DON'T** attempt to fly under a thunderstorm, even if you can see through to the other side.

**DON'T** fly into clouds in areas of embedded thunderstorms without airborne radar, and the training to use it.

**DON'T** trust the visual appearance of a cloud to be a reliable indicator of the turbulence inside a thunderstorm.

**DO** avoid severe storms by at least 20 miles to avoid turbulence and hail. This is especially true under the anvil of a large cumulonimbus.

DO clear the top of a known or suspected severe thunderstorm by at least 1,000 feet altitude for each 10 knots of wind speed at the cloud top. This exceeds the altitude capability of most aircraft.

**DO** avoid the entire area if the area has 6/10 or more thunderstorm coverage.

**DO** regard any thunderstorm with cloud tops above 35,000 feet as extremely hazardous.

Always in motion, the future is. If you follow your plan and your avoidance plan still fails, before you face the thunderstorm's full force. consider these additional pointers from AIM:

- Tighten your seat belt and shoulder harness, and secure all loose obiects.
- Hold a course to take you through the storm in a minimum time.
- Turn on pitot heat and (if you have it) carburetor heat.
- Set power for the turbulence penetration airspeed recommended in your aircraft manual. Lower retractable landing gear to increase aircraft stability.
- Turn up cockpit lights to their highest intensity to lessen temporary blindness from lightning.
- Disengage an autopilot's altitude hold and speed hold modes. These modes increase structural stress in turbulence.
- If using airborne radar, tilt the antenna up and down occasionally. This will permit you to detect thunderstorm activity at altitudes other than the one being flown.

#### **ONCE YOU'RE IN THE STORM:**

**DO** keep your eyes on your instruments. Looking outside the cockpit can increase danger of temporary blindness from lightning.

DON'T change power settings. Maintain settings for the recommended turbulence penetration airspeed.

**DON'T** attempt to maintain constant altitude. Let the aircraft "ride the waves."

**DON'T** turn back once you are in the thunderstorm. A straight course through the storm will most likely get you out of the hazards most guickly. In addition, turning maneuvers increase stress on the aircraft.



Trust your gut, and use your knowledge of the force of thunderstorms. If your avoidance plan fails, follow the teachings of those who came before to avoid the dark side of thunderstorm encounters.

<sup>1</sup> Information provided from the FAA Aeronautical Information Manual (AIM) is excerpted from that manual: for full content refer to the manual effective 5/26/2016.

Holder of an ATP certificate with instructor, CFII and MEI ratings and a Masters Degree in Aviation Safety, 2010 National FAA Safety Team Representative of the Year, 2015 Inductee into the NAFI Hall of Fame and 2008 FAA Central Region CFI of the Year, three-time Master CFI Thomas P. Turner has been Lead Instructor for Bonanza pilot training program at the Beechcraft factory; production test pilot for engine modifications; aviation insurance underwriter; corporate pilot and safety expert; Captain in the United States Air Force; and contract course developer for Embry-Riddle Aeronautical University. He now directs the education and safety arm of a 9000-member pilots' organization. With over 4300 hours logged, including more than 2600 as an instructor. Tom writes, lectures and instructs extensively from his home at THE AIR CAPITAL--Wichita, Kansas. Subscribe to Tom's free FLYING LESSONS Weekly e-newsletter at http://mastery-flight-training.com.



Readback is your chance to tell us what you think about everything we have to say and do - including our PIREPs, articles, emails and previous issues of the On Approach newsletter.

I appreciate your work to make flying safer. Yes, that benefits your bottom-line, but benefits us, the flying public, and even more. Keep up the good work.

-- Joe Grimes Ex-USAF. Cessna 310

Please keep these going. Excellent information. Really like the anecdotes and statistics.

--Ed Thompson

Well done and please keep these newsletters coming.

--Tom Kilev

### **RESPONSES TO THOMAS P. TURNER'S** "FIT TO FLY"

Excellent summary of where we are: waiting for regulatory language from FAA. Giving the pilot the responsibility of "am I fit to fly" has always been the case, but now its importance has to be part of every preflight. Thanks for your emphasis.

-- Fred B McCashin VMD MSc

I think this one of the most important PIREPs I have seen, but it is important today for all pilots not just when the medical rule changes, if it does. You should treat your annual medical review from an AME like it is good only the second you walk out his door. Your medical condition could change minutes later and you won't see your AME for another year or two. You need to know what is in this PIREP every time you fly. If you are taking a new medication you need to know where you can go to find out if you can fly while taking it. There are several places you can find that answer, but the FAA Medical Office is the best place and they are there to help you, believe me. If you are not using the IMSAFE checklist every time you fly, you should be.

--Gene Hartman - FAA Master Pilot Awardee. 2009

Referencing the January 2017 article "Fit to Fly", the addition of the proposition: "I'm fit to fly if I could pass an FAA medical exam today." was brilliant. I have seen too many pilots press on with a condition that would ground them; but "I'll be able to pass my physical when it is due" attitude.

--Steve Stevenson, ASMEL, ATP

I have been a Professional Pilot for 47 years with 31000+ hours and still going strong as a Corporate Pilot and loving it. I have had many first class exams (2 a year for 20 years) then after retirement from the airlines one a year until a little problem arose that was fixed with a stent. (No heart attack). Probably the best thing that happened to me because I am now 50 lbs. lighter, more athletic than I was at

forty. No medication is necessary due to diet, supplements and exercise....The FAA has never made anybody healthier with their regulations and never will....Only you the pilot can make it safe!

-- John R White

#### **RESPONSES TO MARCI VERONIE'S** "SCALE DOWN TO STEP UP"

Just read the latest PIREP. As always, right on the money. If most would understand to buy the aircraft they CAN afford, then they would be happier. After being in aviation for 35+ years. I have seen it too many times as a pilot and as an A&P. I tell most to spend 3 months thinking about what they want an aircraft to do for them 80% of the time and then buy one for that purpose. Keep up the good work.

--Allen Sutphin

I bought a PA28 Turbo Dakota in 2009 instead of a Turbo Arrow. The insurance money and cheaper annuals has gone into fuel and a higher level of maintenance. It has allowed me to fly another 100 hours a year for Angel Flight and go places I never would have gone with a fancier airplane, Yahoo!!

--Ned Rapp

This article is exactly an example of my case. I have hours in both an Arrow and a Comanche, but when I decided to purchase a plane I chose a Cherokee 180 because of the initial and maintenance costs. I've got a four place plane with a good weight capacity, but just takes me

a little longer to get there. My type of flying is usually trips under 250 miles, so the time factor is not huge.

-- Gary Veenker

I wanted to tell you that you wrote a very concise and accurate piece. I really appreciated it. I currently fly an Aviat Husky that I keep and fly off of my farm. A friend had a low-hour Cessna 182 that he was selling for about 1/2 the price I could get for my Husky. Would I be scaling down to step up or scaling up to step up? A Cessna 182 has more power, more seating, more carrying capacity, and more speed. As I researched it, your company actually told me that my insurance costs for the Cessna 182 would be 1/2 of what I am currently paying for the Husky (for the same hull coverage). I was really surprised!

Another consideration is how familiar your local mechanic is with the type of aircraft you are considering purchasing. If you are considering a fabric airplane, such as the Husky, does your mechanic know how to make repairs to the fabric?

-- David Martin

The PIREP is right on. I think we all need to take a step back now and then and do an honest assessment of our wants as opposed to needs. It is human nature to try to keep upgrading our aircraft and automobiles, as well as electronics, both avionics and household items. It is often hard to face reality. It is a matter of pride I suppose.

--Tom Carter

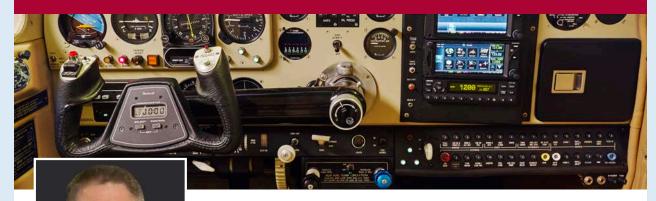
I feel you really nailed it on the "step down" article. This is why I felt I could afford single ownership in a Stinson 108-3. I have never regretted my decision and have enjoyed 17 years of "affordable" flying! My bumper sticker says, "This one's paid for".

--Henry Sedin

Good common sense PIREP that I holeheartedly agree with. I am the proud owner of a 1946 Ercoupe 415C and my maintenance costs are very low. Thanks. A satisfied AVEMCO member.

--Allen Lewis

## FREE AVEMCO WEBINAR: IFR MADE EASY



We're honored to announce a one-of-a-kind safety webinar, presented by ATP, Master Flight Instructor, Gary Reeves. He provides 10 real-life tips that make learning, teaching and flying IFR much safer and easier. Garv is the founder and Chief Safety Pilot for PilotSafety.org and MasterFlightTraining.com and is one of the country's foremost safety experts. In 2016, he was FAA Instructor of the Year Western Pacific Region with 6,000 hours as a charter pilot

and CFII in more than 50 types of aircraft. In one year alone, Gary issued more than 10,000 Wings credits in the FAA FAASTeam program, sponsored by Avemco. Attendance at this webinar will qualify you for an FAA Wings credit.

Join us on Wednesday May 24, 2017 at 8 p.m. ET - Stay tuned for registration details.

# **COMING TO A HANGAR NEAR YOU!**

The most fun we have all year is meeting our customers in person and strengthening our ties within the aviation community.

Avemco continues to be a proud sponsor of the Bonanza & Baron Pilot Training clinics. For a list of upcoming clinics click here\*. The courses are custom designed for pilots and owners of Bonanzas, Barons, Travel Airs, Twin Bonanzas and Dukes.

Avemco will be exhibiting at the following aviation tradeshows in 2017:

#### **MAY 6-7**

Great Alaska Aviation Gathering Ted Stevens Anchorage International Airport FedEx Maintenance Hangar Anchorage, AK Booth #54

#### **JULY 24-30**

EAA AirVenture Oshkosh, WI Booth #1159/160

#### **SEPTEMBER 8-9**

AOPA Fly In Norman (KOUN) OK Booth #53

#### **OCTOBER 6-7**

AOPA Fly In Groton (KGON) CT Booth #31

#### **OCTOBER 27-28**

AOPA Fly In Tampa (KTPF) FL Booth #44

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#### **SPRING 2017**

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