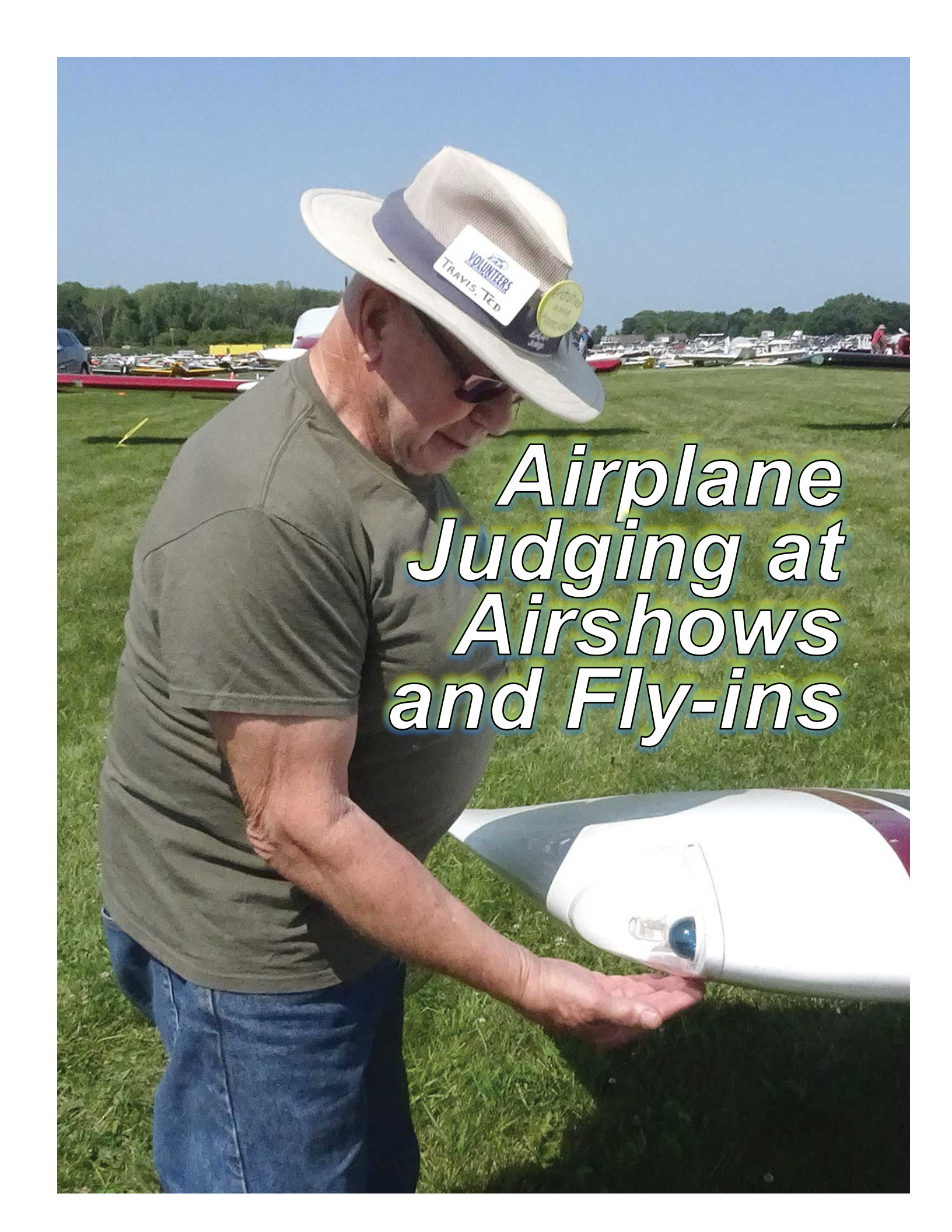


A man wearing a light-colored fedora-style hat with a "VOLUNTEERS" tag and "TRAVIS, TED" written on it, sunglasses, a green t-shirt, and blue jeans is looking down at a small model airplane. He is holding the tail section of the plane, which is white with a blue stripe and a blue propeller. The background shows a grassy field with many other model airplanes parked in rows under a clear blue sky.

Airplane Judging at Airshows and Fly-ins

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By Mike Jones

Cessna Pilots Magazine, originally published: September 2019

Fly-in air shows are simply fun. As pilots, we all enjoy showcasing our planes and our skills at unusual airports, hoping to schmooze with flying buddies new and old. At the top of the flying pinnacle are the shows at Sun-n-Fun in Florida and AirVenture at Oshkosh. Every year more than 3,000 of us fly to Sun-n-Fun and 10,000 clog the skies at Oshkosh. Just thinking about the throng of planes following the railroad at RIPON makes me smile.

Roughly 20% of the attendees register their planes for judging, hoping to win an honor or two. Some of the planes are amazing, with pedigrees and workmanship far beyond the ordinary. I even noodled about having my plane, N7591N, judged this year. Why not? New paint, new leather, all sorts of new geegaws. What's not to love?

Turns out, getting judged is harder than I thought. Who are these judges? What skills do they have? And, how do they do their job? Those are the questions CPA set out to answer for you.

Judges Background

I was surprised to learn that the judges are a very diverse group of hyper-experts. Most are pilots so they have a solid understanding of airmanship. Many are A&P mechanics with IA authorizations. The majority are male and many

have gray hair. But their specific backgrounds, expertise, interests and skills are quite varied.

Dale Still is the Chairman of Aircraft Judging at Sun-n-Fun. He's a lanky southern boy from Thomasville, NC who supervises about 50 judges. He came to SNF in 2004 and slept in a tent, volunteered in the metal shop and paid his dues. Eventually Dale spent three years judging homebuilts, then became



At Sun-n-Fun 2019 (L-R) David Wetcome, Chief Judge Dale Still, and Kevin Maser were on duty at the Judge's Hangar.

Homebuilt Judge Chairman, and now supervises all the judges at SNF. He's been volunteering for twelve years at SNF.

His office at SNF is a busy place. It's a small, cramped, tired semi-shack right next to the aircraft camping area. He uses a worn Formica desk with a huge grey file cabinet behind him.

Papers and forms are piled

everywhere. A constant stream of visitors ebbs and flows in and out — anybody know where I could find this part? Where is such-and-so? Is there any food? It goes on and on.

Burly David Wetcome is the SNF co-chair judge. He's a pilot from Sun City Center, FL and has been judging for eight years. He's finished a couple of homebuilts and resuscitated a basket-case Piper Clipper in just thirteen months. Most of his career has been in seaplanes.

I spoke with at least a dozen of the other judges at SNF including William Doty, Jim Doty, Mike Hoag, and Kevin Maser. Maser is from Kalamazoo and is affiliated with "Air Zoo" Museum there. Hoag, who judges at both SNF and at

OSH, is the “king of Aeroncas” with eight airframes in restoration and an L-3 Birdog he’s rebuilding from nothing but a data plate.

Zooming up to Wisconsin, the top of the judging pinnacle is a gentle, slender engineer named Bob Reece who is the Chairman of Aircraft Judging. I found him in the tidy, snack-filled Homebuilt Judging offices in the middle of Homebuilt camping. Bob has been volunteering and judging at Oshkosh for fifty years. He bought a 1946 Taylorcraft but couldn’t get the maintenance quality he wanted so he studied for eight years, on his own, at night and weekends, while still working at his day job. “When I went to get my A&P license, I had over 6,000 hours working on airplanes,” Reece recalls, and he has been working on them ever since.



Bob Reece has been volunteering at AirVenture for nearly five decades, and writes the Judging Standards Manual.

The Homebuilt judges allowed me to follow them around like a lonely puppy. I worked with Charles Pitman, Greg Buller, Steve Lund, Ted Travis and Australian John Davis. Each fellow had fascinating stories. For example, Ted Travis has been a Homebuilt judge for 35 years. He's an A&P, IA, and a pilot for the Michigan State Police, but his favorite day job was driving a submarine in the U.S. Navy. Their commitment to judging is profound: John Davis said, “I don’t know what I do for 50 weeks of the year, but I know I’ll always be in Oshkosh in the last two weeks of July!”

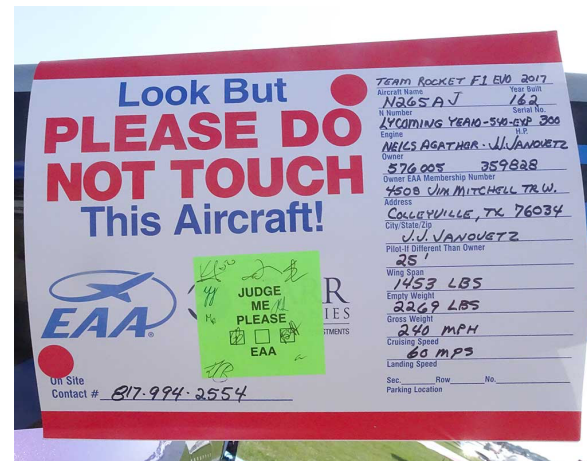
I also spent a lively hour with Jerry Brown, Chief Judge for Vintage Aircraft, and perhaps ten of his judges. Jerry is a mechanical engineer who started flying in 1967. He became interested in antique airplanes when he discovered a Waco needing restoration. He’s been the Vintage chief judge since 2013 and runs his operation from a snappy new office on the Vintage campgrounds.

Among the Vintage judges, I spent time with John Goodloe and Dillon Barron. Goodlow is an American Airlines captain based in Dallas. Barron is from Hannibal, Missouri and at age 24 he's the youngest member of his family's business, which restores vintage Cessna 195s. Barron won a "Grand Champion award" for his Cessna 172 a couple years ago, before he started judging.

These people know their airplanes.

The Judging Standards

The Judging Standards Manual is a 48-page booklet which sets the guidelines for the judges to follow. The Manual is the official standard at Oshkosh and is used, more or less, at most other U.S. airshows. Reece writes it and works hard to keep it updated. At SNF they adhere to the same standards and consider SNF to be "the tune-up event" for competitors going to OSH.



Every registered show plane sports a jaunty tag on the spinner with all the relevant details of the airplane. The green sticker is the judging tag and shows the initials of the judges which have inspected the plane. A top airplane may be inspected by as many as 20 judges before a final score is rendered.



Greg Buller is an AirVenture Homebuilt judge and knows RV aircraft can develop a tear in the aluminum wheel fairings; here he inspects one fairing looking for a strain-release design.

The homebuilt group is the largest at Oshkosh, with 200+ entries divided into two categories: kit-built versus plans-built planes. In the Vintage area there are three sub-categories: the Antiques (built prior to September 1, 1945), the Classics (from Antique through 1955), and the Contemporary (after Classics and through 1970). There also are the multinational warbird group, the seaplane group, the rotorcraft group and the ultralight group. Sun-n-Fun adds an additional

“custom” airplane category, which are certificated airplanes which have been improved by the owner.

“Once you start customizing and move away from authentic, you can make a great airplane but it’s not historically correct,” Still cautions. That said, a 1953 Piper Pacer, named Miss Pearl, won over 50 National Championships while carrying 95 different FAA-approved modifications.

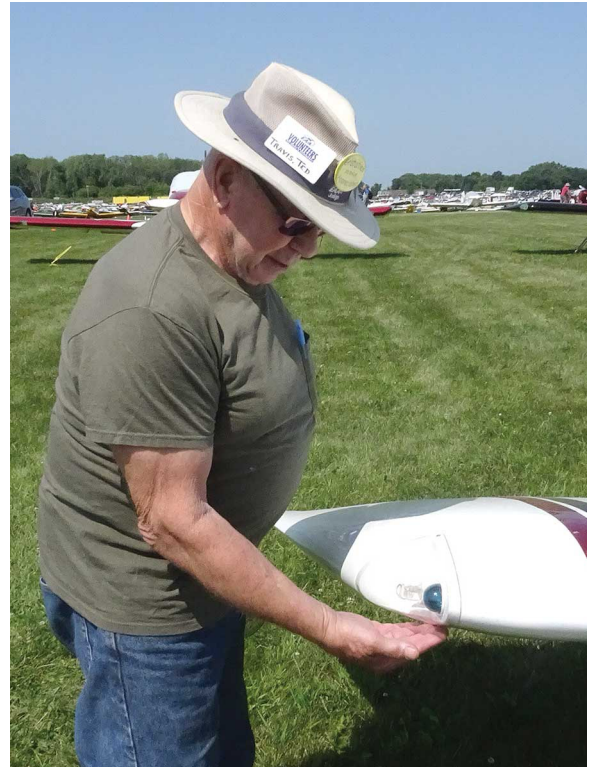
Recruiting Judges

While Sun-n-Fun has about 50 judges, Reece deploys an army of about 170 judges across all the categories to judge thousands of planes. For example, Reece has 22 judges just for homebuilts because the planes are so numerous. Jerry Brown uses 35 make-and-model experts to improve the quality of the judging in the Oshkosh Vintage section. “Mostly they’re nuts-and-bolts craftsmen,” Brown said.

Finding judges is hard but keeping them is relatively easy. Judging is an avocation which takes a long time to learn. It also takes cash to appear at all the shows and events.

“Most younger guys can’t do it because there’s no money in it,” Still explains. “By definition the judges mostly are retired people, and they judge for a decade or two until the clock runs out on them.”

David Wetcome agrees. “The #1 criteria for a judge is mechanical savvy,” he said, “There’s stuff you just have to know and can’t get in a classroom.” It



Judge Ted Travis demonstrates his technique to judge the fit-and-finish of an assembly, using his fingertips to feel the smoothness. “Your fingers can see things your eyes can’t,” he told me, “and you don’t have to get down on your knees!”

appears the crucial stuff is taught by the older judges, an oral tradition of skills and information.

Do people ever disagree with the judges and their expertise? Sometimes, but Reece has a simple answer. “I keep the judge’s qualification sheet; it shows their experience. If an owner thinks that judge isn’t qualified, I bring them in here and say, I want you to read this on that gentleman. Usually when they get through that, they’re kinda redfaced.”

Eagle Eyes

According to Oshkosh’s Brown, in the Vintage category, the judges seek authenticity and craftsmanship. They don’t care if the plane is ugly, as long as it came from the factory ugly.

Judges improve over time. An experienced judge knows what to look for while a new judge might take ten minutes or more on each airplane. Within a category, the judges know where mistakes are made and focus on those weak-spots.

While the judging is subjective, the individual variations between judges wash out after twenty judges look at each airplane. They’re looking at the fit and finish of the aluminum, the quality of the interior, any welding, the riveting, and certainly the painting.



On a sunny summer day in Wisconsin, climbing around airplanes can be hot work. Charles Pitman and Greg Buller examine a wing root fairing. Notice this airplane has a canvas cockpit cover in-place; the inability to see the interior will not help the scores for this otherwise beautiful airplane.

“If it’s a dope-and-fabric plane we look for straight tapes. We look to see if there is too much paint, can we see the weave of the fabric? If you can, that’s proper,” Reece said. “There’s all kinds of things we look at.”

The judges probably fuss the most over homebuilts, because there is no factory standard. “Homebuilts are the most challenging to judge. And the most fun, and the most popular,” Still explains. “The [Van’s] RV was the greatest and the worst thing to happen to homebuilts. It’s great because there are so many of them. But it’s bad because they’re all the same!”



At Sun-n-Fun in April, Jim Doty used the EAA Judging Manual to evaluate a beautiful red Stinson. Jim’s brother William also is a judge in the Vintage aircraft division.

One authenticity exception is allowed: improvements for safety. Nobody is going to get dinged for improving brakes, installing ADSB or using safer shoulder harnesses. “But if you put a flat panel display into an antique, it might be a problem,” laughs SNF’s Still.

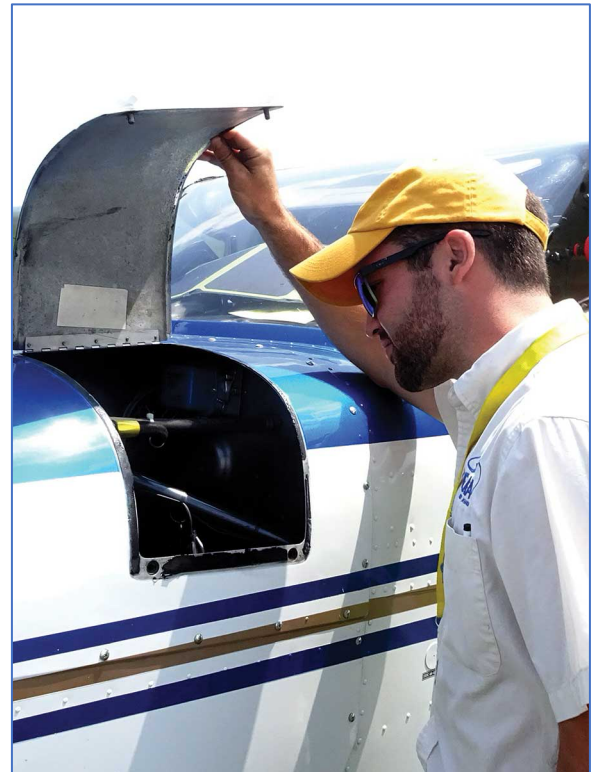
The Judging Process

At Oshkosh, the registration computer talks to the judging software system. Pilots bringing show planes to Oshkosh simply note where they parked on their registration form. That data is automatically loaded onto Hewlett Packard 4390 handhelds used by the judges. Sun-n-Fun uses a similar system, but paper-based.

Each day the judges fan out in golf carts to find their targets, indicated by a green sticker on a highly visible card slung over each prop. Brown noted, “Sometimes just finding the plane is the hardest part of the job.”

Judges work in groups of at least two and sometimes up to five. Usually they wear a badge or name tag which identifies them as a judge. While inspecting a plane, they mostly use their eyes, and sometimes their fingertips to feel the fit-and-finish of the restoration. They do not remove cowlings or even open a door, although they will pop an oil-filler hatch. I watched closely, and they do not talk about scoring a particular airplane but they will discuss what they see on it. According to Reece, a winning score could be an 85 or 86, out of 90. Numerous planes score in the 50s and 60s.

The “A” Form is the scorecard for homebuilt planes; nine criteria are used when judging a candidate. Each item is rated using a numeric score from one to ten, so 90 points would be a perfect airplane. The scores are recorded on the “A” Form if they’re using paper or on the HP 4390 if they’re computerized. Vintage aircraft have a different scorecard with eight criteria; warbirds use nine, and seaplanes, rotorcraft and ultralights each use six.



Judge Dillon Barron won't open a door or remove a cowling, but popping an oil filler hatch is acceptable. Perring through the hatch he appraises the condition of the engine. Barron is an expert on Cessnas, having won a Grand Champion award for a Cessna 172 restoration several years ago.



Oshkosh Judge Steve Lund gets on his hands and knees to inspect a tail-wheel assembly on a beautifully-painted homebuilt.

Once a judge has seen an airplane, the judge signs the prop card. It takes at least three judges to score each plane. As the week goes on and the top-scoring airplanes cluster together in points, the best aircraft may have 20 signatures on it.

Handling Controversies

Controversies are unavoidable. Part of the problem is that people think the judges are comparing all the planes on the ramp, but they're not: they're judging to the standard. "If you're the only plane in a category at an event, that doesn't mean you're going home with the blue ribbon if you're not up the standard," Sun-n-Fun's Still explained. "If you're the only seaplane at the event, you don't win unless the points add up."

Scores are secret. As near as I can tell, no judge at any show tells owners the scores from their airplane. Reece explained that years ago, when new homebuilt types started becoming popular, "the guys would park together in one area and they'd start talking to each other, and 'my plane is a 63' and 'my plane got a 78' and they damn near had fist-fights on the field. So we elected not to share scores anymore." Reece shows owners blank A-forms and explains the criteria, but no longer shares raw scores.

"You get pretty negative looking at these planes. These are the best planes in the world, and here we are, looking for all the dumb stuff, little chicken-* things only we know to look for."**

— Ted Travis, Oshkosh Homebuilt Judge

Sometimes the owners want to hear the judges' thinking so they can improve their airplane for next year. "If they want a detailed review of their airplane, my judges bring the person to the office here," Reece explains. "We'll have a conversation to see if they can take constructive criticism. Some people just can't."

Oddly, corruption appears to be nonexistent. "In 50 years, nobody has ever offered me money," Reece said, somewhat amazed. "It says something about pilots, they're good, honest square people. Pilots in general, they've got a different attitude towards aviation and rules, and we operate under the rules. I've never met anyone who was dishonest."

Suggestions for Competitors

The judging standards vary slightly by the category of airplane and the show's local rules. But there are a few simple guidelines which help a quality airplane to be noticed.

Since vintage airplanes and warbirds are judged on authenticity, pilots should research the history of the aircraft and bring along a "show book" with aircraft information, old photos, documents from the factory, logbooks and similar bits of history.

As much as possible, restore the airplane to factory-new condition. Authenticity includes the paint, the engine make-and-model, placards, and accessories. Use original colors and original color schemes — some of which look very dated to my eyes — using authentic practices and, of course, historically suitable materials.

Take your time. In all the discussions I observed with these judges, great workmanship generates higher scores.

Make your airplane accessible so the judges can see all your work. If a plane is moving towards the top of the scoring airplanes and nobody has seen

the engine compartment or inside the cabin, it will impair your scores. Don't install a canvas sun-cover because the judges won't remove it. They also will not remove engine cowlings, unscrew inspection ports or even open a door, although they will pop open an oil-filler hatch.

Make yourself available, too. Judges like to hear the story of your airplane. Plus, the chief judge may send a group of judges to find you. One chief reported sending six or more judges out to an airplane to meet an owner. In a close contest between high-scoring airplanes, it makes sense to give your airplane every chance to get extra points.



Judging airplanes is all about tiny details. Flaws can be almost imperceptible, including (1) slightly uneven metalworking around a cowl latch or (2) a small amount of uneven fiberglass work underneath the elevator hinges, completely invisible to the casual visitor.

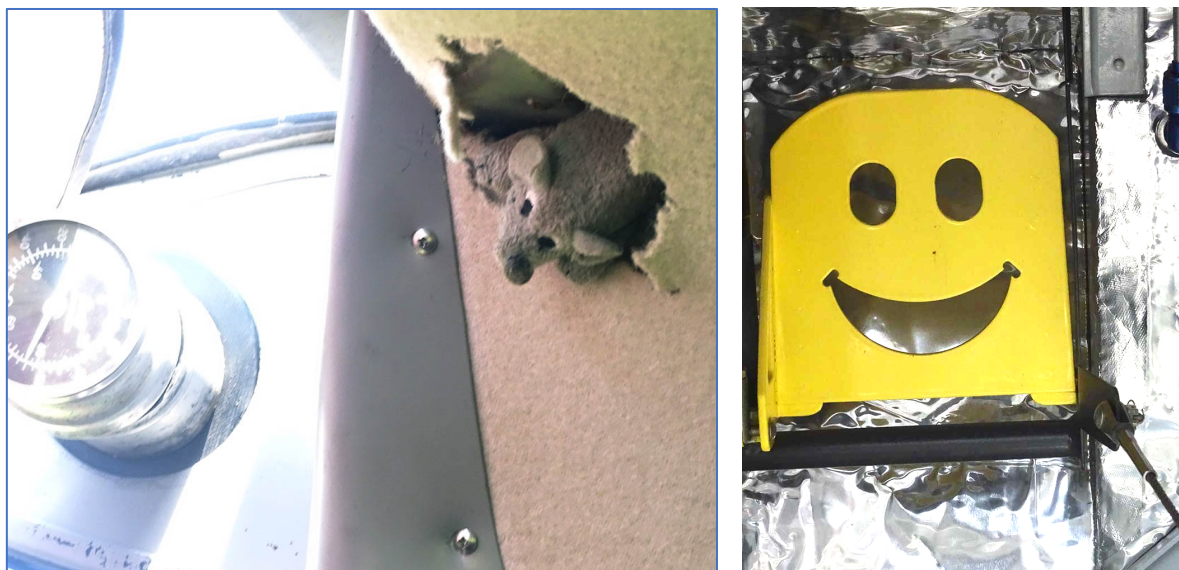
One final note: “Miss Pearl” aside, adding STC after STC to an airframe usually is not a winning strategy because most of those upgrades will not be authentic. Outside of the “custom” category at Sun-n-Fun, wild and wacky innovations are not going to score well.

And the Winner Is...

At a big airshow with the normal seven or eight categories, the judges could award hundreds of prizes. There are 103 possible awards in the Vintage categories, for example, but most years there aren't enough planes to fill all the

slots. “Usually we end up presenting 50-55 awards on a typical year,” Brown said, a little sadly.

Time is racing by, making it harder on the planes and the judges. “The quality of the airplanes is getting better,” Still said, “but the quantity is reducing. World War I planes are virtually gone from the ramp.”



Some airplanes are restorations in progress, such as this Cessna which had whimsical visitor climbing out of the headliner. Restoring airplanes is so long, tedious and hard, it helps to have a sense of humor as demonstrated by these rudder pedals, deep inside the cockpit.

Reece smiles at a question about the perfect airplane. “We’ve had one almost perfect, it was called Symmetry, a little glass plane built out in California by a guy who worked for Burt Rutan,” he reminisced. “It was the highest scoring airplane we’ve ever had. He built it on his own. It was as perfect as you could tell, the guys found one little thing that they questioned on it, otherwise it would have scored 90. But he was up there like 88 or 89, real high, and it was a pleasure to see that airplane. And he’s never been back! I’m telling you, he did a fantastic job, workmanship and all, we still talk about it, see if we can find something that will measure up to that.

As for getting old ’91N a Gold Medal, I guess it’s just not in the cards. As handsome and capable as my Centurion might be, she’s just not old enough,

weird enough or warbird-enough to fit the usual categories. I can handle that. She may not win awards but she's perfect for me.

About the Author

Based in Pinehurst, NC — the golf capital of the world — Mike Jones is a commercial-rated Cessna owner who's been flying for more than two decades. He was discouraged none of the Oshkosh judges wanted to walk two miles to inspect his Centurion but figures if he lives long enough the Vintage category will climb to 1979 and he'll get to park a whole lot closer.

