

Perfect timing

Finishing touches on the Catch-A-Cardinal

BY JULIE K. BOATMAN

This is not about an airplane at all.

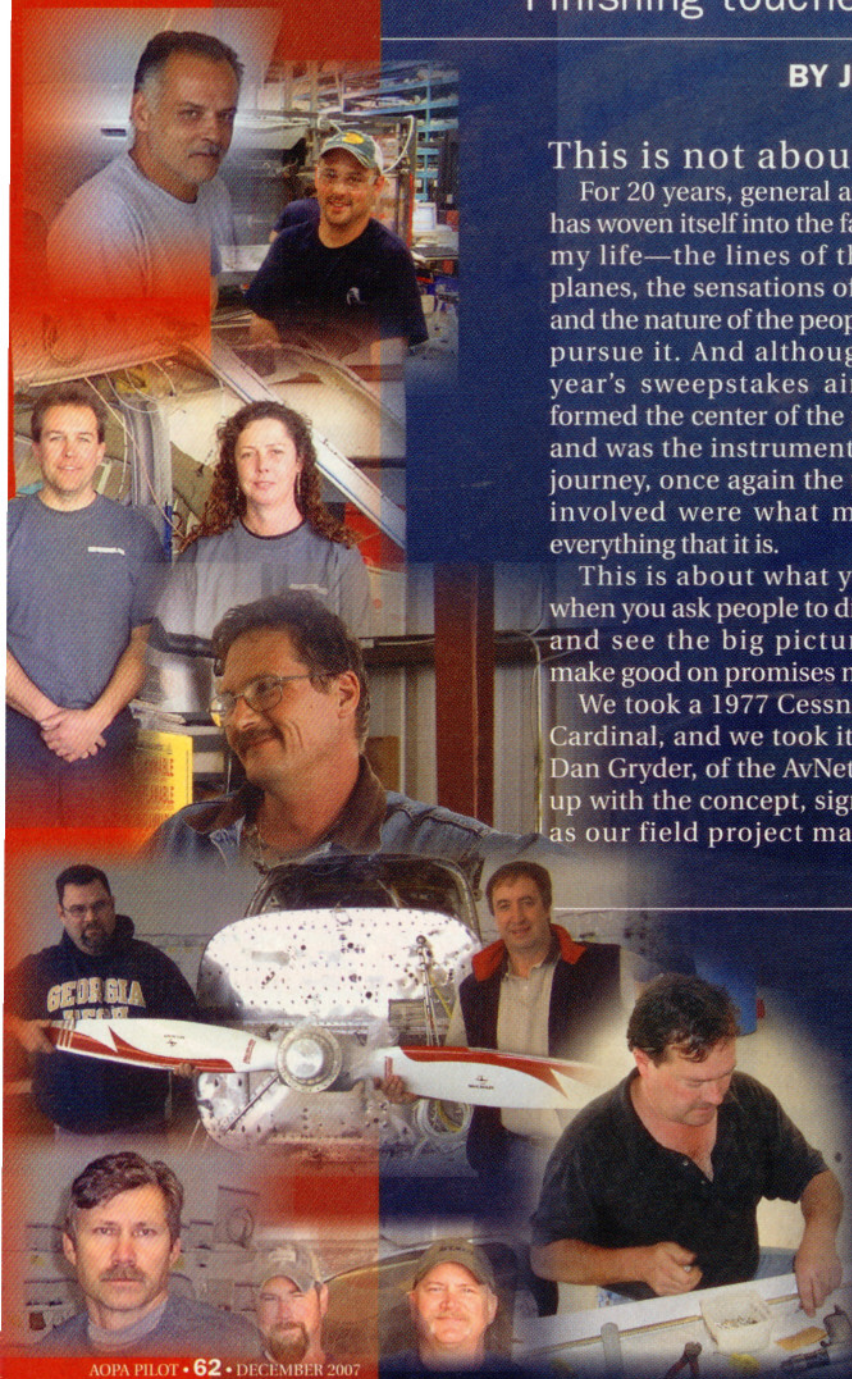
For 20 years, general aviation has woven itself into the fabric of my life—the lines of the airplanes, the sensations of flight, and the nature of the people who pursue it. And although this year's sweepstakes airplane formed the center of the project and was the instrument of the journey, once again the people involved were what made it everything that it is.

This is about what you get when you ask people to dig deep and see the big picture and make good on promises made.

We took a 1977 Cessna 177B Cardinal, and we took it apart. Dan Gryder, of the AvNet, came up with the concept, signed on as our field project manager,

and coordinated the shops and technicians that would complete the work. He served as a second set of eyes on everything touching the airplane, while I orchestrated the flow of parts and accessories in and out of Gryder's hangar in Griffin, Georgia, and worked out the overall plan for the airplane.

We planned and completed five major work packages on the Catch-A-Cardinal, and what seemed like a thousand small ones. We started with airframe disassembly and replacement or refurbishment of parts. The exterior components went into stripping and priming in preparation for the fresh coats of paint applied next. The instrument panel







The Cardinal's new instrument panel is stocked with some of the best avionics out there—the equipment we've returned to time and again.

and avionics underwent a comprehensive upgrade—along with replacement of every inch of wiring in the airplane. The factory-overhauled engine went into a firewall-forward compartment full of new or overhauled accessories. The tired interior came out, and new leather upholstery and plastic trim went in.

And 78 contributing aviation businesses and hundreds of individuals—many of them longtime AOPA mem-

bers—donated or discounted products and services to put more than \$350,000 of value into the finished product.

The road

One day, back in late December 2006, I hit the first in a series of major panic attacks. The airplane that my husband and I had flown in from Dallas just seven weeks prior, N18729, was in nearly 500 pieces—and its fuselage stripped to the firewall. I stared at it

all as it sat in Gryder's hangar. Each part had been numbered and catalogued, but I felt a sense of creeping doom. What if this didn't work? Could I go out and find another airplane and start over? The clock ticked like a drumbeat.

For the first time—but certainly not the last during this project—I reached down deep within for a kernel of hope and a grain of trust, and moved forward.

For an entire year the people at Griffin kept after it, even when it got tough, even when it got ugly.



TOP: MIKE FIZER (LEFT); JIM WILSON (RIGHT)



AFTER



BEFORE

On these pages, we're showing just a handful of the folks who were instrumental in making this year's project a success.

A few weeks later, after we'd towed the fuselage down to Florida for its electrical and avionics systems work, another watershed event occurred: My first installment in the sweepstakes series in AOPA Pilot hit the streets. I was justifiably proud—the pictures of the airplane and the people from the family of shops that would do the majority of the work on it laid the foundation for the rest of the story.

But I hadn't started to say "thank you" in public yet. And one of the most important things I came to learn was that one public thank you from AOPA means more than a hundred in private.

I started the week after that February issue came out. And I have just one more opportunity right here to tell the stories behind the story. To each person who touched the project, from spinner to tail cone, thank you.

Getting specific

In any massive undertaking, over the long haul you have certain people and companies that stand out. Gryder and I came to call these folks our "A players." This isn't Little League, where everyone gets a blue ribbon just for showing up. There are a handful of people who have either helped in an out-of-the-park way with this particular sweepstakes project, or have been supportive for several of these projects in a row.

I'll start with one of our unsung heroes: Todd Thaxton. Thaxton works for Ron Powers at Atlanta Air Recovery & Storage, the aircraft salvage and storage facility just off the approach end of Runway 14 at Griffin-Spalding County Airport in Griffin, Georgia (if you land short, it's an easier pickup for them). Thaxton served as an overseeing inspector for the project, but also was one of the men responsible for getting the airplane to the Sun 'n Fun fly-in back in April—the fuselage went down on a trailer! He put the airplane on his priority list whenever we needed him: late at night, on a Sunday...literally.

(For those of you who saw the airplane on display at Lakeland—it sure looked like a whole airplane then, minus the interior. Well, the Cardinal was basically a Tinker Toy at that stage. The team had it flying eight weeks later.)

During that show, and the others to follow, the Cardinal's battery was put through its paces—powering the avionics off and on throughout the day, and trickling back to full strength on a donated BatteryMindR at night. I had my doubts when I went to fire up the airplane following EAA AirVenture last July (I had a power cart from Orion Flight Services standing by), but the Gill battery took the abuse and leapt into action.

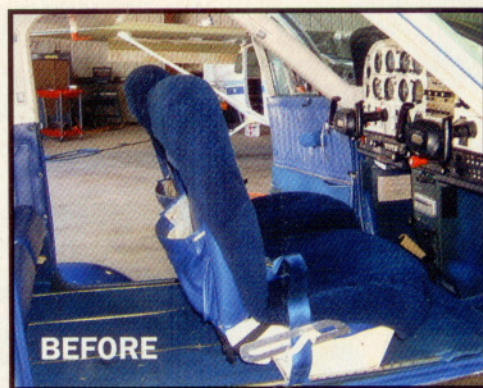
Speaking of starts, hats off to Sky-Tec and Plane-Power for the starter and alternator that have yet to skip a beat (and saved us on useful load, always a trick in a four-seat single), and American Propeller for a gorgeous prop to keep us cool. And to Micro AeroDynamics' vortex generators for being an easy and effective safety upgrade that was simple for our team to execute.

We have a bevy of new stuff in the instrument panel, and I'm really happy with the results. Because we were breaking in an engine for much of the hot summer and fall, I spent an inordinate amount of time looking at the J.P. Instruments EDM-800 graphic engine monitor, and then downloading and poring over the massive amount of data. The little voice of "traffic" from the Garmin GTX 330 transponder was a helpful reminder to be vigilant and on the lookout—and reams of obstacle





AFTER



BEFORE

The buttery leather interior will surround the winner with style and comfort. Janelle (below left) and Lisa Hammer (below center) of Aerodesigns, created the interior.



data on the GNS 430Ws and GMX200 kept us in the clear, especially during the legs we flew just above the maximum elevation figures. The Bendix/King KI 525 horizontal situation indicator made on-course headings a no-brainer—and was the only piece of equipment I didn't have to crack an instruction manual to use. Two thumbs up for that!

But the hands-down kudos in the electronics gee-whiz department goes to my best-est buddy, the S-Tec Fifty-Five X autopilot. Thanks to Greg Plantz for talking me into the upgrade. My minimalist leanings told me to install a more modest model, but the call of electric trim (not an option on the original Cardinal) meant we went for the Fifty-Five X. Along with the 430Ws (with Wide Area Augmentation System), it made hands-off GPS approaches with vertical guidance possible. It sure made my solo trip up the East Coast in the post-cold-front bumps prior to AOPA Expo a lot easier. The only thing it couldn't do was hand me a Diet Coke from the cooler in back.

After nearly 70 hours of flight time, the basically bulletproof O-360-A1F6 provided by Lycoming just keeps humming along. We had a dynamic balance performed on the propeller courtesy of Power Flow Systems to weed out any latent vibration—our winner deserves a smooth ride.

The core team

Although on paper the Cessna Aircraft Company might appear to be a mere parts supplier to the project, to assume that would be a big mistake. At the beginning of the project, I received an e-mail from Jack Pelton (the company's head honcho) green-lighting Cessna's participation in the sweepstakes. And that's been the longest green I've ever seen. He gave Kelly Reich and Mike Tharp in Parts Distribution the authority to keep an open purchase order on the airplane all year long. According to another e-mail, I thought we had sent Cessna our last parts order in February. I'm a real comedian. We received the last shipment in September. This project would not have been possible without the commitment and can-do attitude these folks display. I totaled it up, and the retail value of the parts Cessna donated for the airplane is in excess of \$50,000.

But the core team consisted of many players. Keith and Debbie Petersen and Paul Millner, of the Cardinal Flyers On-

line type club, were only a phone call or an e-mail away through the course of the project. And Jim Rhoads from Flight1 Software created an amazing Cardinal add-on for Microsoft Flight Simulator.

When Aerodesigns signed on as our interior shop back in March, Janelle and Lisa Hammer had no idea they would end up in Alva, Oklahoma, for the rest of the job. But over the span of six months that included a move of their company and households, the mother-daughter team produced first a gorgeous pair of front seats, and then the rest of the leather and carpeted interior for the airplane. Working in conjunction with Vantage Plane Plastics and Mayfield Aviation Leather, they hit every milestone on time—no easy task in a project with so many moving targets.

And then there's the Griffin labor team: Advanced Aircraft Refinishers, Air Wrench, Freeman's Just Plane Hardware, Precision Avionics, Classic Aircraft Maintenance, and Don's Dream Machines. At our launch party on November 2, 2006, none of us had any idea what we were really signing up for. None. No clue. I would have stayed home and baked some really great pastries instead, or maybe practiced the guitar some more.

But for an entire year, the people at Griffin kept after it, even when it got tough, even when it got ugly.

Don's Dream Machines' Jeff Swords created our firewall forward installation—taking a pristine powerplant from Lycoming and supplementing it with fixtures and accessories to form the heart of the airplane. Classic Aircraft Maintenance's Danny Rexroad spearheaded our parts inventory and disassembly, and worked through first flight to bring the airframe back to life.

The crew at Air Wrench, led by Earl Clements (my co-pilot on the cross-country flight to Oshkosh), started working on the airplane on November 3, 2006, and was on hand to help us address the last of the aircraft squawks a year later. Anya Cook and Brian Hubbard (rigging experts), Larry Gobble (sheet-metal magician), Troy Fordham, Rich Handley, and Kevin Perkins all deserve a handshake for constant efforts. Most of these technicians have extensive training and experience performing maintenance for a major Atlanta-based airline, but they have a passion for GA airplanes.

Precision Avionics' Scotty Collins and Jackie Black jumped right in to complete avionics work as the airplane came together—major tasks such as installing the autopilot servos and connecting the EDM-800 to the engine. It takes a certain style of patience to Twister yourself up into the tight space behind an instrument panel and make sure the blue wire goes to the right breaker, but these guys stayed with it. Often Collins was back at the shop in the evenings after attending his twin daughters' softball games. He knows how to do what it takes.

Tom Holt of Freeman's Just Plane Hardware deserves special recognition. Hardware is probably the best metaphor for what's important during an aircraft refurbishment project. Everything in an airplane ties together somehow—often with an AN4-7A bolt and an AN960-416 washer. If you don't have both at the right time, the project comes to a complete halt. Normally, if it's after hours or on a weekend, forget it. You're through until Monday. Holt was on site for us *anytime* we needed hardware, or an extra hand, from day one through day 365. His unwavering support made the aggressive timeline we set possible. He also kept me laughing during the hard times.

The Tony Award

Tony Dias broke ground on Advanced Aircraft Refinishers, a state-of-the-art aircraft paint facility focused on turbine aircraft, at roughly the same time we completed the prepurchase inspection on the Cardinal in fall 2006. Dias not only saw the opportunity in the Catch-A-Cardinal project, but he also agreed to paint the airplane while it was disassembled—and that's just not normally done. With cooperative effort from Craig Barnett of Scheme Designers (who designed the Cardinal's striking paint scheme and has been a great help to the projects over the years), Dias figured out how to bring the Cardinal through the stages of stripping, etching, lap sealing, priming, and painting while the airframe was still in more than 280 pieces.

The gorgeous paint application you witnessed all summer at shows and on tour is the product of Dias's efforts—and he didn't even consider it finished at the time. He saved the final detailing for late this fall, so that the winner gets a pristine airplane. His company is barely a year old, and his donation in labor and materials was in excess of \$35,000.



Lycoming provided the factory overhauled engine—plus chrome valve covers—for this 1977 Cessna Cardinal. A parts catalog full of new components from Cessna went into the airframe.

But there's something more, and that's the spirit Dias has mustered consistently through the project, through his own headaches with personnel, and launching a paint business in "green" times. During my stays in Griffin, I lived at the airport—and I knew if I needed anything, chances were good not only that Dias would help, but that he was already on site. An amazing individual, an amazing shop. Thank you, Tony.

More for the winner

There's no question that the Catch-A-Cardinal will bring a unique value to the winner. In addition to the parts, services, and products that have gone into the airplane and have been mentioned already, we have a host of others.

To help manage the Cardinal's generous (and sail-like) doors, we have a Door Steward kit from Mtn View Aviation. We're also installing Monarch umbrella fuel caps to ward off water contamination. The winner will receive the latest Lowrance handheld GPS, the 600C, to supplement navigation, plus a subscription to Jeppesen's navdata services to get them started, and an SP-200 handheld VHF nav/com transceiver courtesy of Sporty's Pilot Shop.

Bruce's Custom Covers has created a special red, black, and white cover to match the airplane's exterior. A set of four Bose headsets will protect hearing and provide clear communications. And a Cole Clarifier from One Wink LLC has been installed on the altimeter to make the digits in the Kollsman window more readable for the pilot.

Finally, the winner gets a treat, courtesy of several businesses at Griffin. You'll be hosted by Gryder for whatever transition training you need—a fresh flight review and an instrument proficiency check if called for—at the AvNet hangar. All ground transportation, meals, and bluegrass are provided. Need a new medical? Dr. James Gore, local aviation medical examiner and pilot, has donated a complete medical to the winner. The Cardinal will come with an annual and IFR certification and system checks, thanks to Air Wrench and Precision Avionics.

One more

When I called Dan Gryder for help in tracking down an airplane for this project in September 2006, he answered me in his usual fashion: with a string of ideas, one crazier than the next. But those ideas proved he was listening. He knew the problem with a sweepstakes airplane is that we want to give away the very best, and we want to know everything about the airplane before we give it away—so he suggested we take it apart.

Frankly, I thought he was nuts. But he's also an innovator, someone who not only won't take no for an answer, but who actively seeks out the truth, painful as it may be. For his hundreds of hours of labor and enduring focus on the goal, thank you, Dan. And thank you to his family, Darla, Drew, and Dylan, for their support throughout: You always made me feel at home.

The project was in every sense a personal journey for me—as well as a public

one. Like the sweepstakes project managers who have come before me and paved the way, I traveled a long magenta line to get to this point. I grew as a pilot and as a person: The scars are deep and the memories are priceless.

Back in March, a friend stopped by the hangar in Georgia to pick me up for dinner. I was sitting in the airplane, lit from inside by a portable work light, on the floorboard that was Clecoed into place. I was contemplating the schedule, the parts we still needed, and the grand scheme of things, when she came to find me. She said how much she wanted the airplane, ran her hand over the fuselage, and then looked me in the eye. "How are you going to let it go?"

"I don't know," I answered. "When it's time, I'll be ready."

After 20 years of AOPA membership and watching the sweepstakes from the outside—and for the last seven years, from the inside—I realize one critical thing. This project was never about the airplane. The Catch-A-Cardinal project was about taking chances, and seizing opportunities. Every once in a while you have a miss, and those hurt, but they're just part of overall success. People willing to take risks made our result that much better. At times, it was also about those same people sticking with the program and staying motivated, even when it seemed there was no energy left.

We went above and beyond with this project, from just about every angle, and we could not have done it without seeing the big picture at each step, and listening for the truth amidst all the data, opinions, motives, and beliefs.

I wasn't ready to let go just a few months ago—there was still more to learn. But I'm there now. Your Cardinal's all set for you, and the timing? It's perfect.

Thank you.

AOPA

E-mail the author at julie.boatman@aopa.org.

INTERACTIVE ►

AOPA PILOT ONLINE



To see the latest slide show from the Cardinal's final days in the shop, visit *AOPA Pilot Online*.
www.aopa.org/pilot/sweeps/0712



CONTRIBUTORS

AOPA thanks these companies that donated or discounted services to refurbish the 2007 Catch-A-Cardinal Sweepstakes airplane.



PROJECT CONSULTING

The AvNet
678-688-7069
www.theaviatornetwork.com

EXTERIOR/AIRFRAME

Aircraft cover:

Bruce's Custom Covers
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800-635-5631, 770-227-2602
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Engine preheat:

Tanis Aircraft Products
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CONTRIBUTORS

Factory overhauled engine:

Lycoming Engines
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www.lycoming.com

Propeller, governor overhaul, and propeller paint:

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