“Best buy in the sky!”

Timeless and Triumphant—
The Taylorcraft "Twosome"
Sometimes there are hidden treasures tucked quietly away in the south 40 at EAA AirVenture Oshkosh, far away from the milling crowds. That’s where Joel Severinghaus’ Taylorcraft BC12-D was tied down this past summer, and it beckoned to me as I wandered through the field. It was conspicuous by its very presence, with its fresh ivory paint glowing under the midday sun and its bright blue trim reflecting the sky above. The judges found it alluring, as well, and awarded it a Classic Bronze Lindy (Class 1, 0-80 hp) trophy.

NC96130 (s/n 8430) was manufactured in 1946 at the Taylorcraft Aviation Corporation factory in Alliance, Ohio. It was a turbulent year for Taylorcraft, replete with several factory fires, storm damages, and financial troubles. The company filed bankruptcy in early November, just six months after NC96130 rolled off the production line and onto the ramp. NC96130’s own saga began on May 23, 1946, when its airworthiness certificate was issued. Six days later, it flew to its new home in Kansas and later went to owners in Missouri. It eventually made its way to several different owners in Minnesota—including a flying club—and in North Dakota, as well. This particular Taylorcraft, like the company itself, had its own share of hardship—including ground loops, wind damage, and a hand-propping incident. Then in August 2005, Severinghaus of Des Moines, Iowa, became its new caretaker.

**Bit o’ History**

Chet Peek, aviation historian and author, provides a glimpse back in time regarding the development of the Taylorcraft BC12-D. He shares insights into the design, manufacturing process, and the challenges faced by the company during its turbulent years. The BC12-D represents a significant milestone in aviation history, marking the advancement of general aviation with its innovative features and design. Through his detailed accounts, Peek offers a vivid portrayal of the BC12-D’s evolution, capturing the spirit of perseverance and innovation that defined early aviation.

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*“The new straight stringers allow you to see the structure of the airframe just beneath the fabric—they’re like cheekbones on a supermodel . . .”*  
— Joel Severinghaus
In 1931, when C.G. Taylor married his E-2 Cub to Continental’s new A-40 engine, he made personal flying safe and affordable. Of course, you couldn’t fly very fast, or very far, or very high, but you could get in the air. A few short years later, Taylor formed a new company and built his famous Taylorcraft. It offered side-by-side seating, wheel control, closed-cabin comfort, and would cruise at 100 mph with only 65 hp. Finally, a lightplane could be used for business trips or even vacation jaunts. Taylor’s Cub made private flying possible; his Taylorcraft made it practical.

The side-by-side BC12-D (model B, Continental engine, 1200 pounds gross weight) was dubbed the “Two-some” and had numerous improvements over the prewar model BC-12. It had larger tail surfaces like Taylorcraft’s earlier D model, and the rudder and elevators had only two hinges (the prewar model had three). The BC12-D also had a one-piece windshield, and by February 1946, stamped aluminum wing ribs and fabric retainer clip wire were used—thereby eliminating the need for costly rib building and rib stitching. Three versions were available—the Standard, Custom, and Deluxe. Powered by a Continental A-65-8 engine, the airplane had a maximum cruising speed of 105 mph and a landing speed of 38 mph. It carried 50 pounds of baggage behind the seat and had a fuel capacity of 18 gallons, providing a range of 500 miles. Like its predecessors, the BC12-D had a NACA 23012 semisymmetrical airfoil, as opposed to the flat-bottomed Clark Y airfoil used on many Pipers. So its wings, coupled with a streamlined airframe, allowed it to fly faster than a Cub with the same engine.

A company ad in the February 1946 issue of Flying proclaimed the finer features of the airplane, including: “Will outperform any ship in its class—in Speed, Altitude, and Endurance. Better Construction—of 6500 Taylorcrafts built in the past two years, not one has been found to have a structural failure. PROOF: CAA records! Lower Operating Cost—War training school operators have proved Taylorcraft costs less to maintain than any other plane in any class at any price! Best high altitude take-off performance. All who
see and fly the new Taylorcrafts agree—Dollar for Dollar, Feature for Feature—Taylorcraft has earned the reputation ‘Best Buy in the Sky.’"

The publicity that was generated when pilots set records while flying their Taylorcrafts in the late 1930s and early 1940s was perhaps some of the best marketing for the company. Those records included: Hunter and Humphrey Moody flew an endurance flight of 14 days and nights aloft in 1938; Dewey Eldred flew 975 miles nonstop from New York to Daytona Beach, Florida, in 1939; Grace Huntington achieved a world altitude record for lightplanes of 24,311 feet in 1940; Jack Snodgrass won the Firestone Trophy Race during the Miami Air Maneuvers in 1940 and Fon Stark won it in 1941; and Evelyn Burleson flew a nonstop goodwill flight from Canada to Mexico in 1941. Burleson had extra fuel tanks installed in the 1940 deluxe Taylorcraft Miss Liberty and completed her 1,700-mile flight in 16 ½ hours. These accomplishments, and others, were highlighted in a full-page ad in the April 1946 issue of Skyways.

That same ad also listed the “firsts” for Taylorcraft, such as: “FIRST to introduce side-by-side seating with wheel control in light airplanes. FIRST to employ a racing type wing with fuselage giving added ‘lift.’ FIRST to issue an illustrated printed parts catalog to its service organization, assuring Taylorcraft owners prompt, efficient service at home and away from home. FIRST to use multilaminar wing spars . . . . FIRST to introduce model changes every year.” And Skyways helped further promote the new Taylorcraft “Twosome” with its special three-page cutaway feature in its May 1946 issue.

Affinity for Taylorcrafts

Severinghaus’ introduction to tube-and-fabric style flying occurred while he was a student pilot and had the opportunity to do part of his training in a Piper J-5. He enjoyed it so much that he began looking around at vintage airplanes, and he soon developed an affinity for Taylorcrafts. “It was more than 10 years ago, on one of my first trips to Oshkosh,” he recalls, “when I was walking the flightline and looking at old planes, and way down there in the south forty was a Taylorcraft. What caught my eye was the long, elegant taper of the fuselage. C.G. Taylor, who originally designed the Cub, refined his ideas with the Taylorcraft. He made it side-by-side, gave it a more efficient airfoil, and put the shock cords up inside the fuselage, rather than have them hanging out in the slipstream.”

Two years later, Severinghaus attended the Taylorcraft forum at EAA AirVenture Oshkosh, and he posed a question to the group: “Does anyone have a nice BC12-D for sale?”

“Quite the cream puff—take a look at the newly fabricated landing gear leg to fuselage fairings. Nice new Airtex upholstery, wool headliner, firewall fabric, and carpet complete the interior.

PHOTOS SPARKY BARNES SARGENT

Look how cleanly the trailing edge drain hole is opened up. You can see how taking your time results in fine fabric work that both the public and aircraft judges notice.
A guy told me to see him after the forum was over. Two weeks later, I was up in Fargo looking at NC96130,” smiles Severinghaus. “The appeal of that airplane was that it was pretty original. The panel hadn't been cut up to add extra instruments, and the engine had been top overhauled. It had all of its logbooks—including the original one with the factory test pilot's signature—and most of the repair and maintenance invoices from FBOs around the country, dating back to 1946.”

He flew it for a year and brought it to EAA AirVenture in 2006, camping out under its wing. But he noticed several nicer-looking Taylorcrafts, and that inspired him to make a change. “After that week, I started the campaign of convincing my wife to let me restore it,” he says, with a gentle laugh.
Quest for Authenticity

Severinghaus won his campaign and gained permission from his wife, Beverly Westra, to begin a full-fledged restoration of NC96130. One of the next steps was finding a mechanic. While attending the Antique Airplane Association’s fly-in that fall, he noticed “a pristine 1940 Taylorcraft BC-65. It was owned and restored by John Frisbie of Udall, Kansas,” says Severinghaus, “and it was his father’s airplane. He had inherited his father’s hangar and tools, and he had just started his Aircraft Restoration and Recovering business. My goal for the restoration was to be completely authentic and have the airplane looking like it did the day it came out of the factory. It’s tough to find a mechanic willing to do that—to use all slotted screws and original fasteners, such as friction tape and cord, as opposed to Phillips-head screws and plastic cable ties. After I talked with John, I knew he was the one to restore my airplane, so I flew it to his shop in November 2006.”

Back at home in Iowa, Severinghaus devoted hours upon hours to learning the answers to myriad questions, such as: What were the correct colors and paint scheme, and was the glove box handle originally plastic or metal? His persistence was fruitful, and he found the answers he sought. “Other Taylorcraft owners had scanned in unfaded paint samples from old airplanes, and then Jim and Dondi Miller at Aircraft Technical Support mixed the paint to match. Now they have the formula for Taylorcraft Ivory, which is subtly different than Daytona White or Diana Cream. And I’m indebted to the members of the Taylorcraft Foundation, particularly everyone who participated in the discussion forum on the website—they shared an incredible wealth of knowledge,” reflects Severinghaus. “And Chet Peek’s book, The Taylorcraft Story, is a goldmine of historical information.”

Yet another Taylorcraft pilot loaned him the correct glove box handle, and Severinghaus replicated it by making a rubber mold and casting a new one from plastic resin. When it came time for firewall-forward originality, he insisted upon keeping the old Case magnetos, along with unshielded ignition harness and spark plugs. And after an extensive search, he located “an old, unfiltered air scoop in good condition, with a factory-original screen over its opening, and John carefully shaped the new cowling he’d made to fit around it.”

Meanwhile, Westra, who naturally adopted the title of “Taylorcraft Financier,” patiently endured her husband’s quest for authenticity in the restoration, including the overflowing filing cabinets full of Taylorcraft research and his self-confessed obsession with the smallest of details.

Repairs and More

As Severinghaus delved ever deeper, he realized that parts availability (or lack thereof) presented its own challenge. Fortunately, he was able to locate drawings for parts that needed to be fabricated as owner-produced parts, and he discovered that a few items were still being supplied by vendors, such as Shinn mechanical brake parts (Skybound); an exhaust system (Wag-Aero); an aluminum nosebowl (Aircraft Spruce); miscellaneous parts for Taylorcrafts (Univair); and cabin carpet and interior upholstery (Airtex).

As they removed the fabric from the airframe at Frisbie’s shop in Kansas, they were surprised and dismayed at what they saw. Perhaps most alarming was a crack and bend in the compression tube at the right front jury strut attachment bracket—the fitting was completely broken off below the fabric. “I learned that some mechanics don’t go into a great amount of detail on the FAA Form 337s,” shares Severinghaus with a wry smile. “We found that every piece of wood on the airframe was either cracked or broken. Some had been
repaired, and some had not. That's the kind of thing you don't see until you take the fabric off. The metal wingtip bows and nose ribs needed straightening, and the tail was in pretty good condition, although it had splices on the top of the fin and rudder...but that wasn't bad. It's like a small scar on a pretty woman...you don't really notice it and it adds some character."

Frisbie worked on the project full-time, fabricating new upper and lower cowlings, windshield fairings, landing gear, and wing root fairings, as well as spruce stringers and door frames. Other items, such as the floorboards, instruments, and the compression tube in the right wing, were repaired as necessary. After the fuselage was sandblasted and primed, tiny pinholes appeared along some of the bottom fuselage cross tubes. Frisbie cut out the damaged tubes, which had collected water for years and were filled with rust, and replaced them. "I was very lucky to have a talented mechanic like John, who also did the welding repairs on the fuselage, the fabric installation, and the painting,"
says Severinghaus. “He even made staples by hand, in order to fasten the wool felt gasket material to the engine baffles, using the original 1946 staple holes.”

As is common with modern-day restorations, a few concessions were made for safety’s sake. Shoulder harnesses were installed, a small fire extinguisher was mounted adjacent to the seat, and an antenna (for use with a handheld radio) was routed internally so it wouldn’t be visible from the exterior of the aircraft. And for longevity considerations, Poly-Fiber fabric and coatings were selected, as opposed to Grade A cotton.

**Purely Fun Flying**

In just six and a half months, NC96130 was ready for her test flight. Frisbie had the honor of that first flight, and then a very eager Severinghaus had his chance . . . they were both pleased with what they found. “Boy, she flies like a different airplane now,” smiles Severinghaus, “because she’s rigged correctly. That’s one advantage to taking the wings and tail off an old airplane and rigging them again. She holds a heading nicely now, and trims up better, too. Flight controls are more sensitive to input, since the new cables take the slop out of the system. The stall is very gentle, and I fly my final approach at 60 mph—indicated at cruise with the Sensenich wood prop. She could fly faster with a metal prop, and I could push the engine faster, but I fly at 2,150 rpm as the manual says.”

His first cross-country was his journey home to Iowa June 23-24, 2007. “It was wonderful, flying her home at 1,500 feet agl above Kansas and Missouri,” Severinghaus reminisces. “She flies well, and she’s lighter now, too . . . she lost 17 pounds in the restoration. The new straight stringers allow you to see the structure of the airframe just beneath the fabric—they’re like cheekbones on a super model—and it’s just pretty when you can see that underlying structure. You try not to anthropomorphize your airplane, but you end up doing it anyway.”

In late July, he flew it to EAA AirVenture, just as he did last year. But this time, it was his Taylorcraft that was literally outstanding in the field. “It’s been agonizing as well as exciting, because I feel like I should put white gloves on before I fly her, and I spend 45 minutes cleaning her after a flight. So I tell people my next airplane is going to be painted the color of dead bugs!” laughs Severinghaus. “But there is something that I miss in the airplane, now that it’s been restored—it’s that old airplane smell—that combination of old gas, oil, and fabric combined with dust and grass. People tell me it’ll come back, with time.”

**Vintage Value**

Severinghaus delights in flying his newly restored Taylorcraft, and he finds it quite economical to operate. He typically plans for a 4.5-gph fuel burn, “so even with avgas over $4 per gallon, it only costs me about $20 per hour to fly the Taylorcraft,” he comments. “My wife, of course, points out the additional fixed costs of hangar rent and insurance at about $300 per month, plus the capital costs of the plane and restoration. Even so, she flies with me on the weekends, and she’s willing to hand-prop it…I’m a very lucky guy!”

Severinghaus has become an ambassador for the value of restoring vintage airplanes, enthusiastically promoting the advantages they offer to pilots and owners. “I wish more people would restore old airplanes. For a $50K investment, I’ve got a 61-year-old [sport pilot—eligible] airplane. It may not fly as fast as a new light-sport airplane, and it doesn’t have a glass panel, but I don’t need one. Brand new airplanes are great, and I can understand their appeal,” he says. “But there are some of us who are crazy about old tube-and-fabric airplanes. We love flying from grass strips, and navigating by pilotage and dead reckoning instead of using GPS. It’s not for everybody, but it’s very satisfying, because it’s pure, unadulterated fun flying.”