



# Taylor J-2 Cub

In the beginning there was this 'someday project'

BY BUDD DAVISSON



JIM KOEPNICK

Steve Kretsinger

“I didn’t want to be one of those who say ‘some-day’ when talking about a project, because ‘some-day’ quite often doesn’t come. So, I made up my mind to actually start working on the project.”

The speaker was Steve Kretsinger, of Eugene, Oregon, and “...the project” to which he referred was his uncle’s Taylor J-2 Cub, which had lived in his uncle’s garage for almost two decades and was often referred to in “someday” terms. Steve was determined to break the cycle and do something about it.

As is almost always the case with decisions like this, it was a long time coming and involved more than just waking up one morning and saying to himself, “I’m going to rebuild the Cub.”

“I’ve always dreamed of flying,” Steve said, “but, there was no aviation connection of any kind in my immediate family. So, at the time, I just figured ‘...yeah, just another kid dream that’ll never happen.’ I was so far outside of aviation that I didn’t have a clue as to what the proper path would be. I had no idea that lots of kids my age were trading paper route money and

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The rounded tail surfaces and wingtips help distinguish the J-2 from its squared-off predecessor, the E-2 Cub. The changes to the design, created by Walter P. Jamouneau, softened its appearance. In previous writing, the assumption has been made that the “J” in J-2 stood for the designer’s name. Pete Bowers, in his 1993 book, *Piper Cubs*, points out that in reality, the “J” just happened to be the next letter in the series of Taylor Cub models—the previous version had been the 35-hp Szekely SB-3-35-powered H-2, and skipping the letter “I,” since it could be mistaken for the number 1, meant the next model-designating letter would be, at best, a happy coincidence with the design modifier’s last name!

wash jobs for flying time. And it went that way for quite a while.

“For one thing, I thought I had to have ground school completed before I could start taking flying lessons. So, when I got older, I enrolled in a ground school course at the local community college and met a guy there who had a C-152. I told him I was itching to get into an airplane. He said, ‘Fine. How

about Saturday?’

“I said, ‘I can’t. I haven’t finished ground school.’

“He replied, ‘Don’t need it. See you at what time?’

“It was just that simple. Then I started talking about airplanes at home and how I’d like to own one. That’s when my mom said, ‘You know your Uncle Tom has an airplane in his garage. Go see him.’

At that point Steve was 26 years old and just beginning to dip his toes into the aviation pool, so his aviation knowledge was minimal. Still, he knew that he liked old airplanes, and he knew exactly where he could find one. So he set out to visit his uncle down the road in California.

“First of all,” he said, “it turned out that Uncle Tom didn’t have an airplane in his garage. He had



JIM KOEPNICK

two airplanes in his garage. A 1938 Fairchild F-24J and a 1937 Taylor J-2 Cub. I guess I never realized how heavy he was into airplanes. It turns out that at one time in the early '60s he used the Fairchild to commute from Long Beach to work at Vandenberg Air Force Base. He had also been one of the Flabob Airport gang, and vintage/antique airplanes were a big part of his life.

"I started hinting around that I'd like to buy the Cub, and he said, 'Tell you what: You rebuild the Cub and you can fly it, but I'll own it.' That was 1986, and I took the Cub home to my shop to work on it. Only problem was, I got married and started having kids at the same

time, so the Cub was once again a '...someday, I'll get at it' project, and it didn't look as if I was going to get to do the airplane myself.

"I had been introduced to Tim Talen, in Eugene, who was doing airplane restorations (Ragwood Refractory, <http://RagwoodRefractory.com>), and as I hadn't even touched the airplane, it looked as if the only way I was going to get it done was by having a professional do it. I talked to Tim about it, and he pointed out that it was going to cost so much to do the Cub that I'd probably have more in it than it was worth. He suggested I have him do the Fairchild instead because I'd have a more valuable airplane, when finished, and would come out better financially. So, I talked to Uncle Tom about doing the Fairchild, but it turned out a friend of his wanted to do it for him, and he did. When the airplane was finished, my uncle and I flew it to Oshkosh. That was in 2000.

"In 2006 I had the epiphany about 'someday' and realized that day wouldn't come for me on the Cub unless I made it happen. So, I pulled the trigger on it. Only I was going to be as hands-on as I could be, within the limitations of my own time and talents. And that's when I hired Tim Talen to finish the project. As he worked on the project, I was able to contribute in the areas that he thought were within my abilities. He'd look over my shoulder directing me on the things I could do and taking over for those areas where I was over my head."

As near as Steve could tell, the airplane hadn't flown since the 1940s. In the 65 years since it had gone through dozens of hands, each adding their own pile of parts to the 'someday project,' but none of them did anything constructive to the airplane, although right at the beginning Steve and his uncle had sand blasted the fuselage and primed it, which, with the passage of so many years, had to be done again. What Steve had was a gigantic pile of parts that he hoped to-

taled up to a complete airplane.

Steve said, "Tim had already done a J-2 or two, so he knew what we were looking for and how different years of airplanes might have different parts. This first surfaced while I was doing the wings." Steve continued: "When we started spreading out the parts, we realized that I had three wing panels, but no usable ailerons. Not a one. What we did have, however, were factory drawings for those ailerons. So, starting with the hinge fittings and horns, we just built them. The wings needed total rebuilding. I built new spars for them and had to repair every single rib. Some weren't too bad, but others were mostly trash.

"We bead-blasted the fittings for all three wings and picked the best for these wings. We also tore our hair out looking for new pulleys of the right kind, but couldn't find them. We did, however, have a big box of 'stuff,' and in them we found enough usable pulleys to put this airplane together.

"One of my mantras was 'originality and no new parts,' which turned out to be harder to do than I thought it would be. For instance, when we started rebuilding the seats we found that the top of the seat back was supposed to be a special C-shaped steel channel that the drawings called a Dahlstrom Channel No. 543. The same channel material was used in the tail for ribs. Miracle of miracles, it turned out that the company that made them was still in business and still had the dyes. 'Great,' we thought, 'we'll just give them a call and buy 20 or 30 feet of the stuff. We called the factory and talked to a very nice person who had worked there for a long time, and she told us that yes, they could build the parts, but we'd have to buy a minimum of 5,000 yards! Oh, well, so we got creative with steel while filling those gaps.

"The fuselage wasn't too bad," Steve said. "Although we had to strip it again, there wasn't a lot of rust. There was evidence that the airplane



JIM KOEPNICK

The new Sensenich propeller sports the proper yellow-painted tips and a pair of decals with the correct “Made in Lititz, PA” wording.



JIM KOEPNICK

Continental’s first-production flat-opposed aircraft engine, the A-40. Unlike the later “A” series of engines, the cylinder head for each pair of cylinders is cast as one piece, as are the cylinders.



AMY GESCH

had some repairs near the wing attach points. I had the first three log-books, which didn’t mention an accident, but those logs only covered the 1930s, and I had nothing after that. It also had a good turtledeck structure, so that didn’t need much work. In general, however, compared to the total rebuild of the wings, the fuselage wasn’t too bad.

“The sheet metal needed a lot of work. The boot cowl was all there, but good only for patterns, and the firewall was more holes than metal,” Steve said. “We were able to use the original nose bowl, although as it came out of the factory it was a single-piece unit. However, somewhere along the line, this one had been split for ease of maintenance, so we put it back together. Tim did the top cowl and some other parts so that it came back to totally original configuration, including the boot lace clips.”

When an airplane is as basic as the Taylor J-2 Cub, doing the instrument panel doesn’t require a lot of instruments, but they have to be the right instruments or it’ll look “wrong.” Nothing is more visually jarring than a 1980s airspeed or altimeter in a super-simple 1930s instrument panel.

“We had an instrument panel, but not a single instrument. I’m certain they are all in a box under someone’s bed, but that’s when we had to resort to flipping over rocks, looking for what might be available. Tim had some of the instruments, and I found the right tachometer from a guy in Sonoma, California. We ran into a brick wall, however, when it came to the al-

Left: One of the simplest cockpits in the history of aviation. The rod at the top with the small knob surrounding it is the throttle, and the parallel white ropes activate the pulley controlling the stabilizer angle for pitch trim. From left to right we have the minimum instruments needed for VFR flight in the 1930s: airspeed, oil temperature, oil pressure, and nonsensitive altimeter.

timeter. We thought it was a Zenith altimeter but weren't sure. They came in two sizes, 4 inches and 3-1/8 inches. Fortunately Tim found a Zenith altimeter at a fly-in swap meet.

When an airplane has a history that includes lots of owners, it's interesting how much extra "stuff" starts to follow it around, each owner adding something they've found. If the "stuff" box that comes with a project is big enough, the restorer can do his shopping at home rather than make Google a silent partner. In this case, the extras are what made some of the project possible. This especially applies to both the tail and the engine.

Steve said, "We had three complete sets of elevators and stabs, and all were pretty good, but although they were all the right shape, they weren't all built the same. Some of them appeared to be J-3, not J-2. Tim selected the right ones by matching their manner of construction to that shown by the rudder, which obviously was original to the fuselage.

"We had two sets of landing gear legs, with two different types of axles. We went with the type that the type certificate said we could run 4-inch Hayes wheels, which we had, and let us run the commonly available 8.00-4 tires.

"Since this ship was built with the option for a tail wheel, we debated about adding brakes, but that would have been a big departure from the idea of total originality. The tail wheel steers fine, so that wouldn't be a problem, but getting stopped might be. Doug Griffin of Red Bluff, California, indicated that the airplane was engineered and built with a little excessive toe out, which scrubs the tires just a little, so that really helps slow the airplane down. If a tail wind is pushing you and you need to stop, you just spin around and put the nose into the wind.

"When we started on the engine," he said, "we really had a serious pile of 'stuff' to sift through. We had two more-or-less complete engines and

## Personal History Steps Out of the Crowd



H.G. FRAUTSCHY

**Paul Poberezny and Steve Kretsinger enjoy a few moments with one of the J-2 Cubs Paul flew as a young man. Steve brought the restored airplane to EAA AirVenture from California.**

As Steve told the story, "N19252's original owner was the Brown Deer Flying Club in Milwaukee, Wisconsin. While doing the restoration, I was talking to Tim about the history of the aircraft, and he said, 'You know, Paul Poberezny grew up in the Milwaukee area, you ought to see if he flew your airplane.' I e-mailed the EAA, and they forwarded my letter to Paul. He responded that he did fly out of the Brown Deer airport, and said he flew several J-2s.

"Fast forward to AirVenture 2010; while we were in Oshkosh, we were asked to bring the airplane to the 'Vintage Interview Circle' to display the airplane and conduct an interview. Unbeknownst to me the staff had made arrangements for Paul to appear during our interview. As Ray Johnson was conducting the interview with me, he said, 'Steve, I'd like you to meet someone; turn around!'

"To my complete surprise and amazement it was Paul Poberezny! They handed Paul the microphone, and he told some stories about flying in Milwaukee in the '30s, and as he pointed to my airplane, he said, 'As a young lad, I flew this airplane.' The interview was followed by handshakes and photographs. This was like icing on the cake. Here I was in Oshkosh, Wisconsin, over 2,000 miles away from home, displaying my airplane at the greatest fly-in in the world, and I get to meet the man who started it all in front of an airplane he learned to fly in!"

two baskets full of parts that were supposed to contain an engine each. I did some research on the A-40s and found we had a choice of building it as a -2, -3, -4, or a dual-ignition -5. Since this particular ship was originally equipped with the -4 model, we decided to build it as a -4 because of the higher rpm and our parts seemed to lend themselves better to that particular model. And there was that originality thing.

"Rather than do the engine ourselves, I had Al Holloway, of Holloway Engineering, in Quincy, California, do it. A-40s are pretty basic, but they are also pretty old, so I wanted it done right.

"Sensenich did the prop pretty much the way we wanted it. I got a hold of Clyde Smith, the recognized old Piper expert, and he said the tip fabric would have been yellow, so that's the way we did it. Tim had some old Sensenich stickers, but we didn't have to use them because Sensenich asked us which stickers we wanted, since they knew we'd probably want the Lititz, Pennsylvania, address on them to be correct to the period. That all turned out to be very easy."

When it comes to covering and painting low-power airplanes like a Taylor Cub, it's always advisable to keep the weight down so the poor little engine doesn't have to fight gravity quite so hard. And that's exactly what they did.

"Tim had a roll of 1.7-ounce Dacron with the PMA stamp intact, which was important, since this is a certified airplane. We painted it

with Poly-Tone and hand rubbed it. Poly-Fiber was one of my 'contributors,' and their material was easy to work with, but there was a learning process in which Tim had to work to get a consistent shine. We didn't want it to be glossy, but we didn't want it to be totally dull either."

One problem that often plagues projects that change hands so often has nothing to do with the airplane itself but is still the key to airworthiness: the paperwork. So often the airplane changes hands as piles of "junk," so the individuals forget that the FAA paperwork has to be correct, but as Steve was to find, the word "correct" is open to some interpretation.

"My uncle had no bill of sale, and none had been recorded. So technically, it wasn't his airplane, and we couldn't register and fly it until that was sorted out. I backtracked and was lucky enough to find the widow of the last registered owner, so we got our bill of sale and were legal. The only problem was, however, that it was registered as a 1945 *Piper J-2 Cub*, which had been built in 1944, which, of course, had never existed. The *Taylor J-2 Cub* was long out of production by 1945, and I didn't want my airplane having the wrong birth date on its birth certificate.

"The various factions within the FAA couldn't get together and correct the dates, as that was a 'change,' and they couldn't change paperwork without more paperwork. Neither side would give in. So, I hired a DAR who called reg-

istration. They told him the same thing, so he asked for the supervisor's name. The two of them got on the phone and figured out a way to make it happen. Plus, there was a letter on Taylor's letterhead saying that they had built 'aircraft No. 1652 in 1937,' so that gave everyone the proof they needed to justify correcting my paperwork.

"We were really trying to get it to Oshkosh, but we flew it for the first time on July 3 and couldn't get enough flying time on it to break it in or prove its reliability, which we knew was marginal in the best of situations. The truth is that even if we had left that day for AirVenture, the airplane is so slow, we still might not have made it. We got five hours on it, took the wings off, put it on a trailer, and took it to Wautoma, about 30 miles from Oshkosh. We put it together there, flew it a little more, then struck out for Oshkosh.

"I can't adequately tell people what it means to me to be flying an airplane like this and arrive at Oshkosh. When I taxied it into position in the Vintage area and shut it down, I just sat there for a minute or two savoring the moment. I so clearly remembered the airplane as a rusty pile of parts, yet here I was sitting in the grass at Oshkosh with that same pile of parts. It was almost a surreal feeling. And every single bit of the effort involved in getting there was worth it. At that moment I understood why so many people do projects like this. The emotional payoff is huge."

Yeah. What he said!

