

Weeden's Rearwin

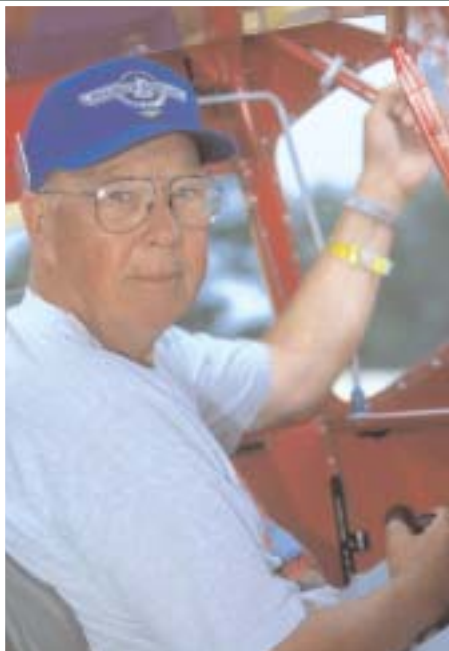
Doing it the hard way

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We talk a lot about basket case restorations. We talk a lot about a crew of guys attacking a huge pile of parts and mixing them with cash until they are magically transformed into a Staggerwing. Or an old Sikorsky. Or something else that is an icon of aviation history.

What we don't talk about often enough is a single enthusiast starting out with a little bit of this airplane and a little bit of that one. We don't talk much about the guy who has to scrounge around for a long time to even have enough parts in his





Dick Weeden, Brodhead, Wisconsin

pile to call it a basket case, much less an airplane project. We don't talk about non-icon airplanes like Rearwins very often either. Enter Dick Weeden of Brodhead, Wisconsin, and his Rearwin Sportster. This is the kind of antique airplane project

more people can relate to because it wasn't glued together with cash. It was fashioned from equal amounts of passion and determination with a few junk airplane parts thrown in to give it form.

Dick Weeden came out of the Air Force in the mid-'50s and immediately put his mechanic experience to work on agricultural equipment. Manure spreaders among other things. Not very glamorous, but his skill as a tool and die maker put beans on the table. Then it was on to a long career making electric brakes and clutches for a wide variety of applications. But aviation was never far away.

"As a teenager, I was the airport

kid. As a line boy, I worked for five dollars a week and one hour of dual in a Cub, but most of the time the airplanes were too busy, so I didn't get a lot of flying done at the time.

"I was a determined kid, however. It was eight miles each way, and I'd faithfully pedal my bicycle out there just so I could work around airplanes. It made me feel as if I was part of aviation, and that never went away."

Shortly after coming out of the Air Force, family and career took over his life and aviation slid to the fringes.

"I had gotten my A&P under the G.I. Bill, more to use up the money than anything else, but my flying was held back by things like food



The interior of the Rearwin shows the same pride of workmanship Dick put into the exterior work.

There was exactly one airplane based there.”

He went to work for Bill Knight at Knight Manufacturing, and it was pure happenstance that Knight and Kent Joranlein were rebuilding a Taylorcraft. That was one of the ways Dick got back into aviation; he became the A&P mechanic on the project.

“By the early 1970s interest in sport aviation began to rebuild in the area, so I helped form Chapter 431 and served as its first president.”

As Dick describes it, he had always been into vintage airplanes—except that when he was first turned on to them, they weren’t “vintage,” they were just “used.”

“I started out with the little tailwheel airplanes and stayed with them.

and shoes. It was 1976 before I finally got my private certificate.”

By the time Dick got his certificate, he had been living in Brodhead for a few years. Today Brodhead is known as a sport/vintage aircraft haven, but it hasn’t always been that way.

“When I moved up there in ’69 it was a dead airport. Totally dead.

Then, one day I looked around and realized I was a vintage airplane guy and didn’t even realize it. I hadn’t changed, but the world sure had.”

As he got back into aviation, he decided he wanted a true antique airplane, something made in the 1930s, because he still saw most of the postwar airplanes of his youth as used airplanes.

The 70 hp LeBlond motor is pretty rare, but a round engine was top of Dick’s list in desirable features for the airplane he wanted to restore.



Dick Weeden is thrilled to aviate in the Sportster, which he says is flying today thanks to the help given to him by over 20 friends.



Dick's handsome shop and antique Rearwin 7000 combine to make for a wonderful afternoon scene.

"I didn't start out looking for a Rearwin, but I knew I wanted a round motor. Also, there were some financial constraints, so I knew I couldn't handle the bigger round motor airplanes."

He found a really tired Rearwin Sportster with a very usable 70 hp LeBlond and along with partner Bud Lebarre parted with \$1,500 for it.

"We bought it from Vi Kapler, who was an associate of Bernie Pietenpol," Dick recalled. "I later bought out Bud's half. He was building a Hatz and already had a Luscombe and felt he didn't need three airplanes."

"The Rearwin was a pile of parts in a hangar on Pietenpol field, and there was a much better Funk in there with it. The Funk was more complete, but it had a flat motor, so I wasn't interested."

He promptly mounted the LeBlond on the Pietenpol he, Ted Davis and Francis Saunders had built during the mid-'80s.

"The book TBO on a LeBlond is 200 hours, but I had 300 on it when the crankshaft finally broke. The early two-bearing LeBlonds had this nasty habit.

"The Rearwin had flipped on its back during a landing in a farmer's field. And when I found it, it had

only one wing, and that was only good for patterns, although the fittings for both wings were there. The tail and landing gear were included, but they were really rusty, and the fuselage had buckshot dents in various places.

"The good news was that the airplane was cheap. The bad news was that the airplane had no paperwork."

The lack of paperwork put him on a detective trail to try and generate a legal pedigree that the FAA would recognize and would allow him to certificate the airplane, when finished.

"I had the N number, so I ran backwards with it and found the last registration had been to three brothers named Andrews in Bay City, Wisconsin, sometime in the late 1950s. I called every Andrews in the book, eventually finding one of the brothers, who was the only one still alive.

"He barely remembered owning the airplane, and when I asked him if he'd sell it to me, I'm not certain he understood how he could sell something he didn't have. Finally, I got him to sign a bill of sale, and that made the airplane officially mine and officially legal."

When he started working on the airplane, none of its condition sur-



prised him, but it was obvious he was going to need more than just a little patching up.

"As you'd expect the rear longerons were in bad shape, and the buckshot had made a mess out of parts of it. The firewall station tubing wasn't rusted through, but it didn't look very good, so it had to go, too. By the time I was done I'd replaced a good portion of the fuselage tubing one piece at a time. Ted Davis did the welding for me."

The years take their toll on any airplane, but when it has been damaged and the remains shift from owner to owner, pieces inevitably earn far more than their

share of nicks and dings.

"The sheet metal wasn't in much better shape than the tubing. The door metal was okay, and I was able to save two window frames, but that was about it. Plus, I was able to get a speed ring off a parts airplane."

When a lot of people look at the airplane they automatically assume the biggest parts hassle was with the engine, but according to Dick that's not the case.

"The tires are a really odd size: 18 by 8 by 3. They are totally extinct, and I only have two more, so I do my best not to land on pavement. I can use 800 by 4s with adapters, but they just don't look right. It's a subtle difference, but it's noticeable. To me anyway."

"Using the one wing as a pattern, I built an entirely new set using the original fittings, which took nearly two years. When they were finished, I had them hanging on the garage wall in front of my wife's car, and I'd tell her 'If you run into them, I'll call a divorce attorney.' We got a new car, and I worried about her hitting them, then, you guessed it—I ran into them.



I didn't damage them too badly, but it set me back a while and made me feel like an idiot."

And then there was the engine. The LeBlond was never a popular engine, so a limited number were produced, which makes engines and/or parts an ongoing headache.

"This engine came out of a parts airplane that Tom Brown had pointed me to. It had been in a garage fire, which destroyed the wings, plus the cabane had been cut off. The engine didn't look very good, but, when we got it apart, it surprised us by not being too bad.

"The engine has a lot of basic weak points with the valve springs

and valves being first on the list. In fact, LeBlond owners don't greet each other by saying hello; they say, 'Got any valves springs?' The LeBlond uses 'volute' springs that aren't too far removed from safety pins and break constantly. I solved that problem by going to O-200 springs and valves as developed by Al Barbuto. There are a lot of minor mechanical changes that I couldn't have made if it hadn't been for the help of my local FAA FSDO guy, Tim Anderson. He was super helpful.

"Rings are another problem, but a nice lady at Hastings helped me out. I gave her the bore and dimensions, and she shipped me a set of rings that were perfect."

For as old as it is, the LeBlond has a few surprisingly sophisticated details, including the fact that it uses ball bearings almost everywhere.

"Thank goodness I had plenty of spare bearings so that never was a problem."

The magnetos on the old oil burner are Scintilla SB5s that would make your local maintenance shop laugh out loud, if you brought them in. Dick, however, knew exactly where to go for that kind of expertise—Lowell White in Mesa, Arizona. To White the SB5 was just another magneto in severe need of TLC.

"To rebuild the carb, I got a hold of everyone who might have even the smallest part for sale or trade, but the Antique Airplane Association came through with lots of good carburetor stuff off a parts engine they had. The prop hub came off the parts airplane."

"When I covered the airplane, I used the Poly-Fiber system through silver, then switched over to Randolph dope. The first color to go on was the Sandalwood trim, followed by the Boston Maroon trim, and then the Tennessee Red main color. The colors and the scheme are what the factory used as indicated by Rearwin brochures and Bill Wright's Rearwin book.

"To be absolutely original, I should

have stayed with the tail skid, but I'd had a bad experience with a skid on my Pietenpol—I ground looped and hit a car. However, the tailwheel was a Rearwin option, so I don't feel too bad about it.

"The brakes are multi-disk affairs not unlike bicycle brakes, and they work just right. They are cable operated via heel pedals, but you only need them for ground handling in tight places. The pulleys for the cable were an odd size, and I couldn't find any, so I turned them up out of quarter-inch Formica and put bronze bushings in them for the bolts to ride on.

"I'm especially pleased with the way the windshield turned out. The frames were completely missing, so we had nothing for a pattern. I got as many pictures as I could of the right time period and scaled the patterns off the photos. It's a three-piece windshield and takes a lot of framing to hold it all in place."

The airplane flew for the first time July 7, 2002, and the goal was to get it to Oshkosh a few weeks later. However, because the engine has some experimental parts, the FAA made Dick fly 25 hours in the local area, which meant he was a busy little pilot for the weeks just prior to Oshkosh 2002.

Dick is quick to give credit to his many friends on the airport at Brodhead, as well as a host of others. "A lot of guys helped with this—Matt Smith, Dennis Hall, Lee Stenson, Bill Weber and my son, Mike an ex-KC-135 driver. As you can imagine, there was no shortage of volunteer pilots."

The prop is a Sensenich 78 by 50, which lets the engine turn up 1750 rpm static. The redline is 1950 rpm, and Dick says it cruises at 1600-1650 rpm and about 80-85 mph.

So now Dick Weeden has his round motor, antique airplane. More than that, he has an award winner, and when standing by the nose answering questions he can proudly say, "I did it myself, with a lot of help from my friends." Not many folks can make that claim. 