

# Sometimes "Free" Would Still Be Too Much

## Bringing a Rearwin Skyranger back from the dead

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**D**oug Clukey and Karl Johnson, both of Winter Haven, Florida, a suburb of Sun 'n Fun, are enjoying their retirement. Both of them, however, wonder how they ever found time to work. Individually, they've restored or rebuilt something like a dozen airplanes between them. They both have their horror stories, so they knew, or thought they knew, what they were getting into with their Rearwin Skyranger.

Doug says, "I once rebuilt a Taylorcraft that had been on floats since it came out of the factory. Someone had crashed it, and naturally, the floats were the first things to hit the ground. I rebuilt the airplane fairly quickly, but the floats took forever. I'll never rebuild another set of floats. Never! They take too much out of you."

Karl doesn't have quite the same terrible tale, but he certainly can tell his own I-wish-I-hadn't-built-that story.

"When the Quicky II came out, I built one with a Revmaster VW and actually flew it for quite a while. Unfortunately, my wife had heard all the wild stories everyone was telling about the Quicky, but I somehow convinced her to ignore them. Then she went for a ride with me, and that was the end of that. She put her foot down; I sold the engine and still have the airframe, which would make an interesting-looking beer cooler."

When the two joined forces in Winter Haven, they started looking around for little airplanes to rebuild. They didn't have to look long before they found some projects, which included a Cessna 120 and a Super

Cub. These airplanes, along with several others that came into their workshop, were diligently worked on and, in a reasonable length of time, took to the air. Then they found the Rearwin.

"The airplane hadn't flown since 1970 and had been tied down at an airport just south of Lakeland since then. A few years back someone bought it, took its wings off, then apparently had an attack of common sense. Something that we didn't have, because we bought it. He gave us a hell of a price, but knowing what we know now, if he'd given it to us, it would still have been too much," Doug says.

Karl says, "On the hour trip to our shop, the wings simply fell apart. What wasn't already broken was rotten. What wasn't rotten had come unglued, and what couldn't rot had



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much of his professional life building power plants. At home, however, he was rebuilding airplanes, including a LeBlond-powered Porterfield and the Taylorcraft on floats.

Karl Johnson was born in Pennsylvania and started learning to fly in 1948. He was a machine shop supervisor and in his 4,200-hour flying career has owned a number of airplanes, including three Bonanzas.

Neither Clukey nor Johnson were amateurs when it came to rebuilding airplanes, but with the Rearwin, it looked as if they had met their match.

"The more we looked at it, the more we found wrong," Doug says. "Of course, we shouldn't have expected anything else of an airplane that had sat outdoors in Florida without moving for nearly 30 years."

The object of what they realized might be misplaced affection was the 52nd Skyraider built by Rearwin Aircraft and Engines Inc. in 1941. This made it one of the last of the type to be built by Rearwin before the company was taken over by Commonwealth Aircraft in October of the next year. It's interesting that of the 82 Skyraiders Rearwin built, 25 were shipped to Iran. Not too many lightplanes were shipped from the states to the Middle East. Technically, because their airplane was powered by an 80-hp Franklin, it

was a Model 180F. There were also 175 and 180 model Skyraiders, both Continental powered, and a 190F. After the war, Commonwealth went on to build quite a number of its 185 models, which depended on the Continental C-85 for power.

Even though the duo's Rearwin was built in 1941, it didn't take advantage of the stamped aluminum rib technology, which so many of its peer group featured. With the exception of the fittings and compression struts and tip bows, the wings were all wood. In this case, most of the wood was in the process of returning to its primary elements, taking many of the steel parts with it.

Doug says, "We didn't even have a good wing to use for a pattern, although we did have one pair of spars that were good enough to locate the bolt holes. For the ribs, however, we had an accurate drawing from Commonwealth.

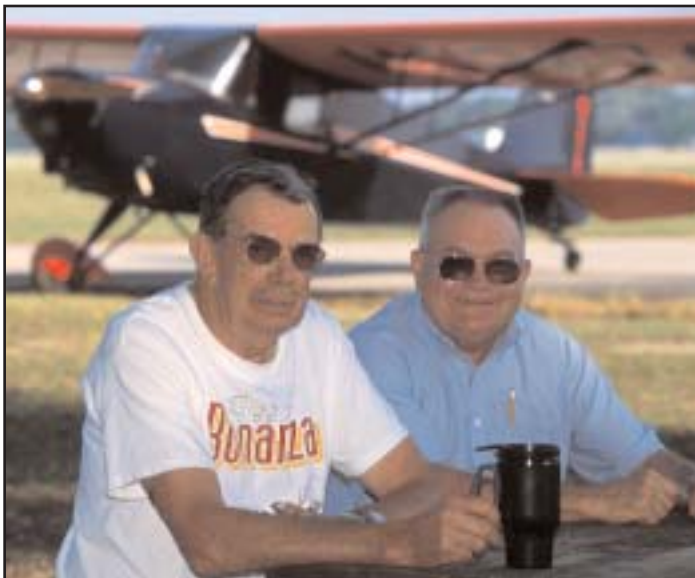
"The ribs are sort of unusual because they are all the same until you get out to the tip ribs, but you make them all full length and then cut the back off, where applicable, and use the cutoffs to build the ailerons. The last couple of ribs are a different size, so we had to do what we could to get patterns off the pieces of the originals along with a little eyeballing."

Karl says, "The ribs took forever, but the metal parts in the wing weren't far behind. We were able to use about half of them, but had to make the rest. The aileron hinges, for instance, were barely good for patterns, so we welded up new ones. The tip bows are also steel and were rusted through in a few spots, but we welded up the holes and bent the tubes back to the right curve and used the originals."

"When it came time to cover the airplane," Doug says, "we knew we were in the home stretch

rusted. When we peeled the fabric off, we realized that we should have used the wings to roast marshmallows. They were a mess, and the rest of the airplane wasn't much better."

The Clukey/Johnson partnership isn't a couple of guys who discovered aviation after they retired. All retirement did was give them more time to do what they'd been doing their entire lives. Doug Clukey, a native of Maine, started learning to fly in the '60s and has logged more than 5,000 hours in little airplanes since then. A project manager for a large energy company, he spent



The resurrectors of the Rearwin, Doug Clukey and Karl Johnson.



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with all the nasty stuff behind us. We used 102 Ceconite to cover it and finished that with Superflite's System II topped with urethane. The paint scheme and colors are as original as we could get them from brochures and pictures."

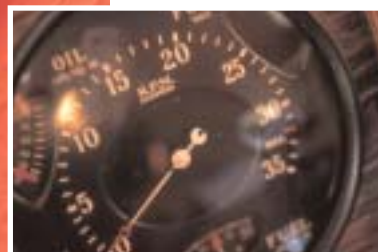
The wing struts were also trash. They weren't sealed struts, so nature did what nature does and kept running water through them long enough so that their only value was in giving the right length measurement.

"When we welded up the new ones we made sure they were tightly sealed. We don't want to have to go through this again," says Karl.

"Most of the sheet metal was really beat up," Doug explains. "We didn't want to replace any more than was absolutely necessary, however, so Karl spent weeks pressing the cowling parts back into shape. We were able to use the original grill parts, which amazingly enough were not only there but not in bad shape. We just cleaned them up and painted them with chrome paint, rather than having them plated. You have to look closely to tell it isn't chrome."

As with all airplanes of its age, the cockpit and interior had been badly treated by not only the weather and generations of field mice but also past owners, and it required many weeks to rectify their actions.

"The panel was one big series of extra holes and patches. There just wasn't anything there to save," Doug says. "So we made up a wood pattern and formed a new one out



**The multifunction tachometer dominates the left side of the instrument panel in the Rearwin. All engine conditions are indicated within the dial of the tachometer. Oil temperature and pressure, fuel quantity and pressure, and an ammeter to monitor the electrical system.**

of soft aluminum. The airplane was pretty advanced for its time as it had a radio and electrical system,

so we made the panel to mount the right instruments and switches. We really lucked out with that big tachometer because we have a guy

right on the field at Winter Haven who works on them and made ours run beautifully.”

One of the features that people often comment on is the wood-grained panel, which is a treatment that was correct to the airplane.

Doug says, “We have done that on a number of other airplanes, and it’s really pretty easy once you figure it out. We use an antique wood graining kit that’s commonly available.

The first time or two, however, you have to be willing to strip the part and start over if it isn’t right because it’s easy to make it look wrong.”

The interior fabric had either disappeared or turned into something organic neither was anxious to touch, so everything had to be replaced.

Doug continued: “We purchased the headliner from Aircraft Spruce, and it fit fine. We weren’t looking forward to making that. The rest of the interior came from Airtex. They fabricated the baggage compartment panels to our dimensions, which also saved a lot of work.

“We would have liked to stay with the original fabric, but it wasn’t available in a flame-retardant material, but Airtex came close, and they stitched the door and sidewall panels exactly to the original design. The seat back and bottom, however, are probably not original, as we didn’t have anything to copy.

“The windshield came from L.P. Aero Plastics, and they had both the one- and two-piece versions,” Karl says. “Commonwealth [Aircraft] used the single piece, and most Rearwins have been converted, but we wanted the two-piece unit because that’s what this airplane had when it came out of the factory.”



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**Rearwin’s Skyranger was one of the last of the prewar cabin monoplanes built. Quite advanced for its day, it featured a full electrical system, with this one equipped with a radio.**

Oddly enough the original Shinn 6C5 wheels weren’t corroded so badly that they couldn’t be saved, although the matching mechanical brakes required many hours of cleaning and refitting to make them work right.

Quite often, when an airplane uses a less-than-common engine, like the 80-hp Franklin in the Rearwin, it turns into a scavenger hunt trying to find enough parts to get it running. The Winter Haven duo, however, found that lady luck had decided she’d given them enough heartburn and would let the engine be one of the easier parts of the project.

“Two engines came with the airframe,” says Karl, “but neither one of them was rebuildable. Between the two of them, however, not only did we get enough parts to build one good engine, but it really only took minor new parts, like rings and valves, to get it ready to fly. The exhaust system, however, was a different story. Both of them were a mess, but we were able to stick enough parts together to make a pattern. Then we took it down to AeroSpace Welding in Fort Lauderdale, who made us a completely new system.”

While Karl was talking about the

engine, Doug chimes in, “We make it sound as if there wasn’t a single good part with this airplane when we bought it. That’s not entirely true. We got one good part. The prop. It’s not only the original type that was used on the airplane, but it was in beautiful shape.”

He looked at the prop, and someone asked how many laminations it has because it is obvious it has more than the average. He walked over and painstakingly walked his thumbnail across the hub and announced, “It has 34 laminations about an eighth of an inch thick, and there isn’t a sign of delamination anywhere.”

The prop is 70 inches in diameter, and its 54-inch pitch lets the little Franklin turn up 2150 rpm static.

So, now that they have the ragged Rearwin back in the air and looking good, what’s ahead for the now-tired dynamic duo?

Doug says, “Well, one thing is sure, we won’t be doing another Rearwin if it’s in that kind of condition. Right now we have a Fairchild 24R that just needs covering and re-assembly. I love covering airplanes, so we’re going to look at this one as if it’s a vacation, after the Rearwin.”

Like we said, free is sometimes still too expensive.