

“I always wanted a polished Luscombe”

Phil Wells' shining 8A/E

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MIKE STEINKE

There are shiny airplanes. Then there are polished airplanes. Then there is Dr. Phil Wells' Luscombe. One look at that airplane and most folks scramble for their sunglasses while realizing that they only *thought* they had seen polished airplanes in the past, but really hadn't.

It takes only a casual glance at his Luscombe to ask at least one obvious question, "How can 55-year-old metal still be that

perfect?" The answer is just as obvious: it can't and it isn't. Little to none of the visible aluminum on Phil's airplane is original. And to answer the next question, Phil didn't have a hired gun do it. He had some help, but most of the work was done by his wife, Connie, and him.

Phil Wells has been around airplanes most of his adult life, as he was a flight surgeon for the Air Guard off and on for

20 years. Hence his e-mail address F4Doc@mindspring.com. "I was lucky to be assigned mainly to fighter units and had the luxury of flying back seat (GIB, Guy In Back) with some superbly qualified military pilots."

The military piqued his interest in getting his private certificate,



Dr. Phil Wells

H.G. FRAUTSCHY

der's EAA SportAir workshops. We learned how to work sheet metal, fabric, gas, and TIG welding, painting, and even avionics. It was great fun and a wonderful experience for the two of us."

Through The Luscombe Association, the Luscombe type club, Phil learned of a project that was for sale in Pennsylvania and, after inspecting it, trucked it home.

"The airplane had been flipped on its back and put in a hangar for some 10 years. The air-



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which he completed in 1990 at DeKalb-Peachtree in Atlanta. Not one to slow down, he plunged right ahead and got his instrument and commercial ratings.

He says, "We have so many hazy, near-zero visibility days in the southeast that an instrument ticket is almost mandatory if you're going to fly consistently and safely."

With that kind of thinking, it was only logical that he do what thousands of doctors have done before him: he bought a Bonanza as his first airplane. However, his first Luscombe, an 8E, N1627K, followed that a few years later.

"It was a good solid airplane with nice exterior paint. I cleaned it up, redid the interior, and was happy being able to get some tail-wheel experience. But, I wasn't totally satisfied. What I really wanted to do was completely rebuild a 'project' Luscombe, learn more about the airplane and make it one of those shiny Luscombes you'd see at fly-ins."

That first Luscombe led him into the EAA where he found that there was indeed a way to have his very own shiny Luscombe. Restore it yourself.

"The more I read *EAA Sport Aviation* the more enthused I became about finding a Luscombe project



H.G. FRAUTSCHY

A custom instrument panel and cockpit round out the excellent restoration of the Luscombe, which was presented with the Grand Champion Classic trophy at the 2004 Sun 'n Fun EAA Fly-In.

and restoring it myself. The part of *EAA Sport Aviation* that I enjoyed most was reading stories about EAA members who had completed similar projects. Connie and I decided to take the plunge!"

Medical school teaches its students a lot of important things, but how to work on and restore airplanes is NOT one of them. Further education would be required.

"I had already made friends with an A & P over in Alabama and he was kind enough to teach me the basics of working with sheet metal. Connie and I added to our skills by attending many of Ron Alexan-

plane was basically all there and in good condition but painted an atrocious orange and blue. Unfortunately, when we stripped the paint, we found there was minimal Alclad left on the aluminum so it couldn't be polished to the degree I wanted.

"The re-skinning initially started on the nose of the airplane. Those skins had patches and dents that I wanted to repair, so I just replaced those thinking that would be it. Nevertheless, once I saw how nice those looked, it was just natural to proceed back until the entire aircraft had new skins throughout.

Bear in mind, however, that when I started the restoration, I 'knew' I'd finish the airplane in a year. It took ten!

"When we started the project, Ray Lett of Sylacauga, Alabama, who a lot of people think is one of the top gurus when it comes to Luscombes, volunteered to help guide me as I went through the process. Ray and I hit it off, and he took me under his wing for the life of the project. It would have been impossible to do without him.

"Ray really taught me what we'd need to know to put new sheet metal on this airplane as well as so many other areas that I'll mention later."

Re-skinning any airplane, even one as small as a Luscombe, isn't something to approach without having a plan. Normally it would be done in an assembly jig or fixture, but Phil didn't have access to such a fixture, so he went about it very carefully.

"Since the aluminum sheet is what holds the airplane together, you obviously couldn't remove very much of it or the fuselage would spring out of shape. The approach I used was to start at the front and remove a single sheet at a time. I used that one for a pattern, made a new one out of stock sheet aluminum and put it in place before removing the next skin. Other than the cowling and corrugated skins, I fabricated all of the pieces from flat stock. I was advised that it would work without the pre-formed piece, but I will let you be the judge."

Working with aluminum skin is quite often a two-person job—one for the rivet gun and the second for the bucking bar. As Phil worked down the fuselage, Connie's small stature became critical.

"Fortunately she's just the right size to work down inside the airplane. Without her in the tailcone to buck the rivets, I don't know how I would have done the last part of the fuselage.

"Gar Williams, another Lus-

combe expert, lent his expertise when it came to the corrugated control surface skins. The corrugations in skins vary in size and spacing and often replacement skins vary considerably. I sent mine to Gar and he worked his usual magic and copied them exactly. As you would expect, they came out perfectly."

Even though the outside of the airplane was to be polished, the inside also needed protection.

"We epoxied all of the internal bulkheads and did the same to the backside of each new aluminum sheet before it was installed.

"The airplane was in my basement workshop for nearly four years. Initially, I had the fuselage hanging from the rafters, but later used a homemade roll-around dolly to move and support it."

The Luscombe Foundation in Chandler, Arizona, is often the Luscombe rebuilder's best friend for acquiring those parts, which are difficult to fabricate for a Luscombe project.

"The Foundation, especially Donna Losey, affectionately known as 'Parts Angel,' was a good source of information and I bought many parts from them including their featherlite pulley kit, an instrument panel blank, the stamped cowling, and many of the unique Luscombe parts only they could supply."

When many people poke their heads inside the Wells' Luscombe, they often can't believe what they are seeing—a completely IFR Luscombe.

"At the time I started the Luscombe I was heavy into instrument flying and that just seemed like the logical way to go...at least it seemed like a good idea at the time. If I were doing it today, I'd



Almost every surface you see here is new Alclad skin, painstakingly done one panel at a time.



The nearly new-old stock Decker wheel pants just needed to be stripped and polished!

make it as original as possible. I have a Maule M-6 to fly on instruments and to think of the Luscombe as an instrument platform seems a little unrealistic now. Nevertheless, it is fun to get the occasional query from ATC, 'What's a Luscombe?'

"Most of the avionics work was done by Terry Wilbourne and his associates at Lowe Aviation in Macon, Georgia. He really had to work to fit everything (IFR GPS,

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VOR/ILS, AI/DG/Vacuum, ICS, LO-RAN) into that tiny space and he did an excellent job.”

“After the sheet metal and avionics were completed, we moved the project over to Ray’s shop in Alabama, and every vacation I was over there working and learning. Ray would have a portion for me to complete and he would guide me, but he would have me complete it basically by myself. He was kind enough to allow me space in his hangar for the rest of the restoration, some four more years! Ray is really low-key

and patient and, even though he has an extremely busy aircraft facility, he always took time and went out of his way to make me feel welcome. He’s now one of my best friends, and he has every right to be as proud of the Luscombe as I am, because his contributions were so huge.

“The wing structure was good with no corrosion. One difficult aspect of the rebuild was getting and installing the wing tanks, which are necessary to convert an 8A (65 horsepower) into an 8E (85 horsepower). Buzz Wagner in North Dakota took a set of factory drawings and duplicated the factory tanks from that.

“Connie and I covered the wings using what we’d learned in Alexander’s EAA SportAir workshop course on fabric covering. We used the Stits/Polyfiber system all the way through because it’s pretty fool proof. Ray did the final painting of the ragwings as well as the standard Luscombe trim on the fuselage.”

The project had come without an engine, but Phil was able to pick-up a C-85-12 at a good price. Unfortunately, it had no logs and was of unknown condition.

“Since we weren’t certain of the engine’s internal condition, I asked Ray Lett to go completely through it. As part of completing the engine, he installed a B & C starter, an alternator, and Slick mags. When he was done, it was beautiful and it runs just the way it looks.”

The cowling that came with the airplane was pretty grim, and Phil had his work cut out.

“The nose bowl was terrible and the cowling was not only beat-up but had the original ‘suitcase buckles’ to fasten it closed. Here again, the Luscombe Foundation saved the day and came through with a nose bowl and top and bottom cowl pieces. Everything was basically a rough blank, but it was new metal and shaped correctly. With Ray’s expert metal-working skills, especially the English Wheel, we were able to create a masterpiece cowling and engine compartment.

“One day as we were coming to the end of the restoration, Ray said ‘I have something that needs to be on this airplane. They are up in the attic and they are yours.’ I climbed into the attic and found a set of genuine Decker aluminum wheelpants for the Luscombe! They looked perfect, but I knew that under the 50-year-old paint we’d probably find lots of filler and blemishes. Only we didn’t! I stripped the paint and polished them AND as impossible as that sounds, that’s exactly how easy it was. They serve as the highlight of the restoration.”

Eventually every project is finished and ready for that first flight. In this case, “eventually” was in November 2003.

“I did the first flight myself. Ray had me taxi around the field for a day to see how it all had come together. With no squawks, the next day we did the first flight without incident. Other than a very slightly heavy left wing, it was a totally no-squawk flight. It was as if we’d had the airplane flying for years. Everything went so perfectly, it was almost anti-climatic.”

The Wells live on a grass strip where their Luscombe must feel perfectly at home, especially since it’s hangared with their Maule. However, there’s a drawback to all of this. Phil went through all of this work just because of a single thought, “I want a polished Luscombe.” Now that he has it, what’s his next goal?