



It's Hardly a

# Sea Fury

George Baker's super Super Cruiser

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When you look at George Baker's personal, and nearly perfect, PA-12 Super Cruiser it's easy to see why he's in one of the EAA's Halls of Fame. And why there are so many pictures of him standing in front of airplanes he's restored, owned, or performed air shows in. Let's see: A Super Cruiser is rag and tube, and his personal Cruiser is unreal in the amount of detail work it displays, so the airplanes in his background must be Cubs and Stearmans and such, right? Not quite. His signature airplane, the one most folks associate him with, is a 3,000-hp Hawker Sea Fury. And much of his air show performing was in a Lockheed T-33. And he's rebuilt and flown B-25s



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COURTESY GEORGE BAKER

George's shop and the PA-12 during the early stages of the airplane's restoration



COURTESY GEORGE BAKER

In the center of the firewall is a heat vent deflector to help diffuse the cabin air as it comes from the heat muff. A set of brushed heel plates keep the varnished birch floorboards from getting scuffed. Not using carpet makes it easier to keep the cabin clean, and keeps the weight of the furnishings down.

and Corsairs and everything else in between. And the Hall of Fame? It's the Warbirds Hall of Fame, not the expected antique or vintage venue. So, what is a heavy iron guy like George Baker doing getting his hands dirty on something as basic as a Piper PA-12?

"I know it looks as if all I ever had in my life were warbirds," says Baker, who is based in New Smyrna Beach, Florida, "but that's far from the truth. In fact, I started out in Champs in Monmouth, New Jersey. The FBO couldn't pay his insurance so he offered a friend and me a special deal: If we'd each write him a check for \$90, he'd get us trained through solo. So, we wrote him the

checks. I was ready to solo at four hours, but then I made it a point to come out on days when I knew my regular instructor wasn't around. This way the new one kept flying me because he didn't know about the deal. When the FBO found out about it, he was hopping mad and forced me to solo. He just pointed at an airplane and said, 'Go!'"

From that point on, like all young pilots, the name of the game for George was to work at filling up his logbook so he'd be more employable.

"In 1950, my dad bought a motel in Florida so I moved south with him. I was married and making my living as a trucker, even though I

was underage for the license. But I flew everything I could for anyone who would have me. I ferried Cessnas from the factory, flew mosquito control in Super Cubs. Then, in 1959 I got a job flying a Douglas B-23, which looks exactly like a two-engine B-17. It had been converted into an executive transport and was being operated by General Electric. I guess that was my first warbird experience.

"I started doing a lot of maintenance for people, which included rebuilding little airplanes, one of the first being a Culver Cadet. Then I did a 150-hp conversion on an 85-hp Swift, including getting the STC for it. That may have been the



The PA-12's cockpit and instrument panel before the restoration shows the hodgepodge of holes and slots for various radios.



The cockpit nears completion during the restoration, with only some final upholstery work left.



PHOTOS COURTESY GEORGE BAKER

So typical of the careful restoration work done by George, the Scott master brake cylinder for the rear seat pilot has a polished mounting ring, while the rest is painted.



Modern avionics are compact, allowing for a tighter integration of the instrument panel. The auxiliary electrical panel on the right is gone, and the radios can now fit in a neat center stack.

first Swift conversion done; I'm not sure. But then, in 1973 a friend decided he wanted a Lockheed T-33, and would I go with him and ferry it back? I guess I didn't know any better, but I said, 'Sure, why not?' even though I knew nothing about T-33s and hadn't flown jets.

"The airplane was in Chino, California, where a very young Steve Hinton checked me out, but the FAA was giving would-be warbird jet pilots fits because of the then-recent accident where the F-86 went into the ice cream parlor near San Francisco. This inspector was opening panels and asking me to explain the function of everything all over the airplane.

"Bob Hoover heard I was going to be flying the airplane, so he had a friend of his, who had 3,700 hours in the T-33, come out, and we really started some aerobatics. Bob flew the airplane and liked it enough that he started flying it in his air shows and had me in the back to run the fuel system so he didn't have to worry about it. That's when I began thinking that I'd start doing air shows in the airplane myself, and I did."

George officially hung out his airplane maintenance and rebuilding shingle while still living at the Spruce Creek fly-in community in 1979. Shortly thereafter he stumbled into a sweetheart deal on a

piece of property on the airport at New Smyrna Beach, Florida, where he still lives.

"The property was too low to build on, but the owner let me pay for it when I could, so too low or not, I could afford it, so I bought it. Then I bought an old bulldozer and made it known to all the developers in the area, and there were plenty, that I'd be willing to accept the fill dirt they had to carry off their construction sites. It didn't take long before we had the entire lot filled and compacted. By the time we were done building, and expanding, over the years, we had 28,000 square feet, and that's where we're living today. I've rented part of it



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out to Gary Norville, who is doing the big airplane work, and my wife, Virginia, and I have an apartment on the other end, where I play with smaller warbirds (T-34s, etc.), some GA birds, and little airplanes like rag and tube Pipers.”

Before George got back to little airplanes, he built a tremendous reputation for being able to take a thoroughly dead warbird and not only breathe life back into it, but also make it into an award winner. Right from the beginning, his attention and stick-to-it nature brought a lot of seemingly impossible projects to his doorstep, although sometimes he had to work pretty hard to get them that close

to home.

“One of the dicey ones was a B-25 that had been essentially abandoned on St. Croix. It had been sitting for a long time, years, but it had to be flown out, as it wasn’t practical to disassemble and ship it. There was so much corrosion on it I was afraid the gear would collapse just sitting there, and lots of parts were missing or just laying around. The exhaust for one engine, for example, was in the bomb bay. I showed up with my toolbox and beat on that thing for weeks before I got it safe enough to ferry back to Florida. There were two of them side by side, but the airport lost patience with the other one and dug a

big hole and buried it.”

His signature airplane, the Sea Fury, entered his life courtesy of Frank Sanders, who was well known throughout the country for his air shows in the airplane with smoke generators on the wingtips.

“I rode with Frank in his airplane and really loved it, so I picked up a Sea Fury for myself, rebuilt it, and hung a Wright R-3350 on it. I raced it a lot and had a great time in it.”

After nearly three decades hammering on the big iron, George started to look around and think about getting back to his little-airplane roots. Besides, making an agreement with Gary Norville freed him up to do more fun things with



George Baker, lifetime aircraft restorer.

...getting  
back to his

## little-airplane roots.

less complicated airplanes.

"I brought in a young partner, Curtis Boulware, a sharp Embry-Riddle graduate, which allows me to pretty much work on what I want when I want, because the business pretty much runs itself. I went out and got a float rating and then decided I wanted a floatplane. I shopped around and found one that looked good in Alaska and bought it. It took 56 hours of flying, including a stopover at Oshkosh, to get the airplane home.

"The airplane was a little ratty

looking, so I thought I'd buff it out, but the second I laid the buffer on it, big, buffer-sized pieces of finish began spinning off the airplane. It had one of the first water-based covering systems, and it was completely bad. I was going to have to rebuild the airplane, but I needed something to fly in the meantime."

Readers take note: The "I needed something to fly while I was rebuilding this one..." is a repeating pattern in George's life, as you'll see.

"There was a modified PA-12 Super Cruiser up in New Hampshire that looked pretty good. It was set up with all the popular bush mods, including a 150-hp Lycoming, droop tips, and had been rebuilt with the pressed wing ribs from Univair. It was a pretty solid airplane, but I couldn't

stand those drooped tips. They are unbelievably ugly and had to go. Problem was, to install the droop tips, they had to saw off the tips of the spars; fortunately, there is a service bulletin that addresses extending the spars and putting the old tip bows back on. And I wasn't really crazy about the way the engine compartment looked. Or the way the airplane looked in general. So . . ."

George could have gone a lot of different ways with the airplane, including taking it back to completely original, but that wasn't

what George wanted. He wanted an airplane he could fly as much as he wanted and have fun with it, landing it anywhere he wanted along the way. While he was rebuilding the airplane, he didn't worry about ruining its originality because it had been so heavily modified by the time he got it that it didn't have any. So, he had a green light to make the airplane into what he envisioned a Super Cruiser had to be to live up to its name.

"Up front the Lycoming was set up with Dynafocal mounts and a spin-on filter from B&C. We used their lightweight starter and alternator, too. Then we got a stainless exhaust from Sutton Brothers, which uses 40 percent less tubing, so it's not only lighter, but more efficient. I think it's close to being the same thing used on a Grumman Tiger. It's a good-looking exhaust system, and we like good-looking engine compartments, which is why we polished the firewall on this one. And why we used a Steve's Aircraft billet aluminum gascolator.

"We put the F. Atlee Dodge cross brace in the roof of the fuselage, which, in the event of an accident, keeps the wings from collapsing in on the fuselage and harming the rear passenger. The landing gear, which is stock otherwise, got the Dodge beef-up package, too.

"Because we lightened up the firewall-forward, we were able to move the battery, a ventless gell-cell, from the rear of the fuselage to



The engine compartment is nearly as clean as the cockpit, with wires and controls carefully clamped in place.



Stored under the wide rear seat of the P-12 is this chromed Halon fire extinguisher, handy during any ground emergency.



A baggage compartment on a high-wing Piper isn't complete without the Piper Cub bear, right? The coil spring door holder/opener mentioned in the text is on the upper right.

up under the front seat. In the process of doing that, we found that the original plywood the battery was sitting on was pretty scorched. It was actually charred."

Super Cruisers aren't known for having long legs, but that's definitely not the case with George's.

"The STC for hanging a 150-Lyc in a PA-12 includes making major changes in the fuel system. Our airplane has a 30.5-gallon Atlee Dodge aluminum fuel tank in each wing. With 61 gallons, you can pretty much stay up forever, and I've done six-hour legs a number of times.

"The windshield is stock, but the right door has been modified to be a single-piece 'seaplane' unit, which makes it much easier to get in and out the airplane. It has a gas cylinder 'assist' that, when released, slowly pushes the door out until it floats up level with the bottom of the wing.

"The left window, which originally was a slider, also folds out against the bottom of the wing, which is great for ventilation. But the airplane has good ventilation anyway because, with the Sutton Brothers exhaust system, I can bring fresh air in through the right baffle."

When the J-5/PA-12 series was being designed, aircraft electrical systems for small aircraft were in their infancy, so most of the 1940s Piper products used what today appears to be flawed logic in placing their electrical switches and such: They were all up in the right wing root, which, although it gave easy access from the back seat, also put them right up against a fuel tank.

"The proximity of electrical switches to fuel tanks has always bothered me about that series of airplane, so we moved everything onto the panel in a more modern, more usable manner. It meant moving some instruments around, but makes for a much more logical airplane. Also, the instruments are all lit, and we think nothing about flying it at night."

The interior of the Baker family fun machine is anything but stock but very much in keeping with the



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Baker vision of a thoroughly usable Super Cruiser.

“We did the interior in gray leather with the seats being done by a local upholstery lady, Linda Saliga, who we’ve used before. We did the rest ourselves, making upholstery panels out of 0.020 aluminum and gluing the leather to them.”

One of the factors about the airplane that catches your attention the instant you poke your head in the cockpit is the floorboard treatment. Piper floorboards never looked so good.

“We did the floors with birch aircraft plywood, put the Piper logo on the floor between your feet and ahead of the stick. We also put the Piper bear cub emblem on the floor of the baggage compartment and sealed it in clear epoxy, a very durable finish.”

In an effort to make the airplane even more usable than it is, George came up with some interesting (and certified) changes for the baggage area.

“The X-member in the back of the cargo hold has been modified, so rather than being an ‘X,’ it is actually two ‘K’ members that give more room down the middle of the upper part of the fuselage so we can carry long cargo or a couple of sleeping bags. This is a popular STC in Alaska for obvious reasons.

“The outside baggage door gives access to the upper part of the baggage area and actually has two levers that have to be moved to get the door open so it won’t accidentally open in flight.”

What George doesn’t mention about the outside baggage door is the clever use of a long coil spring as both the hold-open strut and the opening-assist strut: He has the geometry set up so when the door is forced shut, the spring bends and coils in on itself. Very clever!

“We did a number of little things that aren’t immediately noticeable,” George says. “For instance, the rear stick has been relocated so the front seat can be slid further back or the stick can be removed, if carrying cargo. We put handy little pockets on the sides for both the passenger and pilot to put small items in. The left pilot pocket holds a portable Icom, and the intercom has an MP3 player wired in such a way that when transmitting or receiving on the radio, the music is cut off until there’s no more voice activity.”

Back in the day, Piper’s approach to new product introduction was rearrange-all-the-old-parts-and-make-a-new-airplane-out-of-them so many of the newer parts will fit older airplanes. And this is why a lot of older Pipers, including George’s Super Cruiser,

have been modified with Super Cub tail surfaces, which benefit from being both statically and aerodynamically balanced for better handling.

Just about everyone who saw George’s airplane at Sun ‘n Fun ‘09 came away talking about the terrific amount of interesting detail work the airplane included. In fact, George says that there were more than 30 supplemental type certificates (STCs) in the airplane, which is a testament to not only his skill as a builder, but also his patience and determination at shuffling paperwork. For that alone he ought to be in a hall of fame.

What we didn’t mention is that, when he found the Super Cruiser was going to be down, he immediately thought “...gotta have an airplane to fly.” So, he bought a flying Clipper. But, the carpet in that, as he puts it, “...needed an oil change, and the firewall would really benefit from being polished, and...” It wound up coming apart, too.

We won’t say that George Baker is a project junky, but when asked how Oshkosh was last year, he commented, “It was great! And an unfinished RV-9A somehow followed me home. This one is going to get an all-glass panel and...”

Well, maybe he actually is a project junkie. Just maybe. 