My Kitfox Flies

Originally posted to the Kitfox and Avid internet forums

After years of effort, and twelve million delays, my Model IV-1200 Kitfox finally took to the air Saturday November 12th, 2005.

And the first flight happened in the nick of time I may add. Because I was so insistent that this 'Fox was going to be a seaplane, I spent a lot of extra time struggling with the installation details for the Aerocet amphibious floats. And while I struggled with working in the backyard (the 'Fox sat too high on the floats to fit in the garage any longer), Wisconsin's winter was nipping at my heels. Brrrr... But having 7,000 acres of water runway right in front of my house, I really wanted to do the initial flight off the water. Well, I got lucky. Saturday brought a warm 58 degrees and clear sunny weather (incidentally, that's twice as warm as our normal average for this time of the year). And it was without question my last opportunity to do the flight off the water, as the weather turned windy and cold by late Saturday afternoon! By the following Saturday we had 4 inches of snow on the ground, and ice on the lake. Whew! That was close. I really did get that flight in at the last opportunity.

I assembled a 45 second mpeg video (3.5 mb) of the first flight. It is available for viewing on the Lazair Kitfox website. Just click on this link http://kitfox.lazair.com/movies/paulfloats.wmv and with any luck you will be able to see it. Also. make sure to check out the other cool videos, pics, and forum stuff on that site. Their direct address is http://kitfox.lazair.com/ I will post still pictures on www.sportflight.com under the completions section, and will also put some pics up on the Lazair Kitfox site.

My outdoor workshop

For any of you that are interested in more of the specific flight details, here's my "mini-book" with more specifics:

After launching the Kitfox in the water and making sure it wasn't going to sink, I water taxied for about an hour at all various speeds. This allowed me to make sure the engine and the airframe were operating as intended, and gave me a very good feel for the airplane (on water at the higher speeds you essentially are "flying" the airplane, using all the controls and engine power much like you would when flying at lower air speeds. So it is a very good way to get a good feel for an airplane). And I learned quickly that this Fox wanted badly to fly anytime the speeds approached the 40 mph mark. That was very encouraging, and I at times found it very difficult to resist letting it lift off. But since me and my safety crew had spent a lot of time preparing a "first flight plan", I slowed things down a bit and stuck to the original plan of just step taxiing for now (that served well to keep my wife Ann, and my friends on the safety boat happy).

The Aerocet amphibious floats handled beautifully, and exhibited no

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unusual handling characteristics. And the 81 hp Rotax 912 engine ran flawlessly, easily bringing the Kitfox up on the step immediately after full power application. It seemed to have plenty of power, even though my IVO in-flight adjustable prop at minimum pitch wouldn't allow for more than 5100 rpm static the day before when tied to a tree wide open. Other than the lower than desired static rpm issue, from a seaplane pilots viewpoint, it felt like everything was right for the first flight. So after refueling, and then giving everything one final look over (hoping to avoid using any of that emergency plan stuff), I taxied back out into the bay. Once the safety boat gave me a thumbs up to say they were in position and ready, I radioed my intentions to takeoff past the boat, and lined up into the wind. Both me and the Kitfox were ready!

Ann and me next to the plane

Making a final cockpit check, and rethinking one last time the worse case scenario emergency action plans, I looked left and right making sure my takeoff area was clear. One last radio call, and it was time. Applying full power while holding full up elevator, the little yellow Kitfox amphib plowed through the water as the bows of the floats raised their way up to the surface of the lake. Within seconds, the water spray was all behind me and I was planing across the surface with the speed building steadily. Man, it felt good! Smooth and stable. No porpoising, and was easy to keep her in the right attitude for takeoff. Finding the sweet spot was very easy (the position on the float bottom where the airplane balances hydrodynamically, and allows the wing angle of attack to be adjusted for liftoff with stick back pressure). Only having gone a third of the distance I expected liftoff to occur at, the speed was nearly at 40 mph already. Without even trying, at a little over 40 mph she lifted off all on her own. Wow, what a rush! It flys! Concentrate, concentrate Paul... ok, ok. The Fox was flying very steady and stable at 80 mph at 5000 rpm so I climbed a few hundred feet. Knowing I had miles of water in front of me if I needed to set her back down was a reassurance that ran through my mind just momentarily, as the Fox flew so exceptionally nice that I just proceeded with the original plan of circling the large island in front of my house so that everyone on the safety boat could keep an eye on my position should something go wrong. But after making 6 circuits around the island at various altitudes and speeds (of course while also providing the boat with a lot of photo & video opportunities), and verifying good engine temps and pressures, as well as overall airframe controllability and handling, I climbed a couple thousand feet (at 1,000 fpm according to my VSI), and then slowed the Kitfox down to explore more of the flight envelope.

After slowing to 50 mph I put on flaps one notch at a time, checking for aileron effectiveness (the gear up handle limits right aileron movement somewhat due to squashing ones right knee between the stick

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and the handle when full right aileron is needed and the gear is up. But it turned out to not be a problem as there was plenty of aileron authority in all settings. Significantly better than the earlier models I had flown). That Model IV-1200 aileron setup has a really nice roll rate. Crisp and quick. But not too quick. Very, very nice control feel!

912ul Model IV-1200 on Aerocet Amphib floats

Seeing how things were working out so well thus far, I decided to be brave and see how fast this little Fox could go straight and level. So I firewalled the throttle handle, and bumped the IVO prop pitch up a bit as soon as I realized I was hitting 5800 rpm. That brought the rpms down to 5500 and shortly afterwards it brought the airspeed to 110 mph! Wow! I didn't think it would go that fast. At least not on floats. Wanting to test it multiple directions to verify those numbers with my GPS, I changed my mind when realizing how much I was getting bounced around by the ever increasing strong and gusty winds. Go easy there Paul, there will be plenty of time to verify top speeds some other day.

So I decided it was time to get to the airport, where the Kitfox would have a nice hangar to keep it out of the elements. Of course, that meant I had to prepare for a wheels down landing. Even though I retracted that landing gear in the back yard I swear a thousand times, and everything was working perfectly, I will admit there was a little lump in my throat the first time I reached over and pushed the gear extension (Johnson-Bar) handle down..... Seconds later, just like the doctor ordered, I could see all four wheels down-and-locked in the float mirrors. Ahhhh... Much more at ease after that first in-flight gear test, I flew past the boat one last time so they could make a final inspection of the airplane before I headed towards the airport twenty miles away. After verifying there were no loose parts hanging down, smoke trails, or flames (chuckle), I turned north and climbed to 3,000 ft agl. As promised I gave my wife a radio report of my location in relationship to "the plan" we had made earlier whereas I would follow highways and roads that had landing areas next to them should I need them, and I would give her a radio report every couple minutes as she drove to the airport in her car (was an easy thing to do for her peace of mind).

Wanting to stay in radio contact range with her, while thoroughly enjoying flying the Kitfox, I intentionally made the flight last as long as possible. Even though it was now getting exceptionally windy, I decided to play around with some of the goodies I had installed. Particularly that IVO prop. So I slowed the engine down while bumping the electric IVO prop pitch up one finger-flick at a time. You hardly had to move it to feel the change in the pull. And so smooth. This is one sweet prop. And apparently very efficient. At 4200 rpm (somewhere around 50% power and 2.5 gph?) I

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was still able to maintain altitude, and fly at 75-80 mph. Talk about fuel economy... And so quiet too. Kind of nice way to go if you're not in any hurry. Incidentally, I was flying with 20gallons of fuel, me (180lbs), and a 775 lb Kitfox for a total weight of 1,075 lbs. Of course, it was only 58 degrees, and it was windy. But overall, I was really impressed with how well that IVO prop and that 912ul could handle the bulk and weight of this amphibious Kitfox.

912ul Model IV- 1200 on Aerocet Amphib floats

Before I knew it, I was entering the airport traffic pattern for my first wheels-down landing. While doing my last minute cockpit check, and saying out loud "this is an airport landing, the landing gear is down" and verifying landing gear position again, I heard a familiar voice call a base to final turn on the same runway I was setting up for. It was my friend from the neighboring town flying his Sube powered Model IV Kitfox (small world). Seeing him bounce around I came to realize not only did we not have a good runway choice that was into the wind, but it was gusty and there appeared to be some wind-shear issues as well. Why today? Why couldn't it be nice? Oh well, since when did complaining about weather do anything to improve it? So I reminded myself that even though I've not had a go-around in an airplane in years, that I should plan for one on this day. And if it takes me ten go-arounds before I get one good landing, so be it. So I continued on my approach. It was gusty, but overall the Fox was handling things better than anticipated. Keeping the approach speed a little higher at 70 mph gave me a nice smooth descent right down to the runway threshold. Once over the runway I just pulled back power some, raised the nose some, and bled off speed gradually. Amazingly, the turbulence was minimal and things were steady and stable. Before I knew it, I heard a double-squeak out of the main gears. Now all I had left to do was to gradually lower the nose at the slowest possible speed so as not to create any undue stresses on those small castoring nose wheels out front. Squeak, squeak....I was down on the ground on all four wheels. Hallelujah!

Taxiing in I announced "Experimental Kitfox Amphib clear of all runways". My grin was ear to ear. I could feel a warm flush feeling come over me as I taxied up to the hangars. I was feeling better than good. Just as I shut the mags off and the prop stopped turning, before I unbuckled and opened the door, I reflected for just a second. Only one thing came to my mind. So I said it out loud. "Far Out!" I had just completed quite an accomplishment. And I will be the first to admit I'm not typically very emotional. But that day, I caught myself being a little teary eyed when it was all over. What a thrill to see that all my hard work had paid off.

My wife always says that a man flying an airplane for the first time has to be the closest thing to a man being able to experience giving birth. Obviously, us men wouldn't have any way to really know that. But what I do know is that I now have a new baby to show off...

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Central Wisconsin

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ps - I have a lot of small cosmetic things to still do to the airplane, like add a lot of blue paint to the cowl, stripe the floats, pinstripe all the dark blue, install some fairings, permanently placard the instrument panel, etc, etc. Hopefully will finish those over the winter and /or early spring as I'm considering flying it to Florida's Sun-N-Fun airshow.

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