

DRAGONFLY BUILDERS AND FLYERS NEWSLETTER

THE OFFICIAL VOICE OF DRAGONFLY BUILDERS ALL OVER THE WORLD

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First Flight

By Patrick Hildebrand

As a youth I was always dazzled by flying. I never pursued getting my pilot's license until 1985, while I was looking at a flying article in a

drugstore and my wife caught me. She said, "Why don't you check it out?". That's all I needed to hear. Six months later Patrick Hildebrand received his pilot's license. I thought aviation would be useful as personal transportation and a great

hobby. I was intrigued by articles in a magazine called Sport Aviation and its parent organization, EAA.

In 1986, I read an article in a special Popular Mechanics hardcover about various homebuilt airplanes includ-

Patrick Hildebrand's first flight (Continued from page 1)

ing one called the Viking Dragonfly. I have always aspired to a "do it now" attitude and within a few months of reading about the dragonfly, I purchased a set of plans!

While growing up, I had the opportunity to work on cars and engines as personal interest, and build a few model planes. After reviewing the requirements of the construction of the Dragonfly, I thought, "I can do this". However, making the commitment to buy all the materials and where to get them was intimidating. I had not yet heard of Aircraft Spruce and Specialty.

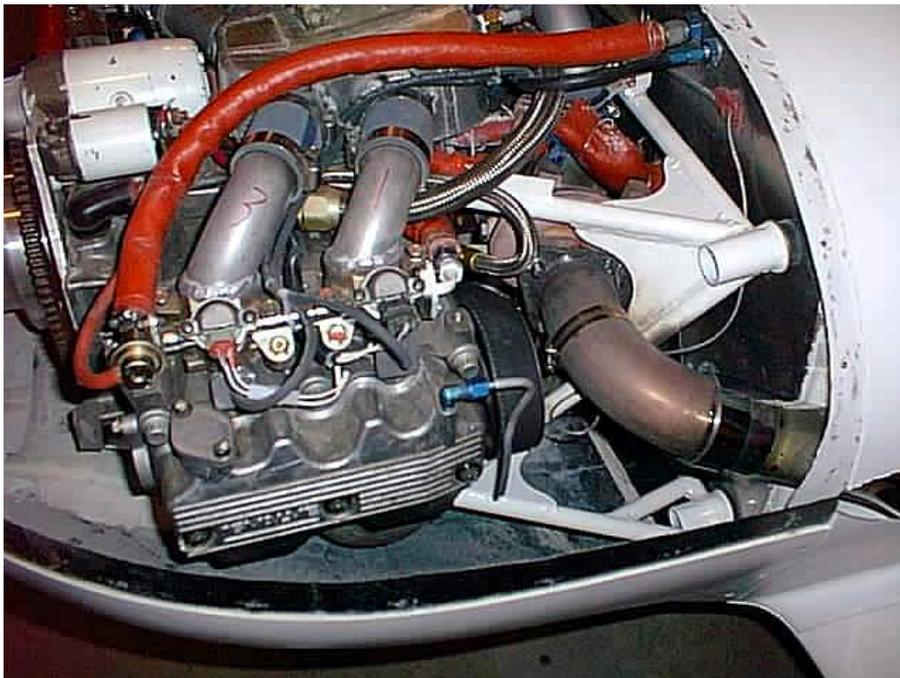
Years went by and my beautiful children arrived. The Dragonfly, still a dream, was low on priorities. I continued to own and fly other airplanes, but whenever I saw Reg Clarke's bird the dream was rekindled. Then in 1998, I found an ad in our Canadian Pilots and Owners (COPA) magazine. The dragonfly project was about 40% along. After



**In the construction phase,
Patrick's belly scoop and hoop gear attachment.**

convincing my wife that this was the window of opportunity, she consented and I set out to pick up my dream.

The dream machine was a bit tarnished. It had been in the works more than 15 years. Some parts were well made, others not quite up to spec. It needed a warm home, I couldn't say no.



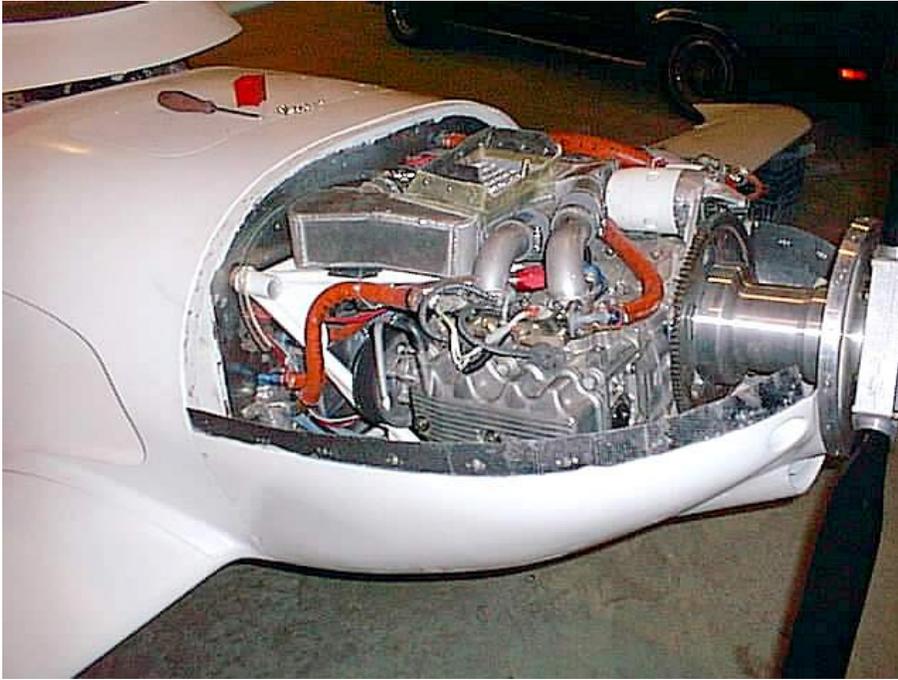
**1998 Subaru EJ22, RHB5 turbo with an enhanced higher-capacity
compressor section, for high altitude**

After getting to know Reg, he convinced me to consider the Subaru engine. I sourced some of the parts, but still ended up buying a lot of parts, materials and an engine core from Reg and his brother Clarke. They have become good friends and have been a great resource and help. I am confident I could have done it all myself, but due to time constraints with our business, I solicited the help of the Clark brothers, who own and operate Air-Ryder.

The engine is a stock Subaru EJ22 out of a 1998 Legacy. Somehow Bud managed to find it right out of Japan. We estimated less than 5000 miles on the engine in its car "host". It looked like brand new.

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Patrick Hildebrand's first flight (Continued from page 2)



We removed all accessories, intake, and hoses, and the bell housing was cut off.

We then built a custom engine

mount, intake and exhaust system. I had Turbo Durabuilt of Illinois build up a RHB5 turbo with an enhanced higher-capacity compressor section, for high altitude. I bought the race-

tech SDS EFI and ignition computer. The cooling and fuel system was built with hose parts from a racing accessories shop. Everything else was reused parts from the original Subaru. I have a background in electronics so the electrical system seemed relatively easy.

One of the most lengthy projects on the airplane was the cooling air belly scoop. We built the basic scoop at Air-Ryder. That was the quick part but very essential. I spent a lot of time fitting it on and fabricating a smooth laminar air ramp at the inlet nozzle. I don't know whether it made any difference but when you read the specs at the end of this article, you be the judge.

I asked a lot of questions and found a lot of answers to optimizing efficiency and maintaining laminar airflow on everything. There were

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Serial Number 520 flies!

By Patrick Hildebrand

When my project was complete about mid October, my youngest daughter said to me, "Daddy, now you've built and airplane." As I agreed, I pointed out to her (gently of course) that it wasn't an airplane until it has flown. Until then its just a lawn ornament. As of this writing, not only has it flown, but it now has 3 hours on it!

It started with another builder in 1981 and is now a reality. Gone are the feelings and dreaming of what it will be like to fly. No more explaining to friends what I think it will fly like (and their skepticism of whether it will ever fly).

The Subaru EJ22 pulled very smooth, hard and strong. We were



off in about 1000' at about 60 kts. At about 100 kts by the end of the runway. Climb out at approx 1500 ft/min. at 100-110 kts. Level at 4000' across the field throttled back with no boost indicating 145 kts. That engine was a pile of work but it sure is sweet to fly behind. Once I have more performance data I'll submit detail on it and the sooby 22. I'd like to say it was all worth it. Can't commit to going that far yet.

A bit of left roll tendency I'll need to

fix and adjust the pitch trim, otherwise, one of the most exciting days I've had. After one overshoot, landing was smooth over the fence at 80 kts and touch down around 60. The hoop landing gear is sweet to land on. Weight transfer to the gear is gradual and smooth.

Everything is going well flying my new bird. The speed and climb rates are very exciting. I can truly say that I never thought that the flying could be this exciting. I have always enjoyed flying, but in this thing I feel like a kid again. I put the throttle forward and it goes. Climb out at 1000 to 1500 ft/min. Rocket by the Piper Arrows. It is so rock solid in the air. The hoop gear is really smooth on landings. I find it a lot easier to land than the MKII gear. Not quite as jumpy. Maybe it was my flying skill that was the problem.

Patrick Hildebrand's first flight (Continued from page 3)

many compromises but I am happy with the final product.

The first flight was far too long in coming. About a year and a half behind where I thought it would be. However, when the day came I wasn't sure I was up to it. Our field has 3000 feet of asphalt, which was a bit short for my logic.

The day of reckoning was as perfect as you can get. My checklist on the airplane had everything working well. There was little wind, which allowed me the option to land and take off either way, if needed. I can never effectively describe the feeling of "taxi to position" and bringing the throttle to take off power (30" MP). Looking down that runway, I was committed as soon as I



Check this photo closely. It's a very simple and elegant electrically actuated reflexor mechanism.

released the brakes. It accelerated in 1000 feet to 70 mph and with a single tug, she took to the sky.

I was at about 100 at the end of the runway accelerating in ground effect and getting the feel. It climbed left wing heavy but was thrilling nonetheless. My dream was a reality. I had been deliberating long about whether I should be the one to make the test flight. Emotion won out, as for me, few things could be as thrilling as building and being the first to fly your own machine.

Since then I have been testing and testing, at gradually increased speeds. I've adjusted the rigging for roll. The elevators were out. Now its straight and faster. As of this writing, I have over 15 hours on it.

Recently I made my first cross country flight. I met up with Reg Clarke and did some formation flying. What a treat. Two Dragonfly's flying low and at over at 180 mph. My round trip to Hanna, Alberta and back was quick. Average speed on

Continued on next page

Patrick Hildebrand's first flight (Continued from page 4)

the GPS was about 170 kts. Going down with a bit of wind on the tail 198 kts on the GPS at 7500 feet. It is so stable and yet responsive. My steady climb is about 800 ft/min solo. After I have 25 hours on it I'll try it cautiously at some higher power settings.

Patrick Hildebrand

Dragonfly Specs:

Registration: C-GKPG
Engine: EJ22 Legacy DDT
Empty Wt: 840 lbs.
Prop: Warp Drive three blade
Diameter: 54"
Pitch: 17° measured 1" from tip
Cruise Speed: 170 kts.
Fuel Burn: about 5 gph.

Patrick Hildebrand Specs:

Age: 44
Height: 6'2"
Weight: 180 lbs.
Appearance: Handsome
(at least he think so)
Wife: One, Cheryl
Children: Two, Felice and Karmin
Airplanes: Two, Gumby and Pokey
(Dragonfly and Grumman)
Occupation: Investment Advisor
(dangerous occupation)

Flying Experience:

700 hours total time.
300 hours tail dragger.
18 hours float endorsement
19 hours, Dragonfly

Types flown: C150, C172, Stinson 108-2, Aeronca Champ, Piper Vagabond, Luscombe 8, 8F, several Pietenpols, Midget Mustang, Dragonfly, Grumman AA5, Mooney M20, Piper Chieftain, Piper PA28, Bellanca Scout, Murphy Rebel. (from memory)



One of many innovative features in Patrick's plane is his carbon fiber auxiliary fuel tank.

Patrick provided me with many more excellent photos, too many to publish. The attention to detail and the craftsmanship of this plane is outstanding. Hopefully we can get Patrick to fly down to the next gathering so that we can see the work in person. I'd like to personally thank Patrick for this contribution to the newsletter. It's very encouraging to all of us who are still building, and dreaming of that first flight.

~Editor

John Mason's canard repair.

Canard Repair

By Pat Panzera

In issue #97 of the DBFN, we reported on the control linkage problem John Mason discovered during a recent annual condition inspection of his MKII. This was not the only problem discovered and repaired during the inspection process. The other major problem is an old one, one we all should be looking for when doing a condition inspection.

It's been speculated for years that having our heels bounce along on top of the canard can cause the foam core to compress and pull away from the fiberglass lay-up. It's been reported in older issues of the newsletter, and when John did his coin tap test in this area, he heard the tell-tail "clack" of a failed glass-to-foam bond.

John called me and had me bring some materials to help him fix this condition, so I packed up my epoxy



John Mason defining the damaged area with a coin and a marker

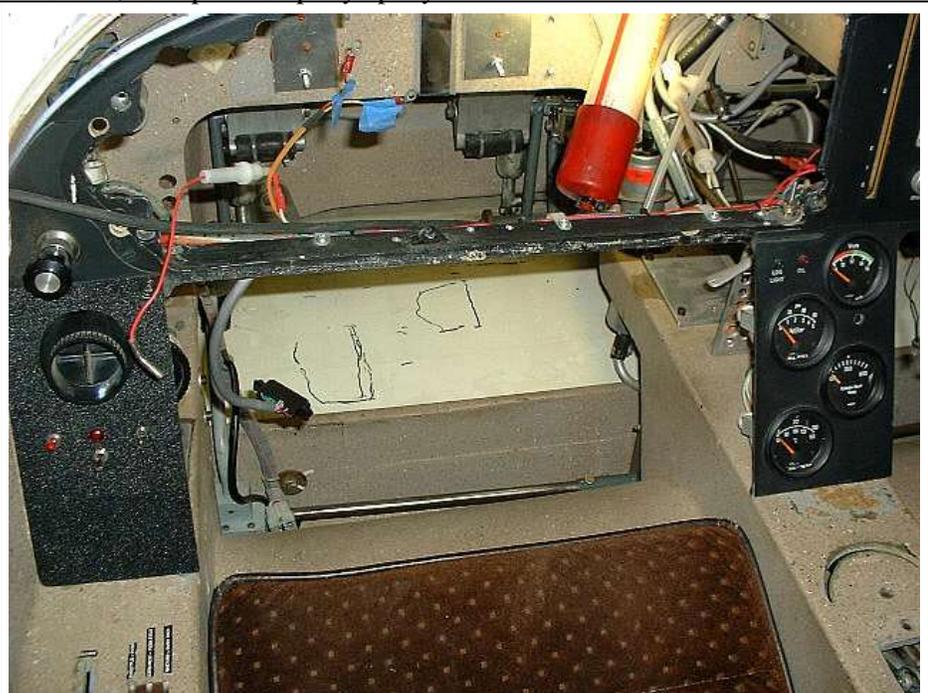
pump, some 10oz bid, a syringe, micro balloons, latex gloves, cordless and corded drill, drill bit index, abrasive wheels, scissors, Sharpie, mixing cups and stir sticks.

I took the opportunity to get some photos of the process, for a future newsletter article. Well, here it is.

We started with John doing the "coin tap" test, to define the perimeter of the damaged areas. Using the Sharpie, John drew the outline of the damaged area, which clearly showed us the cause of the disbonding was exactly what we expected. Note how in the photo to the left, you can see John's resting position while on long cross country flights. This damage could also be from ingress and egress, but whatever the actual cause, it needed to be fixed.

Once the area was defined, the next step was to remove the paint from the area, without damaging the fiberglass weave. We chose to use what I call a plastic wire wheel. It's actually a nylon wheel, which has aluminum oxide embedded in the bristles. Chucked in to an electric

Continued on next page



Here you can clearly see that the damage is from feet.

John Mason's canard repair. (continued from page 6)

drill, it usually makes short work of removing paint, rust, and other gunk... but not this paint. This paint is 20 year old Imron, a 2 part polyurethane enamel system (by DuPont) which is VERY hard, yet flexible. Read that as being highly resilient., especially to my plastic wire wheel.

The wheel hardly made a dent in the paint, but it did roughen it up sufficiently for us to feel satisfied with the final bonding, which consisted of 3 layers of 10oz bid to essentially repair the skin after we drilled holes in it.

Once we were happy with the paint removal, we obviously had to define the damaged area again, as the abrasive wheel was at least successful in removing the Sharpie lines.

With the paint removal completed as far as we were willing to take it, and with the damaged area defined once again, a properly sized drill bit was chucked in my cordless drill.



We probably spent an hour trying to remove the paint.

The actual size of the drill bit will be determined by the size of the syringe you use. John and I live in an area of California known for agriculture and dairy, so feed stores are not that uncommon. My favorite

feed store still freaks out every time I go in and ask for their largest syringe.

So with syringe in hand, we chose a bit which would allow the very tip of the syringe (which is tapered) to enter the hole, but not go too deep. The ideal fit would be to get the end of the syringe to go just past the glass (completely through it's thickness), but not in to the foam.

Holes were then drilled about an inch or so apart, all the way around the perimeter of each damaged area, and in the field of the damage. (see photo at left)

A slurry of micro was then mixed. The consistency is not overly critical. You'll need it to be JUST runny enough to pour in to the syringe, and pass through the opening when injecting it in to the part, but not overly runny. Basically, we made it as thick as we felt we could manage.

Paint removed, holes drilled, it's time to inject micro!

Continued on next page



Pouring the slurry in to a veterinary syringe.



Injecting the slurry

another. Once all the holes were filled, I wiped down the entire area with a clean paper towel.

ously possible to do the job with the canard in place, and although most of John's panel is removable, it still wasn't fun.

But before we got involved with mixing and injecting micro, considerations were made for cleaning up in addition to not making too much mess. Any micro slurry which might spill out of the injected holes, will run in to the gap between the trailing edge (of the center section) and the lift bulkhead. So we taped over that area with packing tape to prevent any stray micro from making our lives miserable.

I then cut 3 layer of bid, 2 cut on the bias, and one cut square. Each layer was wetted out individually, and then squeegeed out to the best ratio of glass to epoxy I could make.

The step of adding the 3 layers of bid is 2 fold. We did just drill through the 3 layers of uni, and this should repair that damage. But it's also to help prevent (or reduce the risk of) the damage reoccurring.

Once we were properly prepared, and the micro slurry was mixed, I started injecting the slurry in to the holes drilled in to the canard, starting with the holes closest to me and working away.

After a bit of epoxy was painted on to the canard, the 3 layers were put in place. I did it this way (as opposed to wetting out each piece in place) to avoid having to deal with the removing the excess, epoxy while working under the instrument panel.

Pat

Thanks to John Mason for allowing me to publish this project.

As micro was injected in to a hole, as the void began to fill, micro would start to ooze out of an adjacent hole. When that would happen, that was my signal to move the syringe to that hole, and work my way up the canard, form one hole to

If you ever need to make this repair, you might want to consider removing the canard first. Although it's obvi-



The completed project

The tale of 58WH

Progress Report

By Rick Dyer

Winter Hawk Technology

The tale of 58WH began as I was awaiting to fly right seat on a corporate flight. My friend threw the latest issue of Flying magazine at me and it fell open to the classifieds. There it was, just started by one of the old Arizona gang and sitting in a garage since 1984. It was 1995 at the time.

A couple of quick phone calls and she was mine for the flying down and packing up. I was heading west with the company's brand new Challenger IV (passenger only this time) and after landing in Bozeman MT, I made my way to Phoenix on commercial flights. Tom Huffman who had started the plane was the consummate gentleman and craftsman. The deal was sealed; the plane was crated and loaded in a hanger where day time temps reached 114°.

My design philosophy from the beginning was to keep fairly true to the plans, but build it as light as possible and as slippery as possible. Any aircraft is a collection of compromises and I felt that going after performance with more power would introduce more avenues to explore than I was willing to go poking around. Building it light and clean while limiting, has allowed me to have a very clear focus from day one.

58WH started life as Task kit, so my feeling is that the pre-molded kits would give me a head start on keeping it light. With that thought process out of the way I went tilting at the windmills of ex-



Overall view of Rick's project.

cess weight and overly complex designs. With a Dragonfly, let's call it maybe one or two more degrees of simplification, since it is not all that complex to begin with!

glass cockpit later. How driven was I in weight reduction? The plans for the rudder pedals required 6 AN-3 bolts; I did it with four, and with 8" less of 1/2" 4130 tube. It is a disease

I know. This obsession didn't stop there. I of course opted for a single center stick. When I went to Phoenix to transport the plane home, Tom had arranged for Larry Brown to take me up in his gull wing Mark II, which has a single stick. Tom is a wise man; he was now sure that the plane he started was going to get finished. Without the need for the connection to the other stick I saw no need for the seatback bearing so out went two more AN-3 bolts and a little more chrome moly,

and the aileron torque tube is a single aluminum tube running from the



Task built wing root fairing, as viewed from behind the right (port) wing.

The two directions I'm focusing on are the airframe and the instrumentation. I will cover the airframe first and then cover the world's smallest

Continued on next page

console bearing back to the motion changer.

Weight reduction was only 1/2 of the airframe plan, drag reduction being the second half. Task has really nice root fairings for the rear wing, but there was nothing for the canard. I wished I had taken more pictures of the creation of my canard fairing, any one of the three times that I did them. The first attempt, I micro'd foam in place and then glassed it. Best thing about that was that it peeled off easily when I saw that it did not

work. Next up was to bondo an aluminum form and fair it into the fuselage with modeling clay. After putting the fuselage on the canard and laying this all out perfectly, I then layered it with 2 x 6oz BID. The results were great (note: I would only use the modeling clay on non-structural lay-ups), not a big a break through compared to Rutan's concept, but I was very happy with the result... until I next had the fuselage and canard united and the fairing was flying 1/4" above the upper surface. This to was easy to redo, which I did, with better results each time. The bottom of the fairing has been left open to allow the elevators be removable. A piece will be constructed later to seal this area once the plane has been assembled.

On the instrumentation I am creating what I call the world's smallest



Right side, showing the canard root fairing, and part of the "rolling fuselage" fixture.

glass cockpit. The instrumentation includes Rocky Mountain's μ coder and Audio Avionics voice based engine monitor, since each of these



Another view of the canard root fairing.

microprocessor controlled instruments replaces banks of individual instruments. The level on miniaturization in these instruments is only surpassed by the utility that they contain. Each instrument is able to

communicate in some form or another, with either a GPS or each other. It is interesting to note that while these units were cutting edge when designed, they now seem archaic when compared to the latest generation. The final piece of "cockpit jewelry" will be one of the PDA based GPS units. I started down this path with the Control Vision software and bought the iPAQ with that in mind. Now I see more options opening up... so I will not pull the trigger on buying the software until I am al-

most ready to fly.

I have not mentioned much on the engine yet, and since it has not been run, Pat and I decided that I would write about it in an update, later in the year. But one phase of the engine falls under the airframe lighting and streamlining, and that is the exhaust system. Knowing that the engine would gain some power by having a proper header I set out to have only one exhaust outlet. I also knew to get full effect of a header on an engine that turns at 3200 rpm, the collector would be need to located way back by the seat, and the outlet

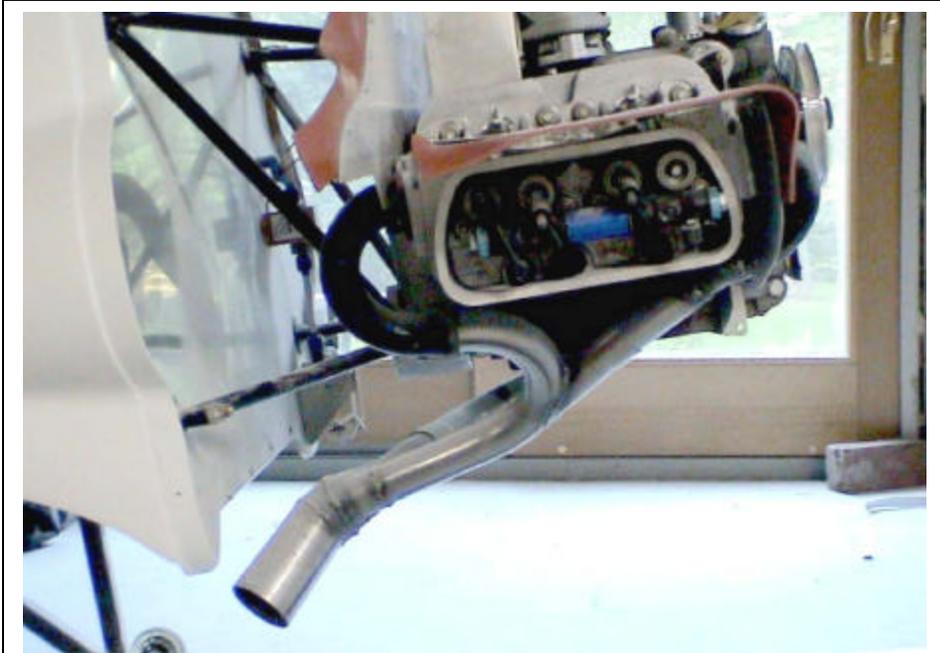
would need to exit behind the rear wing! My calculation yielded a 44" primary tube and 21" secondary. No way this was going to be lightweight, nor low drag. Back to the

Continued on next page

drawing board for a new flexible tri-Y design. Each stub running from it's cylinder head (bank) is Siameed together, and then each bank is collected at the lower right hand side of the cowling, away from the gascolator. Each section is slip-jointed which allows the system to expand and contract. An aerodynamic tail will grow on the back of the main outlet pipe and be part of the muffling system. The design will not gain much if any in the way of HP, but it is light and will present very little in the way of drag to the slipstream.

The only other lightening program was the sanding. In my formative years I worked in an auto body shop and I thought I got all of that sanding out of my system. Apparently I'm some sort of a masochist. I have heard of composite planes gaining a thick coating of micro on their way to getting their smooth glass coat. I wanted to avoid that for two reasons: first is the weight, but also the cold we experience in the north east has a way of putting cracks in these kinds of structures. So while sanding the plane, I tried to stay as close to the weave of the cloth as possible. The sanding schedule was 36 grit then 80 grit wherever there was micro. When that was done, all surfaces were sanded with 100 grit and three coats of Poly Fiber UV Smooth Prime Rolled on. This was then board sanded with 150 grit. Three more coats of UV Smooth Prime sanded with 320 will have it ready to be shiny and white. I plan to use Poly Fiber's Top Gloss.

One final update on lightening the bird, I didn't like the way that the baffle system was designed. I could see that the seal would be a compromise and thus limit cooling, limiting duration of climb. My solution



Rick's "Tri-Y" exhaust system

was to redesign the whole cooling system using a plenum. As I embarked on making a foam plug for each side of the engine, I thought it



Rick's Plenum

would make a much nicer finished product if I made a female mold from the plug. As I completed the plugs it was clear that some indents would be required to clear the intake manifold... which I had not built

yet. A few days later, an EAA chapter member was visiting, and we redesigned the intake to be something that does not resemble anything that is currently being used... so much for some day being able to sell plenum cowls to fellow Dragonflyers. The solution broke the logger head, build a generic plenum mold and create blisters (as needed) for each different manifold design. This is progress again, time to stop writing as a box has just arrived from Aircraft Spruce.

As I finish this phase of the project I am also chasing down the

last details of the engine assembly. Look for an engine update and a possible first flight report in the next installment.

Rick Dyer

The state of our Newsletter

The State of DBFN

By Patrick Panzera

Well gang, it's that time once again, time to renew our subscriptions. Although the cost of everything seems to climb ever higher year after year, the DBFN subscription rate will remain the same, and for some, the price will actually go down.

This is the last issue for 2002, and for many, the last issue of your subscription, so I urge you to fill out the enclosed form and mail it back as soon as you can. Check your mailing label. If it reads that your last issue is #100, then it's time to renew. If it reads higher than #100, don't worry.

I've now completed 2 years as your editor, and although it was a real struggle at first, I've really come to enjoy the duties as of late. The biggest difference is the software I'm now using. I would have to labor over certain pages an entire evening, fighting the software which would make the images and text jump around, seemingly at will. This past summer I was introduced to MS Publisher which has made my life much easier, and taken all the drudgery out of editing the newsletter. What use to literally take hours, now takes only moments!

In the last DBFN issue, Spud announce that he was going to take the newsletter back under his wing. This was a two fold decision. The first part of the decision was that Spud was going through withdrawal. He really missed doing the newsletter, so much so, that he mentioned several times to me that if I ever wanted out, he'd gladly pick it up for 2002. But I wasn't ready to let go. I still wanted at least another year, so we decided

that he'd pick it up at the beginning of 2003. The second part of the decision was that this past summer I became the editor of CONTACT! Magazine, and it made even more sense that someone other than I take on the responsibility of producing DBFN. But that's also the same time I was introduced to Publisher, as that was the software CONTACT! was being produced with.

The last 2 issues of DBFN were produced with Publisher, and while working on them, I started to regret the promise I made to Spud about

of DBFN editor. Seems that as much as he wanted to edit DBFN in 2003 and beyond, he realized that with his work schedule, his driving desire to work on his own project, and the fact that he's now at the helm of the annual Kansas gathering (formally known as "Ottawa", now known as "Coffey Break") he felt that he could not do as good of a job as he felt he should.

A few e-mails and phone calls later, long story short, I'm staying on as editor for at least one more year, with a renewed enthusiasm! I'm



Future articles might include a progress report from "Tucson Tom" I visited his project this past summer, it's quite remarkable.

his becoming the editor once again. As stated before, Publisher has made all the difference. But a deal is a deal, so we kept with the plan, and I did not let on that I was secretly wishing I could stay on as editor.

It was only a few days ago that I learned that Spud was feeling a bit remorseful over accepting the duties

really looking forward to the 2003 edition of the Dragonfly Builders and Flyers Newsletter! And although we've not worked out all the details as of this writing, it's looking like I'll be joined by a contributing editor, if not a full on co-editor, who is bent on seeing that the DBFN become the wealth of useful information it once was! In addition

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Our Newsletter (continued from page 12)

to his contributions, I already have several great contributions lined up for future issues, great technical stuff, and a few more first flight stories!

As mentioned earlier, there will be a slight change in the subscription fees for 2003. I've sharpened my pencil and have determined that we've been overcharging our Canadian and overseas friends, as the postage fees don't quite jive with what we've been charging. So check the subscription form and see that I've lowered the fee for everyone but us poor 'ol Americans. But fear not, our American friends are getting a break too, in that the cost of their subscription is not going up, even though postage fees have risen recently.

The last newsletter and this newsletter came out to 16 pages, 4 more than the "normal" 12. This is something I would like to keep up, but it will be dependant on 2 factors. The first is content. I can't fill the pages if I don't have anything to fill them with! So as a good newsletter editor should do, I'm on one knee right now, begging you to contribute something for 2003. I can get on both knees if I have to, but one should suffice!

It's your contributions that make DBFN valuable. You know what you like to read about, so writing about the same kind of stuff shouldn't be all that difficult! And don't worry if writing is not your forte, we can help with that. I have a submission for CONTACT! which I've been helping the author work on for some time now. Not that there was anything wrong with what he wrote, but the article left the reader with some lingering questions, which I'm helping him answer. It's going to be a great story. I'm more than

willing to help anyone who feels that their writing ability would keep them from contributing an article. So I beg you, consider contributing something, even if it's just a progress report and a photo or two. I know I really love to see what you guys are doing out there, and even though some of your ideas may not have any flight time behind them, they still can be inspirational!

I'm open to advice and criticism as well if you feel like contributing in that manner, what ever it takes to get this publication to become everyone's favorite. I'm also looking for more volunteers to contribute on a regular basis. Dave Morris use to produce a column based on the best of the internet discussions. Someone might want to pick up where Dave left off.

The other factor which will allow me to produce 16 pages of newsletter every month is the subscription base itself. The more subscribers we have, the lower the per issue the costs. If we can get numbers high enough, I can apply for a bulk rate permit and really cut the costs of mailing.

So in doing my share, I'm bearing the cost to mail out "reminders" to all the people who have dropped off the mailing list over the years. Hopefully we can get many of them back. For your part, I simply ask that you renew your subscription as soon as you can.

One last note, you may have noticed a change in the DBFN logo. I figured it was time for a change, but I didn't want to get too far away from the old logo, so I simply chrome plated it. If you feel strongly one way or the other about this change, let me know, I'd appreciate it.

Pat

Coffey Break 2003

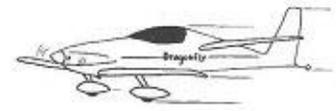
Hi Everyone,

After taking input from the gang, it was almost 100% in favor of the October 3 through 5th weekend. So the official dates for 2003 are October 3rd, 4th and 5th 2003

Look forward to seeing everyone there!

Very Best Regards,

Spud Spornitz



Canopy Strut Source

I'm passing this on to those who may have a need, now or in the future, for canopy struts. I recently had occasion to replace mine & went directly to the manufacturer, Suspa in Grand Rapids, MI who quoted me a price, but suggested if I purchase from their distributor that I would get a much better price.

So I did, and received off-the-shelf shipment @ \$15.00 each, which is 40% off the Suspa price. Part No. GS-20-20 20# Gas Strut. If you don't already have the mating attachment, you'll need 2 for each strut. The Suspa item is Ball Stud 10mm 5/16-18thd. The distributor is:

KenCon
PO Box 737
Bristol, IN 46507
(574) 848-5252

I hope this is helpful to someone.

Phil Williams

12th Annual Tandem Wing Fly-In Video now available

By Jeff Letempt

So you did not get to attend the 12th Annual Tandem Wing Fly-In? Man did you ever miss a great event...make sure you are there next year! There were a series of great forums on Friday and Saturday for the Dragonfly, the Q family of aircraft, engines, X-Plane, the Raptor, aircraft electrical systems (Bob Nuckolls) and more. In addition to the forums there were also some beautiful airplanes present!!! A great time was had by everyone!

So now you are probably all depressed about not making it this year – right? Well don't despair, because I was there with my brand new digital camcorder and captured almost 15 hours of video. I taped every forum, I did a detailed walk around of every airplane, and I even recorded the awards banquet. Don Stewart had done this for many years in the past, but he was not able to attend the fly-in, so I volunteered to assume those duties.

I am in the process of editing the 15 hours of raw tape down to about 7 to 7 ½ hours of video, so I can get it all on one VHS tape in NTSC format (I may be able to get it in PAL, but I am not sure at this point). I am going to finish editing the tape myself, but then send it off to be professionally duplicated for the best possible quality.

I do not intend on having more than a few "extra" tapes produced, so in order to be able to have an accurate count or how many to request, I'll be taking orders in advance.

I am not looking to get rich on this, so here is the deal (and I'd appreciate it if you'd act quickly before I change my mind). Send me \$25 USD and I will mail you a tape any-

where in the world. Personal checks (heck if I can't trust you guys who can I trust) or money orders are ok. Send you payment along with your address to:

Jeffrey LeTempt
1107 Murry Lane
Rolla, MO 65401

I would like to get this project out of the way soon so I will accept orders through 1 March 2003. That should give you plenty of time to contact me with your orders. I wanted to have this done before the end of 2002, but got busy working on my Dragonfly. This tape will not replace actually being there, but it is the next best thing. Heck, even if you were there, this will be a great reminder of the awesome time I'm sure you had!
Jeff Letempt



Jeffrey manning the camera at Coffey Break 2002

Fly-In schedule for 2003

January 18th Corvair College San Antonio TX

Learn how to build Corvair engines and convert them for experimental aviation. William Wynne will be on hand to conduct the teaching, and he will have his manual as well as other specialized parts available For more information visit : <http://www.corvaircraft.com> or call Oscar Zuniga at (210)521-9904

April 2nd-8th Sun 'n Fun Lakeland, FL

May 3rd Mountain States Tandem wing fly-in Laughlin, NV

Contact Don Stewart siinc@zwi.net for more info.

Late June Mattoon Tandem wing fly-in Mattoon, IL

July 29th-August 4 EAA AirVenture Oshkosh, WI

August 15th-16th Livermore Fly-In Livermore, CA

Contact Bob Farnam bfarnam@pacbell.net for more info.

October 3rd-5th Field of Dreams Tandem wing fly-in Burlington, KS

Contact Spud Sportintz bspornitz@sbcglobal.net for more info.

Dates are subject to change. If you don't have e-mail access, and you'd like more information on any of these events, call 559-584-3306 and ask for me, Pat Panzera.

One reader's report of the Ralph Koger's SunShade in his Dragonfly

A. Dziminowicz,
Poughkeepsie NY

I saw a Koger SunShade at my airport, where I keep my Dragonfly. The shade looked great to me, installed in the RV6. It was designed and produced by RV Builder Ralph Koger. I ordered one for my Dragonfly, and installed it. Enclosed is a picture of my Sun Shade on my Dragonfly. It's full size is 25" x 30" when extended. If anyone is interested, Dragonfly owners can get one at: Cleveland Aircraft Tool

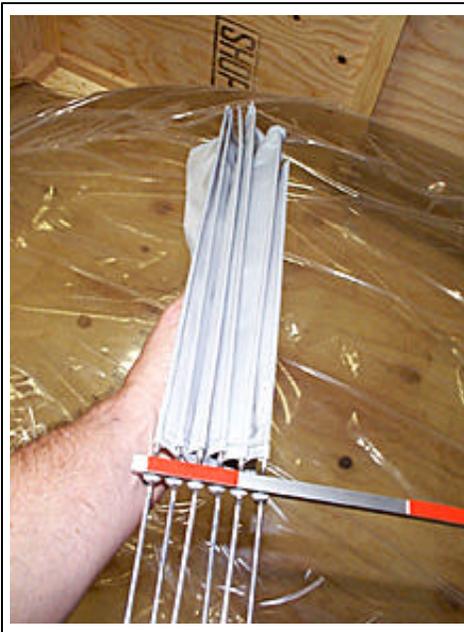
<http://www.clevelandtool.com/>

Phone: 1-800-368-1822

The KS-200S Koger Sun-Shade "Slider" is \$165.00

The KS-200T Koger Sun-Shade Tip-Lip is also \$165.00

The Koger SunShade keeps the hot sun off your head on those bright days, with a lightweight silver fabric shade that's stretched between metal bows. The shade slides forward to cover your head, and then backs out of the way, on a track that you adhere to the canopy. No drilling no screws.



Ralph Koger with his SunShade



Upper left photo shows the business side of the center aluminum channel, which the bows ride upon. Double sided tape (shown orange) adheres the track to the canopy. The photo at the left shows the shade installed on one side of the rail and the wire ribs on the other. Mystery hand points to the thumb screw that locks the shade in the extend position. Van's has been flying the SunShade on their aircraft for some time now and seem to be pleased with the performance of the shade.

Classifieds

For Sale: Dragonfly MK I N812RG, With HAPI 1835 engine, dual ignition, 40 hrs TT, A&E, Tera TXN923 Nav/Com w/ remote Tri-Nav indicator, new prop, always hangared, excellent condition, needs some engine and cowl work and touched up from sitting for too many years. Includes lots of extras, including all DF newsletters ever published. This has been a labor of love that I need to sell for several reasons. Located in central OH. Serious inquiries only. Asking **\$11,000**. Call or e-mail to discuss or for photos. Ronald L. Geese. (740) 964-9497 or rgees1@columbus.rr.com

For Sale: Dragonfly MK II N189SM, with 80hp Continental A-80. 250-hrs SMHO by Skeezi Adkisson, and dual Savier electronic ignition. 3 blade Warp Drive prop w/ Gary Hunter blades. Cruises 145-150 mph on 4.9 gph. 21+ gallon fuel capacity, dual throttles, hydraulic brakes, ELT, cabin heat, oil cooler and filter. Garmin 195, vortex generators, electric pitch trim. Asking **\$23,000** or possibility trade for 2 place side-by-side, tri-gear with turbo or bigger engine. See photos in a recent KITPLANES® magazine, featuring details on electronic ignition. Call 618-594-2681 and ask for Terry, or e-mail: troneill@midwest.net

For Sale: Dragonfly MK II. Complete plane except the canard and gauges. Everything to complete a new canard except the landing gear. The canard is on the table, awaiting final lay-up. The landing gear is laid up, the gear legs are installed and all cloth is in hand to complete the project. The aircraft has always been hangared, and it comes with a HAPI 1835 cc engine, with latest mods. New Props Inc. 52/42 prop, spinner included. Beau-

tiful red cloth seats. Fuselage is complete with new forward hatch cut out, but not finished. The wing and the entire paint job are both in excellent condition. I would entertain splitting up the engine from the airframe. Priced for quick sale **\$4800.00** Call Bill Brutsman at 913-888-8942, Lenexa KS, Fax: 913-599-1290 e-mail: wdbrtsmn@aol.com

For Sale: Carbon Fiber NACA Inlets and Spinners. Spinners are **\$250 each**, including back plate, but w/o front bulkhead. Inlets are \$30 per pair, set in glass. Contact Charlie Johnson, 2228 East 7875 South, Ogden UT 84405 (801)-479-7446 or e-mail OneSkyDog@aol.com

For Sale: Standard Dragonfly cowl, new (Un-cut) for **\$290.00** plus shipping (It will ship UPS). Its one of the best cowls I have come from Task/Feature. If you are interested or know someone that needs one, please pass the word. Spud Spornitz bspornitz@sbcglobal.net or by phone at (913)764-5118 in the evenings. Olathe, Kansas

For Sale: Dragonfly MKII H, Parting Out. Wing, Canard, Loop landing gear, Revmaster 2100 engine 75 h.p., Cleveland brakes, transponder with Mode C, true airspeed, vertical airspeed. Turn and Bank, clock, Radio King X155 with VOR, GPS 2001. **\$7500 OBO** Project is located in Camarillo CA. Phone 805-388-5587 or e-mail Jim DeBay at: bettyboo@lafn.org



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