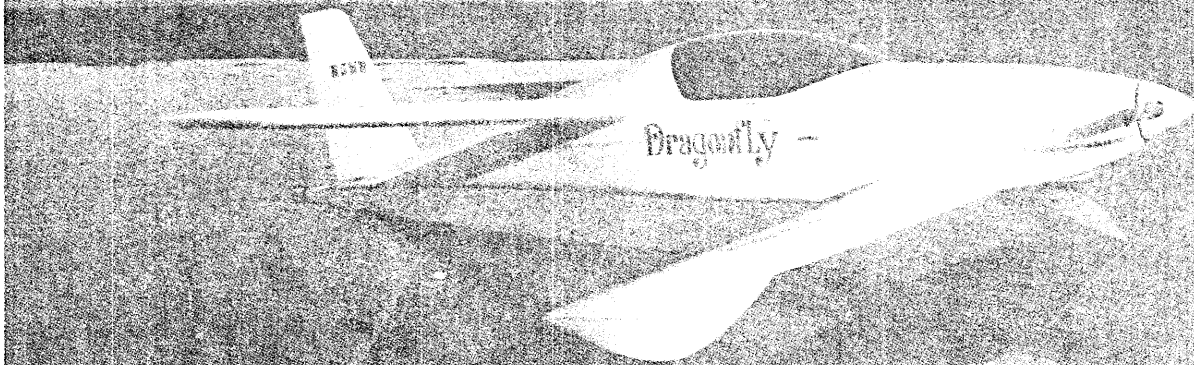


# Dragonflyer



## Dragonfly Newsletter No. 11 • Summer Issue 1983

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Is it Spring already? Seems like we just got the last newsletter together and mailed, and here another one is due. I do have some help this issue though, in the form of letters from you guys about your projects and some interesting input from Don Hewes.

You know this newsletter is yours, too, and you are invited to participate by sending anything that you may be willing to share with the other builders.

### AUSTRALIAN TRIP

I attended Mangalore this year, that's the Australian equivalent of Oshkosh, and had a great time there. I was met at the airport in Melbourne by Noel Bramish, spent the night at his home, and talked DRAGONFLY. His fuselage is pretty well along and looking good. Noel built and flew the first Vari-Eze in Australia, a task of tremendous proportions because he had to lay the paperwork foundation with the Department of Aviation for the design acceptance. We don't appreciate how easy we have things here with our "Experimental" category licensing. Also visited Len Dyson and his nice family. He and his wife provided me with a tent and all the necessaries to share their camp while at Mangalore. Len has his DRAGONFLY about ready for final finishing and painting. Both his aircraft and David Howse's were assembled and on display at Mangalore. One of these two will probably be the first to fly in Australia.

Len and David spent the week at Mangalore showing their DRAGONFLYs and answering the multitude of questions from the dozens of people that were always clustered around the aircraft. Both of these aircraft are superior in workmanship and will be show quality airplanes when finished, I'm sure.

Len and his wife provided me with a tent and all the

necessaries to share their camp while at Mangalore. The weather there was absolutely beautiful until the last day of the fly-in when it turned rainy. Thanks to all you Aussies who made the Yank's stay there so enjoyable.

### SUN 'N' FUN?

The prototype was flown to SUN 'N' FUN in March for the first big fly-in of the year. MUD 'N' FRUSTRATION would have been a more appropriate name, though, as the rain god really soaked the place four days out of seven.

The trip there and back was one of the most miserable I have ever flown, with heavy turbulence and strong winds to contend with both directions. I landed at Kerrville, Texas to meet the DRAGONFLY builders there, flying through about seventy-five miles of rain, and landing in a light rain. Didn't have to answer a lot of questions such as, "Will it fly in the rain?" though.

I landed at Hooks Memorial airport in Houston in about 15 to 20 mph gusting crosswind to meet builders there which answered the question about crosswind ability pretty well. The builder turnout at Houston was great. We talked all afternoon and were hosted to a great dinner and accommodations that evening. Thanks Houston. Y'all know how to make folks feel welcome.

Except for lousy weather, the trip went well and DRAGONFLY performed faultlessly. Flew in the airshow while at Sun'n Fun to demonstrate DRAGONFLY's capabilities. You will probably see more of this type of thing in the future. We get a bang out of showing off the aircraft, always doing so with two aboard. It seems to us that performance doesn't mean much unless an aircraft can achieve it with a good, useful load aboard.

## TROPHY WINNERS

Terry and Joan Nichols' DRAGONFLY took home the trophy for "Best Homebuilt" at the California City Fly-in last month. Congratulations are in order, but then their DRAGONFLY is so beautiful, the judges would have to be out of their minds to give the trophy to anyone else.

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## FIRST ANNUAL DRAGONFLY SWARMING

We have had many favorable responses to the DRAGONFLY Fly-in and have made reservations for several people at the local motels. We have three motels available with plenty of rooms ranging from the Ramada Inn, plush but expensive, to the Golden 6, nice, inexpensive (about \$25.00 a night for two) with color T.V. and pool, located just 1 and 1/2 miles from the airport. Ramada's phone number is (602) 836-5000 and Golden 6's phone is (602) 466-7374. If you're flying, ground transportation will be provided, no charge. We're fifty miles from both Tucson and Phoenix, rental cars are cheap here. There is plenty of room for self-contained campers and motor homes on the airport.

We intend that this SWARMING be educational and will have forums Friday and Saturday on composite construction techniques, engine building, flight testing on those crucial first flights, and, of course, cycle as many of you soon-to-fly builders through the prototype as time permits.

We intend the swarming to be both fun and educational. We will have forums Friday and Saturday on composite construction, with Chris Gentry of C.G. Aero doing "hands on" demonstrations. HAPI Engines people will be conducting engine forums.

Dick Rutan will conduct a forum on Saturday on flight testing, describing the essential elements, how to recognize problems without endangering yourself or your aircraft.

Task Research will be here assembling one of the new totally prefabricated "SNAP" DRAGONFLY fuselages during the weekend for those builders going that direction. Even if it does cost you the price of an airline ticket, we're going to try and make this event a learning experience that will more than compensate you for the money spent to get here. A little bit of flight experience in a DRAGONFLY will probably do more to keep your bird in one piece than the most expensive insurance policy you can buy. Please do let us know if you intend to be here, so we won't be short of groceries when we feed you Saturday night. Don't forget, October 7, 8, and 9. Copperstate Fly-in, one of the biggest on the West coast will be held here at Eloy the following weekend, October 14, 15, and 16.

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## Plans Pirates

We are increasingly aware that several Dragonflies are being built using copied plans. This bothers us for several reasons. I think the first is disappointment in those builders who have allowed their plans to be copied. The builders agreement they signed and agreed to is clear that each set of plans is for one airplane only and builder agrees not to copy or allow anyone else to copy or build another aircraft from that set of plans.

I believe that the Dragonfly builders as a group are some of the best people on earth and it's only a very few who not honored their agreement.

We can't blame the guy who wants to get a set of plans free, we all need to save a buck, but saving is a far different thing from using copyrighted material obtained by devious methods.

When you purchase a set of plans you are getting more than just some drawings, you're helping reimburse the designer for

the thousands of hours of design and testing work, then the ordeal of producing a set of plans, printing costs, and the follow up support to the design. This includes continual updates and corrections on the plans, builders support in the form of hours on the phone, plus scores of letters to builders all over the world. Letters cost over \$5.00 each to answer (\$1.20 additional postage for overseas letters) and you also receive a one year subscription to this newsletter.

The builder who allows his plans to be copied is probably doing more harm than the pirate builder, because he erodes the bond of trust we have in all our builders, and undermines the income that makes it possible to continue to provide the support, new development, and continual refinement that you expect.

Please think about the above when someone asks to copy your plans. The plans are really not yours, but rather you have been licensed to build an aircraft and the drawings are furnished for you to do so. If you will help to protect our interests, we pledge to give you our best efforts in your behalf.

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Courtney Bryan flew his Dragonfly from Ohio to Sun"N"Fun this year, it really looked good on the line next to the prototype. Received a letter from him later which reads.

Dear Rex & Crew:

I am sending you additional pictures of baggage area of my DRAGONFLY. I believe you took others at Sun & Fun.

I have flown the airplane 74 hours now and have been pleased with the airframe and its performance. I used hydraulic disc brakes and can apply them any time after touchdown without fear of brake pull. They have always stayed straight ahead.

My DRAGONFLY has always stalled at 40 knots recovers at 45 knots indicated and I can make turns either way with power off stalled with very positive aileron and rudder control all the way.

I find the large rudder a little too sensitive and tend to overcontrol rudder action. I would recommend and intend to install strong centering springs to reduce sensitivity. My cruise speed actual ground speed "fellows" flying to Sun & Fun varied from a low of 150 mph to a high of 170 mph. I find it hard to believe these reports of canards breaking by running off a 6" drop at the end of the runway as I was told by one fellow. I have dropped my DRAGONFLY once 5 feet during takeoff practice, short hops as per Bob Walters' recommendation in pre-first flight practice.

My advice is do not practice as Bob Walters recommends, but as Rex Taylor recommends.

I also decided one day to try landing the DRAGONFLY in a different way to land shorter. I approached at 70 over the fence, landed at 5 to 6 feet off and pulled stick all the way back at 3' off. Don't do it fellows. All it did was do the highest bounce I have ever done; maybe ever. I bounced so high I put in full power and never came within 5' of the runway as it settled some and climbed on out to use my proven method of landing this airplane.

I have never improved over the first landing method. I come in, hold it about a foot off where it settles, and touch down. I release some back pressure and it lands smooth as silk. I have tried every routine I can think of and none works better than that. Think about it. When you release back pressure it's very near like retracting flaps on a regular

aircraft. Speaking of my revmaster engine, if you insist on buying one, figure on rebuilding it or you will have big trouble. Revmaster doesn't cooperate or help you. You're on your own. I consulted Rex several times concerning the troubles with my engine and he helped me quite a lot. I think it speaks well of a man to help solve the problems you have with a competitor's product.

I would strongly advise using a HAPI engine or at least their main components, and, most of all, their expert advice.

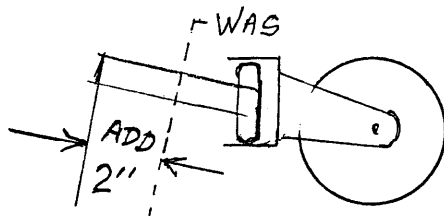
By the way, building time was probably around 1200 hours, and took me 10 months.

My Revmaster is now running good after 3 teardowns--2 requiring engine removal.

Sincerely,  
Courtney Bryan

#### NEW TAILWHEEL SPRING

The company that has made the pultrusion we use for a tailwheel spring has stopped production on that particular cross section. We have approved and Wicks Aircraft is now supplying a pultrusion with a slightly heavier cross section which is reddish orange in color. The new spring is two inches shorter than the yellow one formerly supplied so it is necessary to make the steel tube portion slightly longer as per the sketch here to compensate for the shorter length. Those of you who already have the yellow tailwheel spring will not be affected by this change.



#### NEW TAILWHEEL

Many of you have expressed concern about the tailwheel being noisy on take off and rollout, and I must admit that it is annoying. The wheel has a hard rubber tire that I feel could be quieted with a softer tread, but much more importantly, gain adhesion to the runway surface and give better rudder authority at low speeds. Now please don't construe this to mean we have a control problem; we don't. There is almost nothing, however, that cannot be improved. Ken Brock Mfg. Co. is designing a new tailwheel to be used on DRAGONFLY with a much softer rubber tread and sealed bearing in the center. The wheel is constructed in such a way that the tread will be replacable. Ken will also have available the complete tailwheel assembly ready to hook to the tailspring. Contact Brock directly for price and availability.

We have received a copy of the "Canard Pusher" from Rutan Aircraft which states that RAF has tested the 7715 Burlington cloth supplied by Alpha Plastics, Inc. and that they believe it to be deficient in strength compared to Hexcel by about 19 percent in compression mode.

Alpha Plastics does not concur with the results and feels that further testing of a more sophisticated nature is necessary to resolve the question. Both Burlington and Rutan are continuing their tests.

We at Viking have not seen test data to either support or disprove either position. At this time, only the plans specified Hexcel made 7715 UNI, is approved and recommended.

We believe that everybody involved is concerned with your safety and will do their utmost to assure that the design strength of your aircraft is not compromised.

Until more definitive test data is available, Alpha Plastics is recalling the Burlington 7715 and has issued the following letter.

Dear Customer,

There has recently developed a controversy concerning the 7715 Unidirectional Fiberglass produced by Burlington. As an interim measure and while additional testing is being performed and until all controversy is resolved, we are asking that all customers return any unused Burlington 7715 Unidirectional Fiberglass to us for a refund or replacement.

We are indeed sorry for this inconvenience. This letter is being sent to all customers, even though many of you may not have purchased any 7715 from us. Any 7715 Inidirectional Fiberglass purchased from us prior to July, 1982 is not subject to this recall.

Additional information will be forwarded in a couple of weeks.

Sincerely,  
Ira D. Hale, Jr.  
President

If you have this material in your aircraft don't panic until the results are in. The testing will determine what must be done.

We are always eager to get knowledgeable people into Dragonfly for some stick time. We recently had Don Hewes and his wife Peg aboard. Don is a retired NASA employee with considerable background in flight test and airfoil evaluation. Don's letter follows.

May 11, 1983

Dear Rex,

Yes, I was very impressed with the DRAGONFLY, as you mentioned in the last Newsletter, and I was pleased to get a back-to-back comparison with the LongEZ. I had flown with Dick Rutan in his special LongEZ and with Mike Melville in RAF's demonstration plane just two days before flying with you out of Camarillo.

I found the general flight characteristics of the DRAGONFLY to be very good and quite similar to the LongEZ. However, I did not get a chance to make takeoffs and landings in either design. Obviously, the LongEZ had somewhat better climb capability because of the bigger engines, but it appeared that the DRAGONFLY's climb was very good. The control harmony was very good although the ailerons were a bit heavier than those of the LongEZ, however they were more than adequate. The sidarm controllers of both designs were comfortable and felt very natural for a center-stick pilot.

I prefer the side-by-side seating of the DRAGONFLY over the tandem arrangement for the LongEZ. Of course, visibility was super and far better than that from the rear seat of the LongEZ. Having the canard positioned low with negative dihedral makes for a big improvement in visibility. Stall characteristics were excellent for the C.G. and load we were flying. I would be interested in seeing the full aft and forward C.G. stall characteristics as these might be different.

Peg, my wife, is a low-time pilot and had been somewhat apprehensive about flying a "funny" airplane, but she was quite satisfied after flying with you. She has a private ticket and is my "chief pilot" since I picked up a pacemaker a few years ago. Essentially all of her time is on the Cessna 152, but she is checked out in our ED4 and therefore knows how to handle taildragers. Both of us are not small people so we need a fairly roomy cockpit and good takeoff, climb, and landing performance. The DRAGONFLY is not as roomy as our ED4 and carries far less luggage, but is much more comfortable with much lower noise level. Of course, there are less than half the number of horses trampling around up front. In spite of that, we can be cruising about 10 mph faster in the DRAGONFLY.

Our ED4 is a beautiful crosscountry machine and we enjoy making such trips. However, the ED is a bit hot on landing because of its much heavier wing loading. Therefore I have been very interested in comparing the takeoff, climb, and landing characteristics of the DRAGONFLY. I observed that your landing approach numbers will float "forever" if the approach speed is a bit too high. However, you hit the "bottom" of the power required curve at about 70 mph and need to have the wheels on the ground at that speed although it stalls near 60. I noticed that you flared at about the same speed as I do with the ED but the DRAGONFLY continued the float to a very much lower speed than the ED before touchdown. Obviously, the difference is due to the lower wing loading and the much higher wing aspect ratio of the DRAGONFLY. From what I saw, I expect to be satisfied with the DRAGONFLY landing characteristics, however, I can see that some form of drag flaps would be helpful to steepen the approach for small field operation.

I had the unique chance to fly Dick's LongEZ in the desert at Mojave both in and out of the rain, and found that rain have very little effect on the DRAGONFLY, so I am still waiting for a chance to personally evaluate them, especially those at low speeds. But based on what I have learned over the past several months, I don't expect to encounter any serious problems.

In the last Newsletter before you took over, I was unfairly and incorrectly charged with making a statement at Oshkosh last year that the DRAGONFLY has serious problems with rain and bug contamination of the wings. I actually said at that time that, based on the available information, I believed that the DRAGONFLY Bob Walters built DID NOT have any serious problems. My concern was and continues to be with the other DRAGONFLYs that may not be built as carefully as Bob's or may be modified "slightly" so that the canard airfoil characteristics are different.

As has been pointed out in several recent aviation articles, a number of the Brand Q versions of the tandem wing configuration have had some serious problems. There are two significant differences between the DRAGONFLY and the others, first, the lower wing loading and, second, the thinner canard airfoil. Unfortunately, we do not know how sensitive and the contamination effects are to these or other factors. Both Bob's experience and yours with the original airplane and that of Terry Nichols seem to show that there are no serious effects of rain on the basic design characteristics. Although I do consider that a 10 mph increase in stall speed is NOT INSIGNIFICANT. However, I don't see it as a serious PROBLEM as long as the pilot is aware of the actual behavior and knows how to cope with it. It is IMPORTANT to be aware of the POSSIBILITY that a DRAGONFLY built by a "sloppy" builder, or a DRAGONFLY that has been "modified slightly" may possess some completely different and perhaps serious characteristics.

I have covered the subject of the effects of rain and bugs on canard and tandem wing airplanes in general in the three-part article which is currently running in the SPORT AVIATION magazine, so I won't go into that subject further here. But I do suggest that all DRAGONFLY builders take the time to read all three installments, even though they are rather long and perhaps a bit tedious.

There has been very little progress lately with our bird because of the cold, wet spring weather, but I now have finished the canard and expect to complete all of the basic foam-glass fabrication in the next few days. We hope to make it to Oshkosh this year, but will be sure to make it to your fly-in at Eloy in October. I plan to install my AIRGUIDE two-axis autopilot system in the DRAGONFLY and have it thoroughly tested. There should be three or four DRAGONFLYs flying around the Newport News-Norfolk area by late this fall.

Thanks for giving Peg and me the chance to fly the DRAGONFLY and see first-hand that it is a fine flying machine. Sincerely,  
Don Hawes, EAA 32101

### **Pilots Manual For Dragonfly**

We are generating information for the manual at a pretty good rate. We have been fortunate in getting Dick Rutan to fly the flight tests and do the "number crunching" in the computer to generate the data necessary for the various charts and graphs.

Dick is probably one of the leading test pilots in the world, doing the testing for Burt's new designs, some flight tests for independents such as ourselves, in between setting new world records in his Long-Eze. He and Jeanna Yeager are well into building their "Voyager" designed to go around the world, non stop without refueling.

Dick has already flown part of the tests necessary and will be spending more time in Dragonfly in the next month so that very soon now Dragonfly's performance will be well documented and predictable IF you build it like the plans.

We have several flight reports from builders now and those builders who have faithfully followed the plans are reporting weights and performance almost identical with the prototype.

Those who have made major modifications have not attained design performance and of course the numbers Dick generates with his work will not be nearly as applicable to those aircraft.

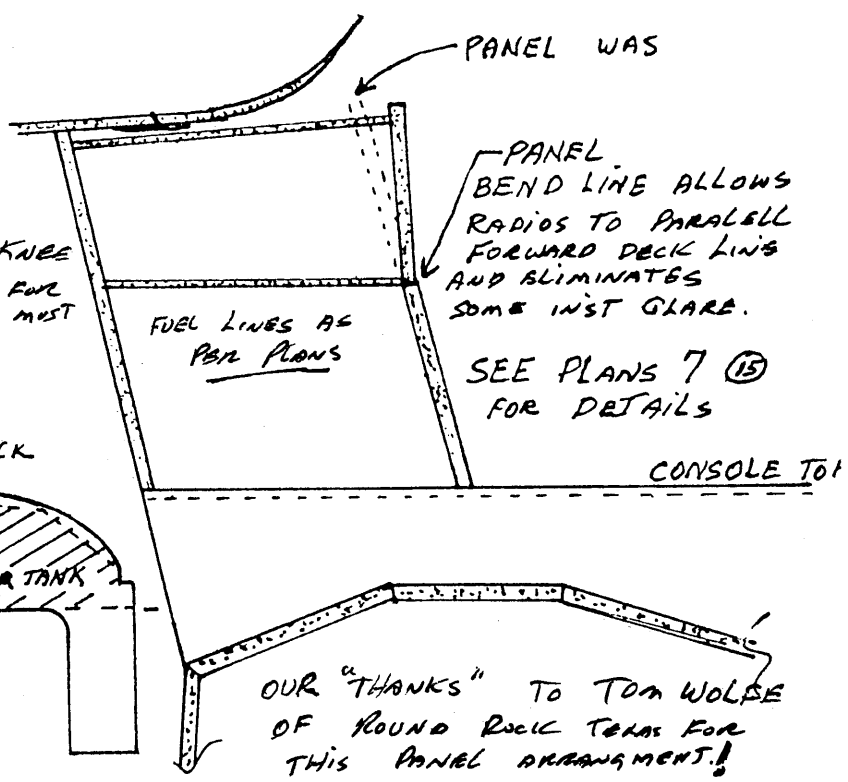
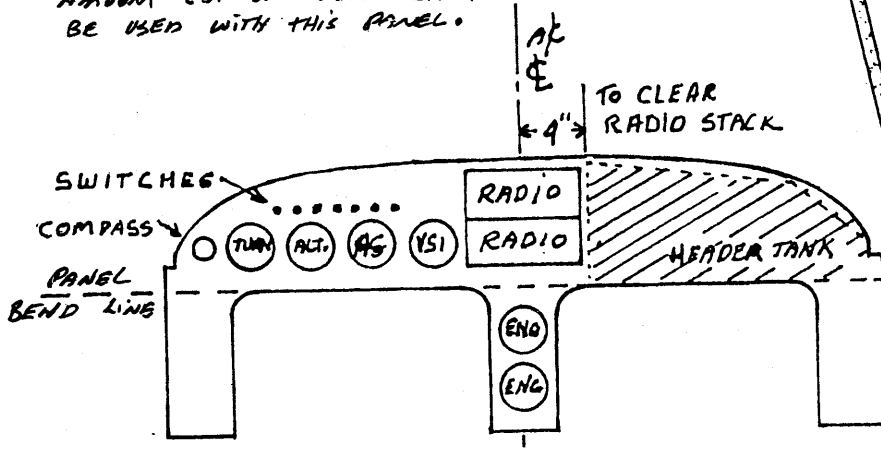
As soon as possible we'll have the pilots manual available but we expect it to be October at the earliest before publication. The pilots manual will also include a check off list to be followed preparatory to the first flight, and then a testing program designed to expand the testing envelop with minimal risk to pilot or aircraft until at the completion you will have a thoroughly tested aircraft. You will also have filled in the blank spaces with the information you generated by testing and have developed accurate performance charts for your own aircraft.

**EAA - 12th Annual  
COPPER STATE FLY-IN  
Eloy Airport, Eloy, Arizona  
Oct. 14-15-16, 1983**



"NOTES"

THIS MODIFICATION IS "OPTIONAL" TO ALLOW BETTER INSTRUMENTATION AND MORE ROOM FOR RADIOS WITHOUT SACRIFICING PANEL SPACE. HEADER TANK LEFT END IS MOVED TO RIGHT AND TURNING PANEL VERTICAL AT KNEE CUTOUTS ADDS CAPACITY TO TANK TO COMPENSATE FOR AMOUNT CUT OFF LEFT END. HYDRAULIC BRAKES MUST BE USED WITH THIS PANEL.



NEW INSTRUMENT PANEL

While on the Sun 'N' Fun trip, I had the opportunity to meet many builders and see some of their projects. Tom Wolfe of Round Rock, Texas has an instrument panel modification that is far easier and better looking than what we had intended to use, so we asked him if he would allow us to share his ideas with you.

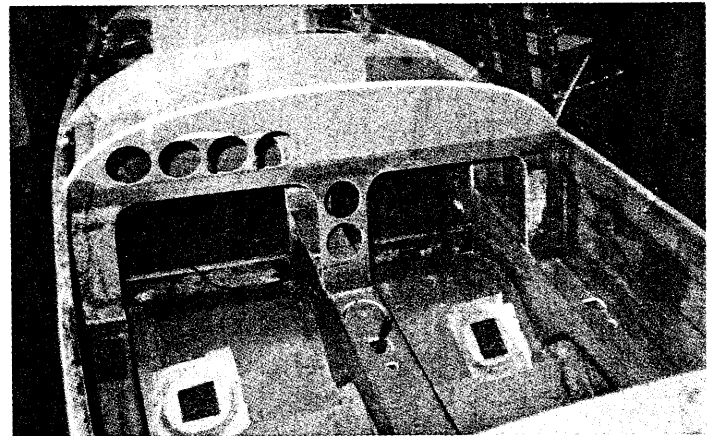
The advantages of using Tom's modification are several. It retains original header tank location and capacity, and requires a bare minimum of work. Tom's panel places the instruments vertical, thus reducing sun glare on the faces, without reducing knee room. It requires the bare minimum of dimensional changes and allows center stacking of the radios, and perhaps best of all, it looks good!

Tom's panel is placed in the stock location at the bottom where it connects to the consoles and is angled forward to the top of the knee cutouts, where it is cut and bent to vertical. The header tank dimensions are unchanged except that the left end of the header tank nearest the center console is moved to the right one (1) inch to clear the center stacked radios. Dimensions are as per sketch.

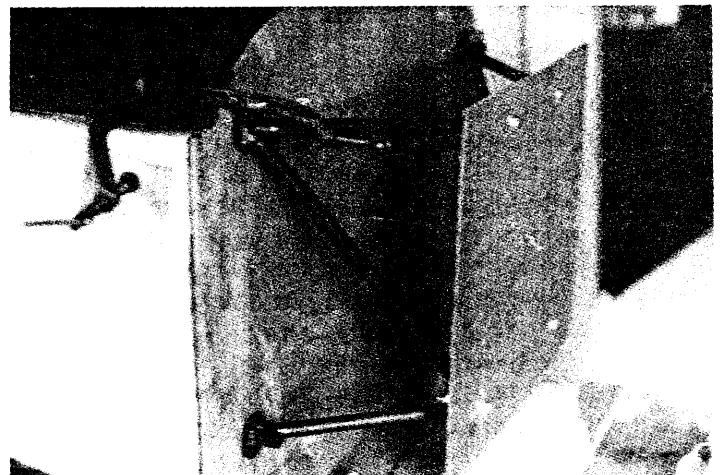
HAPI triples are mounted in the two holes in center console, giving all necessary engine information easily visible from either seat, and the flight instruments consisting of from left to right, electric turn coordinator, air speed indicator, altimeter and rate of climb are displayed in front of pilot for excellent viewing. Another 2 1/16 hole is to be placed at the extreme left for the compass.

Flight Instruments

Many builders are having problems locating good flight instruments at reasonable cost. HAPI has probed the market for months trying to find good sources on flight instruments. We finally found a company that will supply top quality flight instruments at reasonable prices. We have been quoted on a group of instruments that consists of new air speed indicator, properly marked for Dragonfly, new 0-2000 FPM rate of climb indicator, plus sensitive altimeter and an electric turn coordinator, (both overhauled and certified units), for a total



package price of \$569.00. We must buy in lots of ten set, so if you are interested send your check to HAPI, and you will have your instruments by July 15th or your check returned uncashed if there is not enough interest for ten sets. We can also accept Master Charge, Visa, or American Express. These and the HAPI triples will fill up the new panel just right.



NEW MOUNTS being fitted to Roger Ring's fuselage. Note the "thrust line" string used to locate mounts.

I have never been fond of the method of attaching the motor mount to the air frame on DRAGONFLY. It is structurally sound and has proven itself in service, but it is very difficult to maintain production control over. The builder must install the four horns at the proper compound angles in exactly the right place for everything to fall in place as it should, with the thrust line and engine placement correct. This has been a continuing problem with many builders reporting difficulties in aligning everything in the engine compartment due to small dimensional errors while building, and the fact that there is no provision in the mounting system for thrust line adjustment. We have redesigned the motor mount to incorporate the conventional thimbles and through bolts in the firewall. The load path is carried from the firewall into the fuselage sides and longerons by two fabricated aluminum angles that bolt to the longerons using the existing holes that formerly retained the horns. This system allows the builder to install the engine on the mounts and then C-clamp the mount in position on the firewall adjusting the thrust line side thrust up and down thrust correctly, then drilling the four holes to actually bolt the mount to the airplane. Further adjustment can be obtained by shimming mount corners with washers to achieve correct alignment if necessary. These mounts are manufactured and sold by HAPI Engines and are available now. Price is still \$139.50, and HAPI cannot exchange the new style mounts for the old style. If you've already bought the older style, use them; there's just more work to installing the engine. If you have not yet bought your mounts, the new ones may save you hours of work.

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Don Zimmerman's Dragonfly is nearing the finishing, sanding, and engine stages. Don was here and had some stick time in the prototype. His letter follows -

Getting to fly the DRAGONFLY was a very important event for me, as a DRAGONFLY builder. I chose the design because of the performance and good looks, with the performance being verified by first-hand experiences of people I knew and trusted, not just what the brochure said. But I really wanted to know what it was like to fly the thing from personal experience. While you spend hours shaping & glassing, thoughts creep into your mind, like, "These light composites are squirrely...tricky to fly...you need to be an experienced aviator to fly these things...etc." I'm very happy to have the issue settled in my mind now--the DRAGONFLY is a very nice handling airplane--no surprises--it just flies and does what you want it to do.

#### THE DETAILS

The seating position feels perfectly natural--comfortable--nothing feels strained while you look around & work the controls. The noise level was not at all objectionable. I talked to Rex throughout the flight at the same volume one would use in talking to a passenger in a Cessna 150.

Some routine flying first--straight lines and turning. The airplane responds to pressure on the stick, not gross deflections. It is a very nice sensation--like you were feeling the control surfaces, and you lightly push the airplane where you want to go--up, down, left, right. No tricks. Within the limits of my perception, I could not detect any adverse yaw on the ailerons. Feet off the rudder pedals and you turn just fine. Nice for long trips--you can do all your flying with just the stick.

The most impressive part of flying the airplane was in slow flight and canard stalls. Back, back on the stick--the nose bobs a couple of times and just hangs there, but the ailerons are fully responsive. At full aft stick, I can roll thirty degrees to the right, hold it there, roll back to level, and then thirty degrees to the left. Like some giant hand holding you up in the sky while you do things with the controls which would ordinarily be asking for trouble. Rex tells me to try some tight turns in slow flight, like you just overshot the runway on base and you're trying to get back on final. We're in what seems like a forty-five degree bank, hard back on the stick and again the canard just hangs there and nods, letting you know that other airplanes would have had you spinning straight down by that time.

I was really struck by the great openness of the view--no part of the airplane seems to be in the way of where you want to look--like being part of the sky. But mostly I keep looking at the wing & canard off to the right. From where I sit, I'm seeing them both edge on, and they look like two long rigid poles (one with a wheel at the end). There they are, sticking out into space, unwavering, and I keep finding myself laughing (a gleeful laugh on the inside) as my rational mind tries to convince the rest of me that these "poles" are what are keeping us up in the air.

Final approach seems to be done at a comfortable speed and nothing seems to be busy or tricky. One thing I wanted to do is feel the touchdown of the wheels. I felt there had to be some kind of tork in the yaw direction since the wheels are so far out. The left wheel touches first, then the right, all very lightly, and I have to admit I cannot tell when they touch ground except by looking.

So here I am today happy to know what the DRAGONFLY feels like to fly. I work on my airplane knowing it is going to be a fun thing to have and to fly. I still plan to get the recommended tail-dragger time and experience landing "floaters." I encourage you fellow builders to get a ride. Rex is great about this, and especially wants you builders who are nearing completion to get some hands-on flying experience in the prototype.

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Don Zimmerman

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#### Dragonfly Fly-In At Rockford

All Dragonfly pilots and builders are invited to attend a special Pre-Oshkosh fly in at Rockford, IL airport on July 28th that's the thursday preceding Oshkosh. It looks at this point as if at least four flying Dragonfly's will be there, including the prototype.

This get together was organized by Roger Lindeman of Rockford and will give all of us a chance to get together, swap experiences and ideas, and enjoy a good meal thursday night. There are several motels nearby from Hotel 6 (2 people \$21.15) to Howard Johnsons (2 people for \$40.20).

Hope to see you there whether you are building or still just looking. We'll have a good time!

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#### Premolded "Snap" Dragonflies!

TASK Research will have the completely pre-fabed kit in production by the time you read this. The process has taken longer than expected but the results are terrific. The quality and fits that TASK has engineered into these parts will firmly establish them as the "new standard" of the kit plane industry.

TASK will be at Oshkosh in the "workshop" area assembling one of these fuselages during Oshkosh and answering questions about composite construction. Don't miss this opportunity to see how a kit should look and fit.

This fuselage will be for sale at the end of the show.

### Approved Vendors

The following list of vendors have been approved by Viking and do provide plans specified materials to the builders.

You may find other sources for some of these materials but you should be aware that some of the items used in Dragonfly are of proprietary nature, such as the Hexcell 7715 Uni-Cloth and cannot be purchased from any other source, except those specified.

HAFI Engines - Complete engines, or engine parts for the builder who wants to build his own, motor mounts, exhaust systems, spinners, propellers, engine instruments, flight instruments, engine controls, and hydraulic wheel and brake assemblies. Send \$4.00 for postpaid catalog (\$3.00 will be refunded with your first order of \$25.00 or more), R.R.#1 Box 1000V Eloy, AZ 85231.

Wicks Aircraft Supply - Wicks stocks complete raw materials kits for the Dragonfly builder who builds from scratch, epoxy, foams, Hexcel 7715 Uni-Cloth, carbon fiber, canopies, cowlings, and much more. Send for their catalog to 410 Pine Street Highland, IL 62249.

TASK Research, Inc. - Completely prefabricated, premolded fuselages, wheel fairings, wing tips, computer cut wing cores. Send for price list and literature to 848 East Santa Maria Street Santa Paula, CA 93060.

Ken Brock Manufacturing Co. - Complete hardware kits for Dragonfly including all control system hardware and other metal parts, pre cut, welded, plated, and ready to install. Send for their catalog to 11852 Western Avenue Stanton, CA 90680.

O.G. Aero Co. - This company offers custom building services to the Dragonfly builder, primarily wings, canards, and vertical surfaces. They also offer pre-hot wired foam cores to west coast builders. They have a nice line of Dragonfly "T shirts", caps and jewelry. Send for price list and literature to P.O. Box 783 Anza, CA 92305.

Fibertech Inc. - Manufactures of Dragonfly cowlings, made from Viking tooling. This cowling is stocked by Wicks. Send for price lists and literature to 10809 Prospect Street Santee, CA 92071.

Aircraft Windshield Co. - Manufactures the Dragonfly canopy from Viking owned tooling. This canopy is stretch formed, not blown and cannot be duplicated by others without loosing quality (this canopy is stocked by Wicks). 3842 Catalina Street Los Alamitos, CA 90720.

Axis Aviation - Stocking all the raw materials to build your Dragonfly in Eastern Canada, including resins, cloth, foam, and hardware. Owner Dave Steinbeck has his Dragonfly completed and can offer much builder support. Send for price list and other literature to R.R.#2 Woodstock, Ontario N4S 7W1.

Feglar Aviation LTD. - This new vendor will be stocking all the raw materials, prefabed parts, plus the complete line of HAFI Engine's goodies for Dragonfly in Australia. Feglar Aviation will be stocking Dragonfly info packs and Dragonfly plans in Australia for quick delivery there. Garth Feglar is also starting one of the first prefab Dragonflies so he will be available for builder support. For price lists and other literature send to 70 Hillcrest Drive Eden Hills 5050 South Australia or phone (08) 277-7051.

## IMPORTANT NOTICE OUR PLANT WILL CLOSE FOR "OSHKOSH" 83

July 30 and Reopen August 15, 1983.

We Appreciate Your Business.

### Debunking The Rumors

Every so often we hear a fresh new rumor about what is being developed for Dragonfly. Some of the rumors are pretty wild and almost all are lacking in factual basis.

We do intend to explore several new ideas in the future but we are so busy just trying to keep up with supplying you builders with parts and support that our development time is very limited.

O.G. Aero is building a new canard for the prototype that is to plans specifications. We will take the old canard, cut the wheels off the tips and install new wheel pods inboard, and new wing tips, to make the Dragonfly move at home on rough narrow strips and grass fields.

This modified canard with the narrow tread gear will be installed on a brand new TASK Research "Snap" Dragonfly fuselage. This will give us two prototypes to fly and as soon as my son Patrick gets his private, two airplanes to give rides in.

We intend to install and try a speed brake though I very strongly feel this is a very poor substitute for pilotage. Dragonfly can be slowed down to a controlled nose high attitude and will develop a very high, controlled sink when flown properly. I feel that with a drag brake extended, should the pilot decide on a go-around and forget to retract the brake, a bad situation could result.

### Big Engines

We are definitely not going to install a Lycoming or Continental in Dragonfly. Why should we? The aircraft cruises now within 15 miles of red line so who needs more power?

Any change we do make will be well tested and proven before we offer it, so please, don't ask us to give you advance details of what's coming, it just takes up our time, and we need that time to spend on development.

Dragonfly has been flying for three years now, yet has not needed any redesign. Dragonfly was designed well and thoroughly tested before the plans were released. We want to keep it that way by making sure that a change will be beneficial by testing before we introduce it.

### EDITORS NOTE

Writing this newsletter is both fun and frustration. It's always a challenge to try and answer the questions that come up, while at the same time making this newsletter informative and not boring.

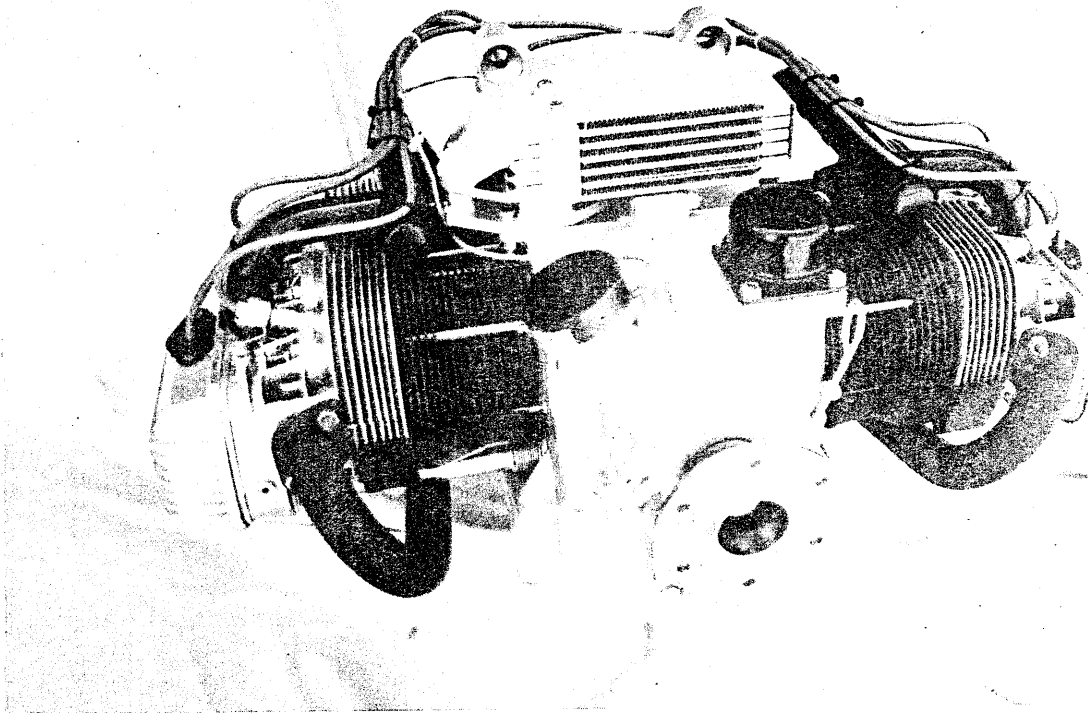
I do welcome input from you builders describing your triumphs and your failures too, we learn from each other.

Pictures of your Dragonfly are always welcome and we'll use as many of them as space permits.

We expect to have at least 5 flying Dragonfly's at Oshkosh this year and hope to see you there! That's it for this issue.

Your Editor,

Rex Taylor



## Hapi Dragonfly Engine Model 60-2 D. M.

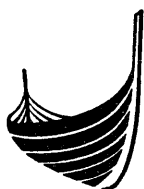
### ITEMS AVAILABLE FROM VIKING

**PLANS:** \$175 (\$200 overseas) includes 1 year subscription to quarterly newsletter.

**INFORMATION PACKAGE:** \$7.50 (\$8.50 overseas) includes color lithograph.

**QUARTERLY NEWSLETTER:** \$8.00/year (\$10.00 overseas)

ALL PRICES INCLUDE AIRMAIL POSTAGE. ARIZONA RESIDENTS PLEASE ADD 6½% SALES TAX. OVERSEAS CUSTOMERS PLEASE SUBMIT U.S. FUNDS ONLY.



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SUMMER ISSUE

