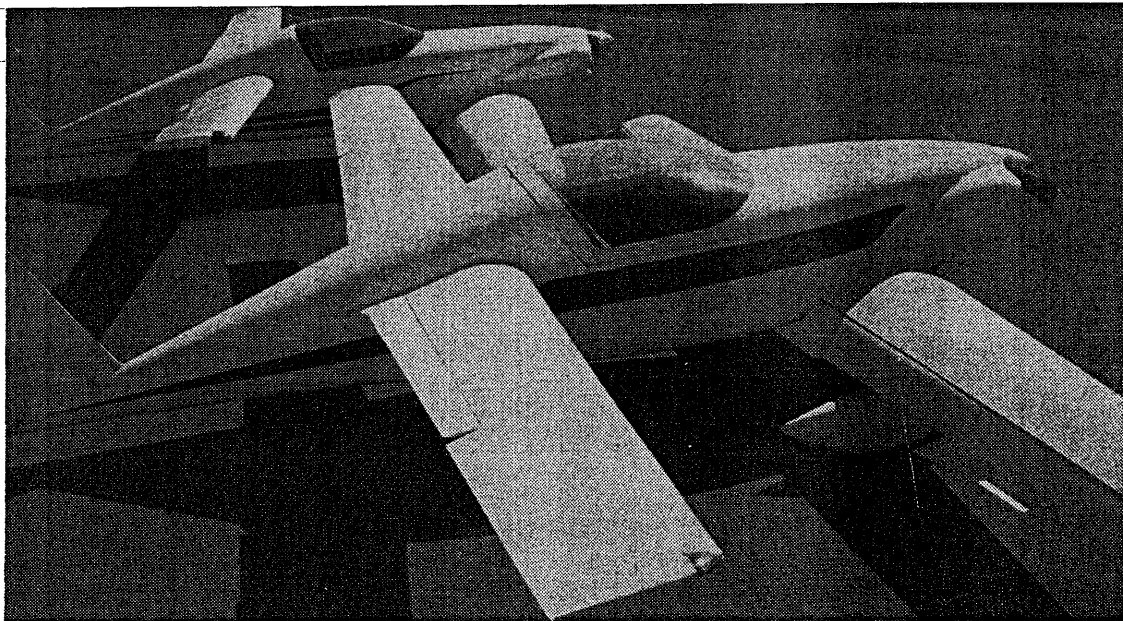


Dragonfly Builders & Flyers Newsletter

Volume 33

DEC -1990 - JAN - FEB - 1991



What's better than owning a Dragonfly?

Jerry Scott of Corona, California has the answer to that question and that's to own two Dragonfly's! As you can see in the above shot that Jerry has two beautiful planes.

Jerry was nice enough to send in a letter with the pictures and which I think everybody will find very interesting.

Hi Spud!

Glad to find that your taking on the challenge of the newsletter, it's greatly needed and we all appreciate it.

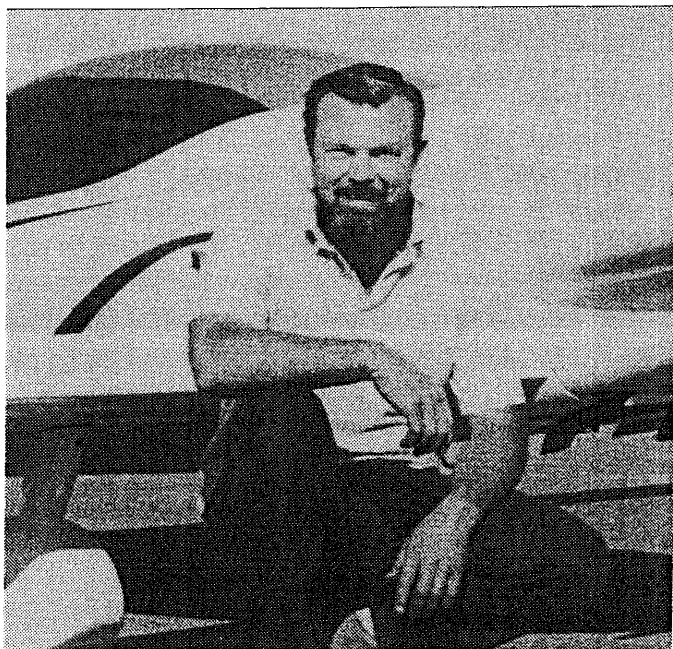
I'm sending you pictures of my Dragonfly's for a little show & tell. The blue one is the original and is for sale. It is a Mark II, 300 total time, Revmaster 2100, with Hyd. lifters - 75hp, Nav lites, strobes, intercom, transponder w/ mode C, Reflexor, aileron boost servo's, Rosenhan brakes, 21gal. fuel tank, Warnke prop, full plush interior. Reason for selling - liked the Dragonfly so much I built another one with all the workable mods from the ground up.

And now a little info on the new airplane. With the help of my very good friend Troy Burris the second airplane was scratch built and completely ready to fly in 12 months.

The airplane flew hands off on the first flight, absolutely no trim changes have been needed. We have put 17.4 hours on in the last 2 weeks and we couldn't happier with it's performance.

Empty weight including headsets and logs - 883 lbs., the engine is a Revmaster 75 hp with hyd. lifters, Dual navcom's one being a removable ICOM hand held with a 10 watt linear amp, Narco transponder with encoding altimeter, King 8002 Loran, RST marker beacon, Softcom intercom, Audio panel-custom built by Troy Burris (We're going to have to find out about this!! Hello Troy - Spud), strobes, nav lites, landing lite in the lower cowling - no drag, reflexor, aileron servo trim tab system, boost pump and full interior. Paint is Ditzler with blue frost pearl. Interior was made by my father and myself (I did the slave labor - Jerry).

Our group here in Chino have built eight Dragonfly's and have helped on several others. We have learned a



Jerry Scott of Corona, Ca.

tremendous amount on how to work on these glass lay-ups, we have several suggestions that will save everybody 50 to 75 lbs. on the airframe and will be very easy to finish. (hopefully in # 34)

Jerry Scott

7210 Plute Crk Dr.

Corona, Ca. 92719

It didn't take very long for me to get on the phone to Jerry and he's going to prepare a full article on their building and finishing technics and hopefully will be ready for the next newsletter.

663 lbs. is really light for everyting they have in this plane!!!

Guy's we should feel very fortunate to have these gentlemen as part of the team, experience like this you can't buy ! Thanks in advance gentlemen.

DRAGONFLYS IN THE SO-CAL WINTER SUN

I was at about 2000 feet AGL ohugging along in old N3969R. The little Vee Dub was doing its tapuoka-tapuoka thing like Vee Dubs do. Glanoing around I could see the other three Dragonflys buzzing along with me. Troy Burris was on my port quarter; Jerry Scott and Stan Moleski were also slightly behind but on the starboard side.

Before you readers get totally disoriented let me give you some background. The situation I was describing

above took place on a Saturday when the clear winter Southern California sun was promising CAVU conditions all day. And the day had begun when I left home plate at Camarillo with a full bag of fuel ready for a nice cross country. My intention was to stop in at Chino airport, east of Los Angeles, for a social visit with the DF gang that nests there. But at the time of my arrival at Chino our friends Burris, Scott, and Moleski were ready to pull the chocks and tear up the sky in their 'Flys. So we all launched out to have some fun together. Time to talk could come later.

At any rate ... back to the original setting. There we were at 2000 AGL four 'Flys all swarming along in a very loose gaggle. For some reason or another I was lead aircraft. And as usual I didn't know where I was going. So the other pilots were giving me left-right steering directions on the RT. As we cruised along that Saturday morning I nervously wondered if my three companions were just trying to lose me or perhaps point me into the L.A. TCA to make up for past sins.

But before I had to confess and repent my sins someone came up on the RT and suggested we all land for lunch at Corona Airport. Okay! Right on! Good lads! Now I felt warm fuzzies and knew what to do ... dial up the wizard of LORAN and punch "NAV", "CORONA", "GO TO", and "EAT".

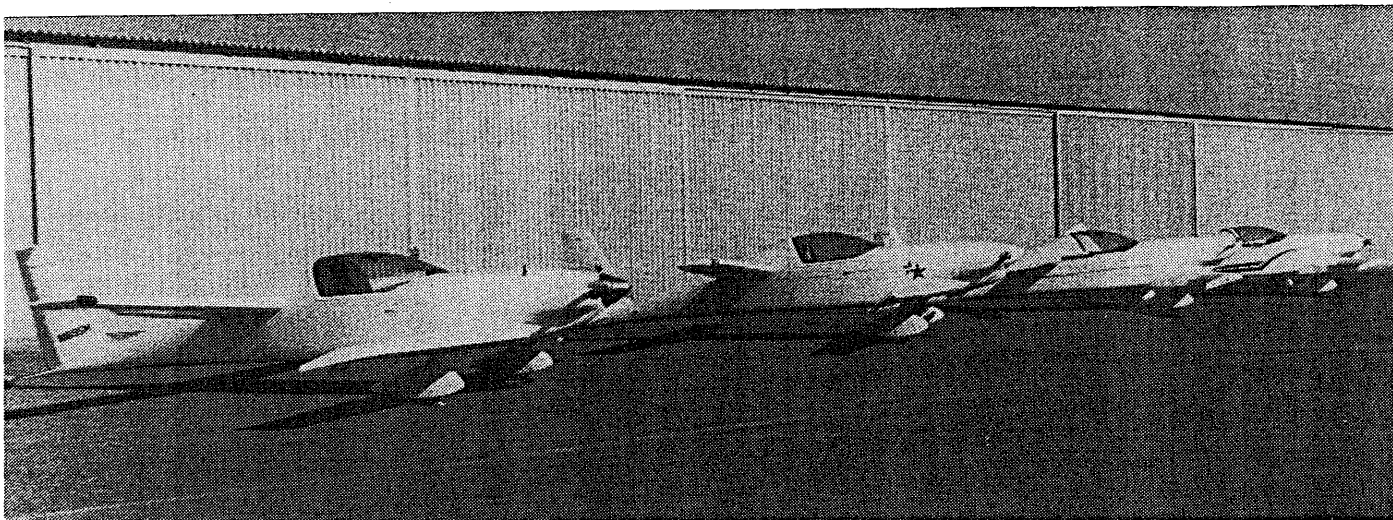
Sure enough ... 15 minutes later the LORAN counted mileage down to 0.1 and then started to blink "EAT...EAT...EAT.." (or something like that). We all tumbled out of the air and parked at the Corona airport cafe. What followed was a chance for this DF pilot to not only get some nourishment but to quiz the three Chino pilots about what their group was doing these days.

For those not familiar with Chino I might say that it is a hot-bed of DF activity. It seems that Chino "hatches" a new DF about every nine months (or what ever the gestation period is for DFs.) And a guy can learn a lot from the Chino gentlemen 'cause they know of what they speak.

While eating lunch Jerry Scott told us all about the ship he had been flying with us that morning ... his second DF. That's right; he built a brand new 'Fly and hung a "For Sale" sign on the old one. Not only that but he reported that he built his second ship in 12 months often working about one and one-half hours a day. It's gorgeous! You can see the fotos and read Jerry's story elsewhere in this newsletter.

After lunch and sharing some good stories my friends and I went our separate ways. The Chino guys returned to that fascinating place where all sorts of Dragonfly magic takes place. And I headed homeward.

As the So-Cal winter sun set in the west I found myself nearing my own base. My mind wandered to how well the NASA section was working out on my redesigned



left to right, Stan Meleski, Nate Rambo III, Troy Burris, Jerry Scott

forward wing. I thought nebulously about Super 'Flys and things of the future like Meador's retract system. And I could hear the little VeeDub doing its thing. It went tapucka-tapucka. I was pleased.

Respectfully submitted by Nate Rambo

Letters, Letters and More Letters

Maj Ted Givins
6318 Fortune Drive
Orleans, Ontario Canada, K1C 1Z1

Mr B. Spornitz
1112 Layton Drive
Olathe, Kansas USA 66061

Dear Spud;

My most humble apologies for not getting this letter to you sooner. It has been sitting half done since we last talked. Once again I apologize and may the weather gods curse me with lousy weather for a month (well maybe a few days).

Congratulations on an excellent first issue. It was great, and if it is an indication of things to come Dragonfly owners will have a great communication network. Enclosed is my payment for the year and you can be sure I will continue to renew.

I have a number of things for the next issue, please use them as you see fit:

1. Policy regarding publishing modifications: I don't want to stifle new ideas but neither do I think that "unproven" modifications should be encouraged for other builders. A simple solution would be to institute the following policy: The newsletter will not publish any design change or modification unless the following information is included with the submission:

- a. Number of hours flown since modification completed or a statement clearly stating the aircraft has not flown with the modification.
- b. Reason for the modification.
- c. If the modification has flown, detail flight testing that was completed.

The inclusion of the above information will allow other builders to make knowledgeable decisions before modifying their aircraft.

2. Owner listings: I have included two listings of Dragonfly owners. The information used to compile the data base the 1988 FAA Aircraft Registry (more up to date issue not available) and the Transport Canada Aircraft Registry Jun 1990. The first listing is by State/Province and the second is sorted by Aircraft Registration Marks. Also owners willing to conduct familiarization flights should be identified.

The information regarding C-GGEM is as follows:

- a. Ted Givins (builder and owner) C-GGEM; plans # 888 Mark II Aircraft located - Rookliffe Airport, Ottawa.
- b. Empty Wt. 658 lbs
- c. Engine HAPI 1835, 75-2DEH Posa Super Carb Warp Drive Propeller 52" dia.
- d. Top speed 158 mph IAS, 163 TAS (still playing with the prop)
- e. First Flight 6 May 1988 Construction started Mar 86 at Eloy, completed Aug 88.
- f. Total Time: AF and Engine 175 hrs.
- g. Current Status: Serviceable, awaiting warmer weather

h. Damage: Rt main gear leg damaged after first flight landing. After landing wheel "found" a pot-hole and the gear leg twisted and failed when I went off the runway. No other damage occurred and there have been no problems since. (the runway was repaired a week after the incident)

i. Rain- I have flown in light and very heavy rain and other than an easily controlled pitch change there are no problems.

j. Modifications: Aileron Balance Tabs - 60 hrs flown since installation. Effect - aileron controls forces have decreased slightly.

3. Adjustable Sparrow Strainers:

After losing one strainer for unknown reasons a second was lost following a bird strike. After that I decided that an adjustable tab would be desirable. The following design has been flown on C-GGEM for 74 hours and no problems have been encountered. Since installation the tabs were adjusted twice. The tabs are constructed with balsa and plywood similar to the plans. The dimensions are as per the plans. Refer to the drawings for further details.

4. Rudder Pedal Failure. I am including this incident in order to provide other builders simple information. During a recent flight, on roll-out after landing, I applied the left brake and found the rudder pedal moved with no braking or rudder control. On inspection it was found that the tube at the base of the pedal arm had failed. Close inspection revealed one spot where the weld had poor penetration and corrosion had started. The tube failure initiated at the point of corrosion. This incident has been discussed with Rex and this is the only known

failure of the rudder pedal assemble so it should be considered an isolated incident. There is no requirement for an inspection program but owners should include a close inspection of the rudder pedal assembly during the annual inspection. It should also be noted that my aircraft uses hydraulic brakes and the pedal assemblies (supplied with the kit) were the old design. I believe that more recent kits used large diameter tubing.

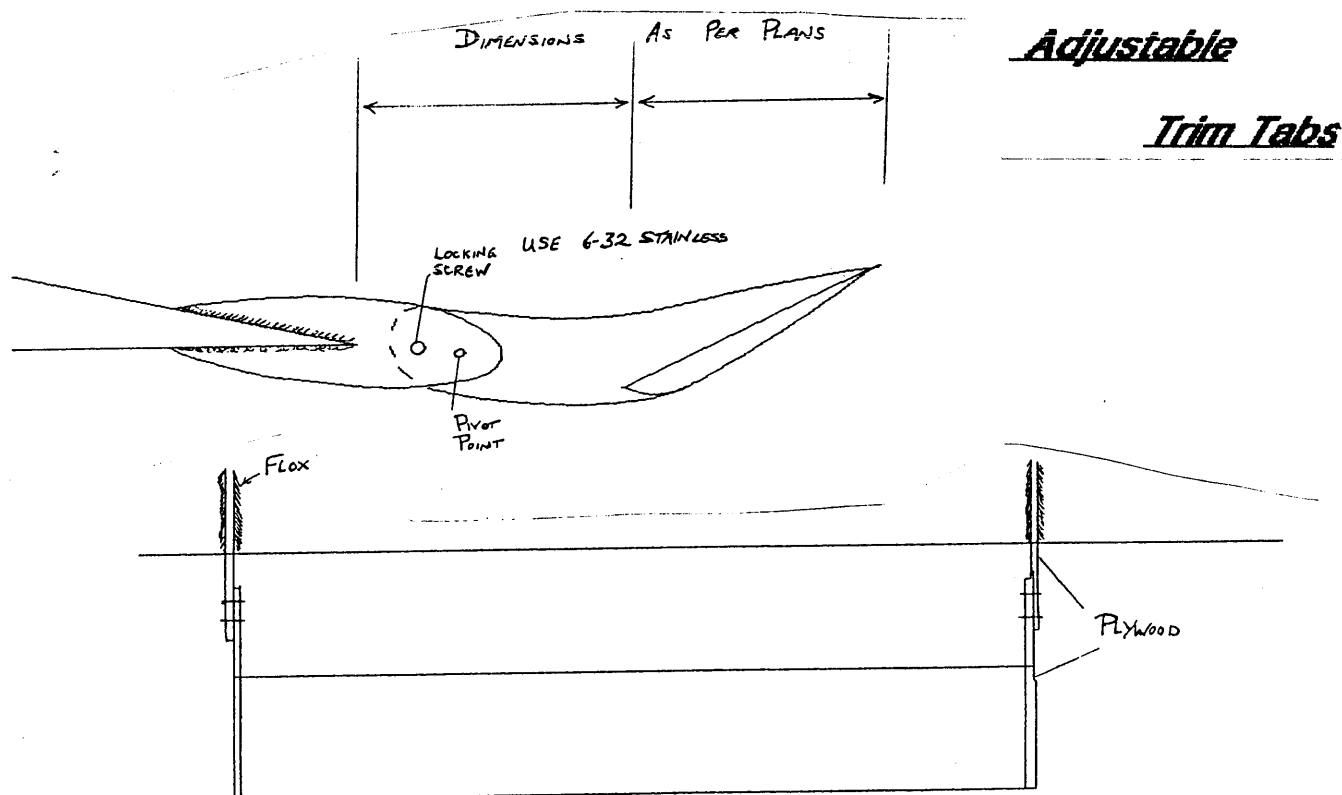
5. Information on Aileron Reflex systems. The idea of a reflex system was discussed at Oshkosh and someone thought there was at least one Dragonfly flying with a reflex system. Does anyone have any knowledge of this system? If the owner is known an article regarding the system would be very interesting. (Yes Ted there is several people using this system, the Evans brothers of Visalia and the Chino, Ca. group. Info to follow - Spud)

I will be sending you some more in the near future. As discussed I will provide the following:

- a. Article on Aileron Balance Tab - Design and Flight Test Results.
- b. Detailed article on Warp Drive Prop. (may take a little time)
- c. Pictures of Canard tufting flight test and video from cockpit.
- d. Flutter Article - if I can simplify the problem - it may be a two or three part article.

Spud take care and if I don't talk to you before Christmas have a enjoyable holiday (work on your Dragonfly)

Ted Givins



Dear Spud,

Received your letter a while back, and I'm all for a new newsletter, sign me up.

Just a note about my project. I've been working on my Dragonfly for over seven years now and hope (???) to have it ready to fly by June.

For the most part my Dragonfly is standard with some modifications, which I believe are worth mentioning. To begin with my canard has the same airfoil as the new Q2. I had an Aeronautical engineer make the design changes for the new canard with a set of disconnect fittings. (similar to the Varieze) This set up allows the center section to be semi - permanent so with a narrow landing gear the plane can easily be rolled through a standard 8' garage door.

The landing gear is retractable, which is controlled by a single electric motor and winch setup. After trying hydraulics first, the electric winch system proved to be the best way to go, but if I had it to do over again I'd settle for the standard narrow gear arrangement. It took an awful lot of time (2 years) to work the problems out.

I'm also installing a BRS, Ballistically Deployed Parachute System. This system will fully deploy a parachute within 3 seconds t bring down the plane and pilot, at speeds less than 150 MPH. This means it can be deployed as close as 50 - 100 feet above the ground. Best thing about it is it weighs about 24 lbs.. BRS, Inc. is located in South St. Paul, Minn. 612-457-7491 ask for Jeff.

I'd also like to hear from other builders in the Ohio, Indiana and Kentucky areas. My number is 513-741-8257.

Good luck on the Newsletter.

Sincerely, Bob Meador

3272 Sunnyside Dr.

Cincinnati, Ohio 45251

Hello Spud,

I received your letter today, and I would like to subscribe to the newsletter. I have been working on my plane seven years (Wow, that seems like a long time) and she is painted and ready to go to the airport. I have gull wing doors, and I built the engine with hyd. lifters, dual spark plugs, one mag and one electronic ignition.

Will you have advertising in the newsletter on Dragonfly products and services. (yes we sure will - Spud) Well if I can help out in some way over here in St. Louis let me know.

Joseph Anthony

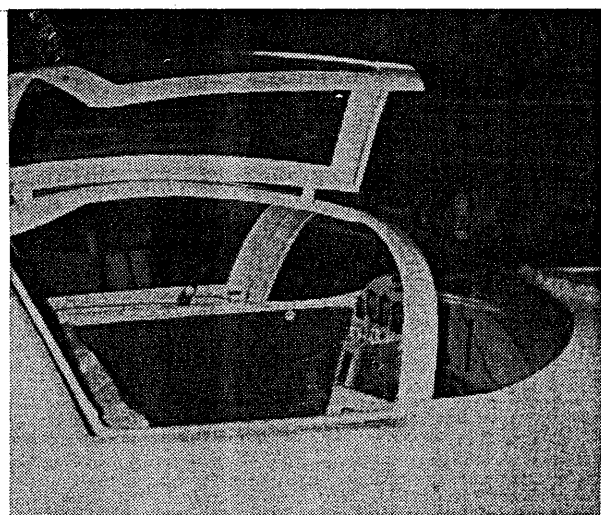
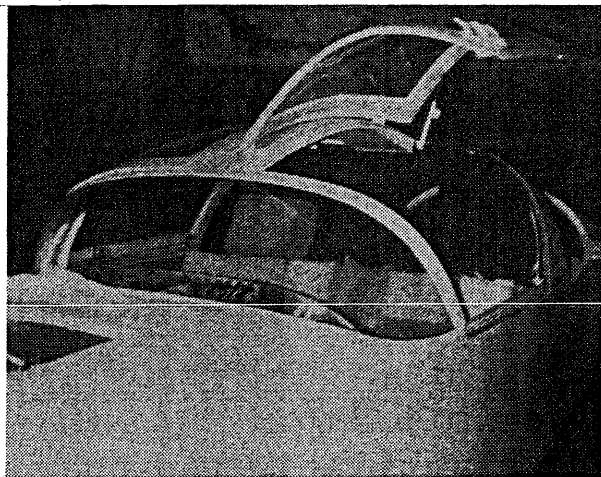
3546 Bamberger

St. Louis, Mo 63116

I asked Joe to tell us more about his gull wing doors, He responded very quickly and here's his additional report - Spud.

I will try to answer your question about the gull wing doors on my Dragonfly. My wife says cheap, but I say thrifty, and we go from. I found this broken canopy for only \$35.00, it was broken at the rear just on one side. The gull wing doors came out of the back of my mind, just maybe I could make a new side and have the three parts I needed. (Gull wing doors).....\$35.00, what a deal. I tried to glue a new section on the broken part, the glue line was to weak, I was going to make a form and make the part, my oven was to small, I would take the form to a plastic company and let them heat and form it, but they will not work on airplane parts. Go and buy a new canopy and out it up, yes, I can get a new part that way.

Now I'm real nervous, cutting up a broken canopy is one thing, but cutting up a new canopy is something else. I laid a string over the canopy with the latex safety covering still on and when the string was in the right place I dusted a coat of spray paint over the string, when I removed the string , I had my cut lines. The old dremmel with a rotary saw and a new whole canopy was in three parts.



Joe Anthony's Gull wing Doors

I did talk to the only other (that I know of) gull wing Dragonfly builder to get ideas and I started to get in my mind what I wanted. I wanted to be able to work on my instruments and inside in general, so my canopy comes off like the plans built planes. I wanted more room so I did not reduce the length of the plastic after adding the frame around the edge, this made the whole canopy longer, I like the new look.

I like the idea of the center section it gives some roll over protection and a little sun shade. I also put a light in this section.

After ten thousand and one decisions later, I had the doors of my dreams. Trying to get hinges to work on a compound curves, how to keep the doors open, how to keep closed, how to properly seal the doors. etc.

I sent some pictures and hopefully they will answer some questions. This little change took me an extra 6 to 8 months of work, I also made provisions so it can be jettisoned if need be.

And now a question for you. Do you need a stronger valve spring when you use hyd. lifters versus the original solid lifters? Will the stock VW springs work?

Joseph Anthony

Traditionally the Hydraulic application has had a lighter spring tension than the solid lifter. But in any valve train application, Car , plane , boat or whatever, a weak valve spring is worse than a too strong of a valve spring. A weak valve spring will allow the lifter to bounce down at the bottom heel of the deceleration flank of the camshaft (just as the lifter goes down to its lowest point on the base of the cam) this causes a wear problem and a loss of power. As the lifter bounces so does the rest of the valve train and momentarily reopens the valve causing a loss of compression thus a loss of power. Of course this is much more critical at higher RPM's , it is still a problem in applications under 3000 RPM and should be given proper attention. I would recommend at least new quality springs and to make sure they are being installed at their recommended " installed height". As heads have their valves and seat ground this pushes the valve retainer farther away from the spring seat mount. Valve spring shims are available in .015, .030, and .060 which should allow you to get them very close. I will check with some of the VW motor boys that are much more familiar with this engine than I am and if there is any different info I'll let you and everybody else know.

Spud

P.S. I'll be over to St. Louis in Feb 91 with camera in hand.- Spud

Thanks for the opportunity to participate in your newsletter we need it badly.

I'm a scratch builder and on the project for 8 yr's. Have all the major components complete, some control system pieces in, but haven't worked on it for 2 years. I need

some inspiration to complete it. I hope the newsletter will help

Doug Harvey

(You want inspiration and incentive. We got lots of that, Read on I -Spud)

Dear Spud,

I'm happy to hear that you are going to continue the Dragonfly newsletter. I've missed receiving news on Dragonfly flyers and builders. Sign me up for the newsletter.

Here's a little info my Dragonfly: - Mark 1 (Built per plans) - Plans Serial number 005 - First flight July, 1982 - 60 Hp Hapi - Gross empty weight 675 Lbs - Max. cruise 155 mph at 3000 ft. - Max. climb at 920 Lbs = 830 fpm at S.L. - Max. climb at 1180 Lbs = 580 fpm at S.L. - I've flown her for 635 hours - 5 times to Oshkosh and 2 times to Sun N' Fun

Robert Verriest

10071 Balfour

Allen Park, Mi 48101

Dear Spud,

I have been flying my Dragonfly for the past 4 years and have logged over 600 hours on it. Recently, I flew my Dragonfly from Florida to California and back. I have accurate statistics about this trip and will glad share them with everyone.

I have made various modifications including installation of Vortex Generators and will be happy to write an article regarding these changes.

I am pleased that we finally have a newsletter and wish us all the best with it.

Sincerely

Rob Kermanj

1240 NW 8th Str.

Boca Raton, Florida 33486

I contacted Rob and asked him to write on his trip and his other modifications. Rob also was one of the other gentleman interested in taking over Claude's newsletter. I've asked him to be involved in the newsletter on a on going basis, writing, research, group activities and Etc.. I feel he has a lot to offer the Group. - Spud

Dear Spud,

How glad I was to receive your letter announcing the reestablishment of Dragonflyer Newsletter. My brother Gene Evans and I have put about 260 hours of flying on our Dragonfly since it first flew in June of 1987. We have,

like others, gone through some of the same 'trials and tribulations' of being homebuilders and appreciate other builder tips on how they have addressed a particular problem or modification.

We have made some refinements on our own aircraft and would be willing to share those with anyone. Most recently we have installed a belt driven alternator on to the back of our engine's drive case because of the unavailability of a Hapi voltage regulator and magnet ring. This not only produces more than enough amperage for all of our electrical instruments (Narco 12D radio, 891 VOR head, Elec. turn and bank. Transponder, two electric fuel pumps, Hapi electronic secondary ignition, Hobbs meter, CHT, voltmeter, EGT, oil pressure, oil temp., Whelan strobes and retractable landing light---Whew!) but it becomes an item that can be replaced at any automotive parts store or junkyard. Another item that might be of interest to many VW aircraft owners is a great little gear-reduction starter that we have located that will crank over any VW engine (even high compression, full race drag engines) hot or cold. It too is available at most junkyards and with a simple flat aluminum adapter plate it will mount up to Hapi, Revmaster, and Soneri accessory drives. One last thing item to is a very simple aileron reflexor that I have drawings and instructions for that allows our aircraft to reflex the ailerons a few degrees allowing a couple of miles-per-hour in cruise speed.

If these are items that you might be interested in running in the newsletter feel free to contact me or my brother Gene.

Info on our Dragonfly, Serial # 663 N142JE - First flown June of 1987 - No major flying problems, adjusted trim slightly - Cruises easily at 155 mph, I've seen 170 mph with two on board - 705 Lbs. Dry (not bad for all of the garbage behind the dash, Did I mention that we run a vacuum pump off the Bendix mag drive on the back of the engine for our DG and VSI. - Burns about 4.5 gph if pushed hard.

Guy and Gene Evans

5545 W Pershing

Visalia, Ca 93291

Spud,

First off, great job on the first newsletter I it was very well done and an informative collection. I am writing to address one question and to ask a couple.

Re: Interrooms. I have had good luck with Radio Systems Technology's kits. They are out of Grass Valley, Ca. and some of their products are available ready-wired. I have built five of their kits, and have had nary a malfunction to date. My BD-4 (flying) has an adaptation of the RST 504 audio panel which includes an Interroom (they don't

always tell you that in the literature). I modified this unit to custom-fit into the console of my IFR-equipped plane. The installation looks professional and was tailored in at least three areas to meet my needs exactly. The company sends complete schematics, diagrams and also will verbally assist in any in any mods you need to make. I would be happy to offer my assistance to any Dragonfly builder in custom-modifying any of their kits or developing wiring diagrams or harnesses. What seems matter-of-fact to me might seem bewildering to someone else, so if I can help someone get past the worry stage of electrical, please let me know I

Now for some questions; can you check with Rex (if you don't know) and find a sketch of the aileron control system that he said was under development some time ago? I wish to have two side-sticks and a center power quadrant. My designed system has two side torque tubes driving a center torque tube, which runs aft to just through the wing drag bulkhead. The pushrods run vertically to the aileron bellcranks. The elevators are driven individually from each side-stick, with an "idler" bellcrank about where the old center stick used to attach. this allows a slight differential elevator adjustment. Of course, the bellcranks on the side torque tubes extend downward, and connect to upward bellcranks on the center torque tube. (I have a strong distaste for reverse sense ailerons)

For statistics, I am building plans # 820, and am in the process of deciding on the engine - between the Magnum plus and the Rotax 912. I am active in building.

Warm regards,

Darryl Wright P O Box 724 Barrington, NH 03625-0724

Now here you go guys, People helping People, everybody is bad at something, but everybody is good at something, in the electrical/electronic area is Darryl's strong suit. This is a good example as how we can all stick and we can ALL turn out, an excellent product-Our planes- Attaboy I

I don't have any info on the new aileron setup, to the best of my knowledge there is a couple of versions. I did contact Rex and he has had 200 sets of the new plans made up and they're finished. Along with the new plans he will be supplying all the revised/improved revisions like the Aileron system. But they will not be available for approx. 45 - 60 days . Hopefully we can get some of the people in the group to input on this area

Dear Spud,

I have been flying my Mark I for two years and have just recently upgraded the engine from a 1833 to a 2100cc and it has really been worth while. The next step is to retrofit the A/C to inboard gear. The wing tip wheels and prop tips near the ground make it an expensive pastime in prop replacements.

I wrote Mosler about getting a set of gear legs over two months ago and have had no reply. I have just written to Aircraft Spruce and asked them to help me, They are usually pretty good.

I returned yesterday from Rockhampton, Queensland, head winds of 30 + Knots and very rough - 7 hours flying, both plane and motor never gave any problems. So far there are 5 or 6 Dragonfly's in Australia, Len Dyson has installed a very effective belly board, like the Varieze. The other comment I would like to make is that I was getting insufficient cooling on the climb with the factory cowling. I increased the opening a little all the way around and now it's perfect.

Dr. R.S. Jelliffe

R.M.B. 19, N. Boambee Rd.

Coffs Harbour, N.S.W. Australia

The leg kits are only available Thru Rex Taylor. He owns the molds, They run those legs kits in batches and are only available when they get enough orders to run them. Production delays can be up to 60 days. The price of the kit (which includes plans to change MkI's to MkII's) is \$450.00.

I have tried to contact Len Dyson several times by mail with no response. I had heard that he had some good luck with his belly board. I believe Mr Kinross or Mr Bramich both of Australia said Len was building A RV-6 or we have his wrong address and that's why he hasn't responded. If you come in contact with him let him know about the Newsletter and our desire to here more about his Belly board even if he's working on a RV. - Spud.

Dear Spud,

I have about 4 1/2 years into my project (Plans#848) and feel that I'm just coming down the pike to a favorable finish line. Working 6 days a week doesn't leave much free time (took me close to 2 years just to find a suitable garage to rent close enough to my apartment) Have been following the plans very close, but like most builders have made a few changes to suit my needs.

For example, I've opted to go with Rex's Magnum which puts a little more weight up front over the 60-2dh coupled with the desire for a full panel, I decided to eliminate my header tank, go for a pressurized fuel system with a standby fuel pump and add a 4 1/2 gallon auxiliary tank in back of the right upper seat bulkhead which directly feeds into the main tank via a pilot controlled fuel valve. This will give me the full capacity flexibility plus, with my weight on the slim side (145Lbs.) give me a ballast advantage in the back of the CG when flying solo.

I have also installed Jerry Scotts servo tabs, via Butch

Hernandez in Golden, Colo., which looks like those of Teg Givins in DBFN #33 photo E. These work off of the aileron movement, but are also hooked up to the trim system.

Other modifications are steps on both sides of the fuselage to assist shorter people entering the plane. A fuel grounding system has been installed in both main and the auxiliary tanks. Installed elevator counterbalancing system, hooked up to the elevator torque tubes. I'm finishing up now the inboard aileron fairings which will be removable, thus the ailerons can be installed and/or removed without removing the wing. and thanks to Butch Hernandez I've put in a reflexor system, electrical driven with a control panel indicator. I figure about a year more to complete.

Phil Williams

63-53 Haring St.

Rego Park, NY 11374

Hello Spud,

The newsletter looks like a good, positive newsletter - Keep it up!

I'm looking for some help for you and the rest of the builders. I'm planning to install a forward canopy, as soon as there's good plans around. PLEASE I publish all related pictures, drawings, plans or whatever.

Dale Dutt

4302 Laurel

W. Richland, Wy 89352

Well guys I need your help, I looked thru all my stuff and can't come up with a thing. Let's see if we can fix Dale up. Lets get everybody's pictures, plans, drawings, pro and con comments in for the next newsletter - Spud.

Dear Spud, I am pleased that some one has taken up this vital task. Sign me up for a year.

I'm interested in a Partner in west Michigan area to help complete my Dragonfly. It could be a very good deal to the right person. I am now finishing and getting ready to install the engine. All major work has been completed.

I look forward to the first issue of DBFN.

Evan Stroup

4493 Marshall S.E.

Kentwood, MI 49508

French Dragonfly accident

To follow are some excerpts from the French Dragonfly newsletter "LA LIBELLULE" about the fatal crash of Michel Vallais of France Jan. 1989.

I believe that Gerry Bracken of AGC Enterprises Ltd. translated and forwarded to Rex Taylor in July of 1990.

Yvan de Lespinay

This accident was the tragic end of 6 years of dedicated effort, but it was also a end of a friendship. It is important that all Dragonflyers are put in the picture about this problem of downward pitch of the elevator. We no longer subscribe to the newsletter, however we don't really understand why Rex Taylor did not warn all those who had a building license (maybe 1500) when in a similar instance Aeroquip took the trouble to send their customers worldwide an AD notice.

(there was a note injected at this point in the letter by F.Besse - Spud??)

Note by Francois Besse: The importance of the elevator stops is not to be overlooked. The letter mentions it. The newsletter stressed their importance also (La Libellule had already announced it in their summarization of the "Dragonflyer" newsletter), but are not vital since the newsletter adds that they can be fitted after flight trials. Perhaps it was another factor. But I do not think it was the main cause of the accident.

(back to Y. Lespinay's letter)

I should have written earlier because some of this information can be useful to the builders, but I really could not bring myself to do it for some time. On the other hand, I have contacted all those nearing their first flights. Furthermore, I did not have all the details of the inquiry, in particular an important witness report to the police, and I was awaiting the results of the magnetic tape recorder onboard (which proved to be of no interest). I needed to be pretty sure of the causes and events of the accident myself, before talking about it.

On January 11th. we had been ready for several weeks, except for some brake problems. The engine worked perfectly and everything seemed to be in order. I believe we could have used an even bigger propeller since the ground run indicated 3100 rpm, which is better than the best 1835 with a carb.. Michel arrived midday and made final taxi runs, but decided against flying because of a crosswind. He confided that he now understood the need to practice in an old fashioned tailwheel plane - the steering being very efficient even at low speed. He decided the plane must be flown by giving it a few small doses of power. In the afternoon the wind dropped. I rang Michel at his office. He said he would arrive at 5:15. While waiting I filled the tank full (30 liters), and after a careful preflight I taxied the plane to the foot of the tower.

At 5:30 Michel started the engine and proceeded for a immediate take-off. The take-off run was less than 200 meters(a meter = 3.28 feet) and the plane climbed steeply without floating. At the height of 300 ft. a turn to the left to fly over the field. Once he reached the tower, at a height of about 1000 feet, he turned south. As the weather was hazy, Eric Adillon and myself quickly lost sight of the plane from where we stood at the bottom of the tower, with a VHF radio. A few minutes later, as we had no contact with him, the tower called twice. After the second call, we heard his voice for the last time: " AG, I have some problems, I'll try to land..." A plane from Rennes Aero club, which was in the area, quickly found the point of impact, less than 1500 meters (lees than a mile) from the threshold of the runway.

Unless the inquiry leads to some new information, here is what happened: Michel had trouble with the engine a few kilometers from the field. The origin is still unknown, but was probably a fuel supply problem. So he decided to fly back to the field. at less than 1500 meters from the end of the runway he stalled violently at about 400 feet, and only recovered about 10 meter above the ground, then he stalled a second time , but to low to recover this time. He hit the ground at a 70 deg. angle. We cannot say that this behavior is alike to what we know of the Dragonfly characteristics. Stall test were made by E. Adillon in Eric Hamonics plane to confirm the plane (bobbing?) at very low angle of stall, and loss of height varying between 2 -4 meters/ second. Indicated speed between 70 and 100 mph . The Ailerons were very sensitive.

The examination of the control linkage does not reveal any break before impact. All hinges and trunnions were in place. The plane was within the weight and balance limits. On reading the winter 1987 newsletter, which we did not have since we no longer subscribed, was a revelation to me - excessive travel of the elevator causing a deep stall of the canard when landing, without thinking apparently that such a condition in the air could be much more dangerous.

Beside the conclusions everyone can draw about the need for elevator stops, perhaps even to the limit the deflection to 20 degrees, I would like to add that a static ground run of at least a quarter of a hour at maximum RPM now seems essential. Of course our engine had at least six hour running without a incident. But the use of power for longer than 2 or 3 minutes was impossible with the cowls on, as they reduce the cooling too much at static run-up. This longer run-up could perhaps have shown up the fuel supply problem, which was the principal cause of the accident. Also, the absolute necessity to stay in the vicinity of the field for the first flights will also be obvious to all. Yvan de Lespinay

I'd like to make a couple of comments about this accident and hopefully clarify some areas - Spud.

The lack of elevator travel limitation very much may have aggravated the stall tendency to be so sharp, but if all

information correct, I see the accident (In my opinion) as pilot error. Mr Vallais at a relatively low altitude had a unrestartable engine stoppage which he chose to attempt to stretch it to the airport which didn't work. It is the pilots responsibility to maintain control of the airplane (even without a engine) in all situations. It is seems that Mr Vallias in his second pull-up may have went into a more aggressive stall at a altitude which was to low to recover (20 meters = 66 feet) from this stall (In any airplane - engine out). If Mr. Vallias had chose to maintain proper emergency landing procedures he would probably still be with us today. Yes he probably would have busted the hell out of the airplane, but nothing is as important as your life.

There are quite a few books available on these subject areas that I highly recommend everybody be familiar with, especially those just getting ready to fly there Dragonfly's.

And why at least one person over there was not taking Rex's newsletter and translating it for the group is beyond me. If Eric Dzalba Lyndis the French Editor of "La Libellulle" does not subscribe to this newsletter I will be glad to send it "Free". Come on everybody we need to stick together for everybody's benefit.

I need a Translator

Eric Dzalba Lyndis of France who is the leader of the French Dragonfly group so kindly sent me the last Seven copies of their newsletter "La Libellule", there are all sorts of neat drawings and photos but there is one catch, its all in French and I can't read didley.

What I would like to do if there is someone in the group that can read French is forward them the newsletter to see if there is something meaningful and if so translate the good stuff.- Spud

Rever from Dragonflyer #28

Setting the Elevator Stops - Important !

We have had several broken oanards on Mark 1 Dragonflys. I've written a whole lot of words about how to fly the Mark 1 and how to avoid getting into a bad situation with it. At the dragonfly swarming here, we were disoussing flying the airplane, how to make a good landing with it, and the subject of elevator stops came up.

Perhaps I haven't made enough emphasis on the importance of setting the elevator stops very early in the test flight program so that the elevators don't oause you to lose lift on the oanard at low speed and fall on your nose, thus setting up a chain of oircumstances that sometimes break a oanard.

In the little sketch I've provided here you can see what

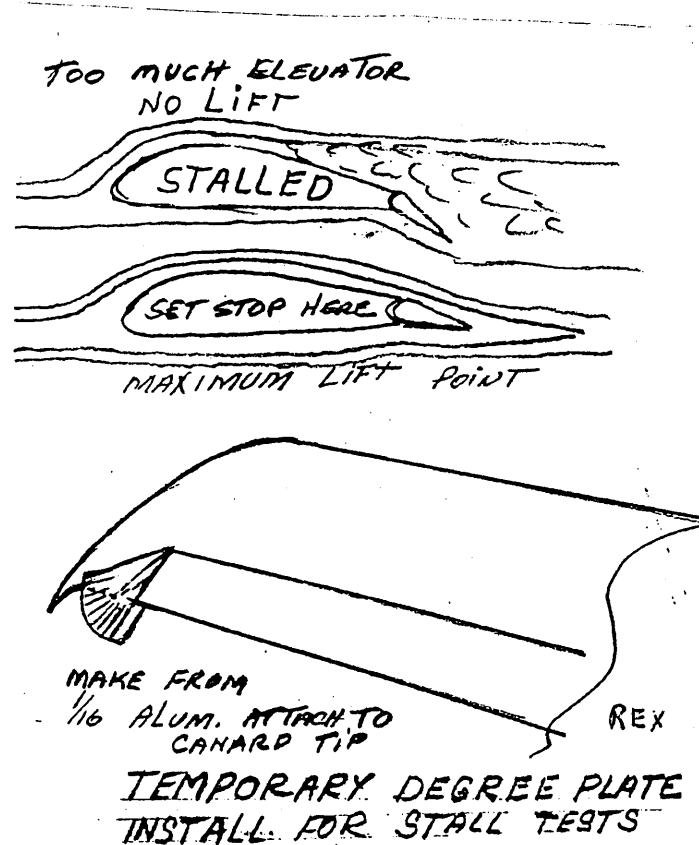
happens when the elevator is deflected too far and the front canard transitions from lift to drag. This is a condition we definitely don't want, particularly if we're three or four feet above the ground on landing.

It is super important that you go up and fly the airplane at progressively lower speeds, power off, and find the point at very low air speeds, where the elevator transition from lift to drag, then put the stops in so that you don't exceed the maximum lift point in the flare attitude.

I suggest a little plate made out of sheet aluminum with a series of graduations on it at the outboard tip of the elevator. watch it as you're stalling and find out what number it stalls at, then put in the pitch stops so that your stop keeps you a little bit short of that deflection point that you know from experience causes the elevator to stall.

The center of gravity also comes into play when setting these stops, so it is wise to check it at the most forward C G that you would normally fly at, because that's where you'll get into the most trouble. With an aft. C G , the canard isn't carrying as much weight and consequently can carry it at a lower airspeed.

Rex - Viking Aircraft Ltd.



Dear Spud,

Your idea of starting up the Dragonfly newsletter is a great one. I will gladly subscribe. I also would like to contribute articles, computer help (I own a computer business) or information. Please let me know what you need.

I would like to see a section in each edition of the newsletter dedicated to different parts of the Dragonfly construction. As an example in the next issue we could have a section on different ways people have attached canopies, or paint schemes. I would also like to see newsletter more often because three months is a long time to wait between issues.

Let's start the newsletter off with a bang. Let's include lots of information like current builders list, a list of good of good suppliers for parts, information on current configuration options (engines, landing gear, etc) How about publishing a missing persons list to aid in locating builders that are either out of contact, sold their airplanes, or moved to some other location. Lets publish a short note in Sport Aviation asking for people with an interest in the Dragonfly to contact you.

Information on my project(s); I purchased plans for a Dragonfly #868 July 30, 1985. I started working on the hardware construction, then moved, married, etc. That project resulted in a continuing in the Dragonfly and a box of parts, plans and newsletters.

In September of 1988 I purchased a partially complete Dragonfly from Irwin Tallakson of Wilmar, Minnesota (if you could look up the plans registration number I would appreciate it). The aircraft is a Mark I that is now complete except engine, instruments, interior and paint.

Robert L.C. Cooley

2505 Robin Str. McAllen, Texas 78504

Robert definitely has his " Thinking Cap On", he has a bunch of good ideas that we are going to put to work immediately. Robert is also helping me in the computer department so that we can print the newsletter on a laser printer which will improve our quality in the future. As far as publishing the newsletter more often than every 3 months, the only other option would be every 2 months which we have tentatively scheduled, but we haven't had much feed back from the group whether they think this is good or bad idea, lets have some input ASAP PLEASE. As the newsletter subscriber base increases and I get a few extra dollars I'm going to get the new version of "Publish It!" which will save me a bunch of time on production. Robert, I really appreciate the help with the newsletter -Spud

So guys lets get ready for the next issue and lets concentrate on , Canopy attachment styles-sliding, forward pivot, over center (Lancair style) and Instrument panel layout and consoles too I let's give this a try I Lets take lots of pictures and good descriptive

letters giving all the details.-Spud

Dear Spud,

When I wrote you last I was doing high speed runs with my plane 86EJ. Unfortunately I broke a gear leg again (Mine is a Mark II). This is the third incident I have had with the Mark II gear leg design. In the past I have taken the blame for these mishaps as I'm a relative a low time pilot with no more than four hours total time in a taildragger. My understanding is that the Dragonfly MkII gear can handle only about a two foot drop onto the runway. This last incident was different in that I have gained more experience doing high speed runs and did several airborne hops down the runway before my collapsed gear occurred. Usually they twist at the juncture where they turn 90 degrees as designed, but this time it snapped at the canard, right before it goes into the mount. We inspected the leg (although I certainly am no expert) and it showed fewer parallel fibers, at the break than I have observed in previous legs. To make a long story short I am no longer a believer of the Mk II leg design.

This is not to say that in the hands of a competent Dragonfly pilot these incidents would occur. The reality is that most builder must test fly their own projects and as such are essentially a " student pilots" in their aircraft. Therefore a trainer style gear system seems to me to be more appropriate. For this reason I am no longer willing to rebuild my gears as Mk II's. I plan to sell my project as such or try to obtain a trigeared design (like Tri-Fly of Rex Taylor) and refit that to my plane.

I feel a gear system guaranteed to handle a 10 foot drop onto the runway would help me greatly. If any builder has such plans I would find them helpful indeed.

My design is essentially a straight MarkII with only an oil checker port on the cowl. My empty weight is 697 lbs. with the CG at 56.2" aft of the datum as measured professionally with weighing pressure transducers on the main gears and weighing scale under the tail wheel. My plans # 830

John Mortarelli

P.O. Box 497 Brimfield, Ma 01010

Lets all pitch in and see if we can get John some ideas on this landing gear project for the next newsletter - Spud

Dear Spud,

One of my hopes is that , collectively , we can get some factory support for this airplane. Having had to ride the financial and other problems of the parent organization - which created a two year grounding of my airplane after 50 hours of flight time - I hope you succeed.

I will support a positive newsletter - as long as it doesn't hide the facts, such as stall speed on my aircraft is 64 dry, but 82 (and very nose heavy) in a light rain. Original advertising gave a much slower stall, but I flew in the prototype and it flies just like mine.

I have about \$11,000.00 in mine and the original advertising bragged about producing it for about \$5000.00. Mine still is operating on a hand held radio and definitely not IFR.

My Dragonfly, N-17AK, is back on the line, ready for test hop as soon as I take my Bi-annual in the next week or so.

Allen Kennedy

4353 Kathy Lane

Chico, Ca 95926 Plans # 182

As far as getting support from the manufacturers, the newsletter goal is to help the Dragonfly Group "earn" the clout and the respect of the manufacturers. If any one person is having any difficulties beyond normal, please notify me as soon as practical, the group should be made aware of these problems as they arise and possibly we may be of "assistance" or may have an alternative solution.

And as far as your \$5000 vs \$11,000 , inflation has definitely taken its toll . It sure doesn't seem like the pay check has gone up at the same rate. It's like my wife keeps telling me. " The only difference between men and boys are the price of their toys" and if you really want to feel better go truly price out a Lancair or Glasair.

Dear Spud,

I've just flown the first four hours off my Dragonfly N43WD. It's a Mark II with an A-75 Continental, No wheel pants and an awfully blunt nose(subject to change). It indicates 150 mph at 2375 rpm with Bernie Warnke 55 X 70 prop.

I'd like to sign-up for the newsletter and ask you and the readers for some info on a good composite inflight adjustable prop.

Thanks in advance for everybody's assistance.

Allan Martin 10660 NW Contact Court Silverdale, Wa 98383

First off a hearty congratulation on that first flight, it has to be gratifying after all those hours of work.

I'd like to get some pictures of your plane and the engine installation - Spud

Hello Spud,

I have just completed and flown my Mark I. I am still going through the adjustment period .

I am also interested in the Mark II conversion and any

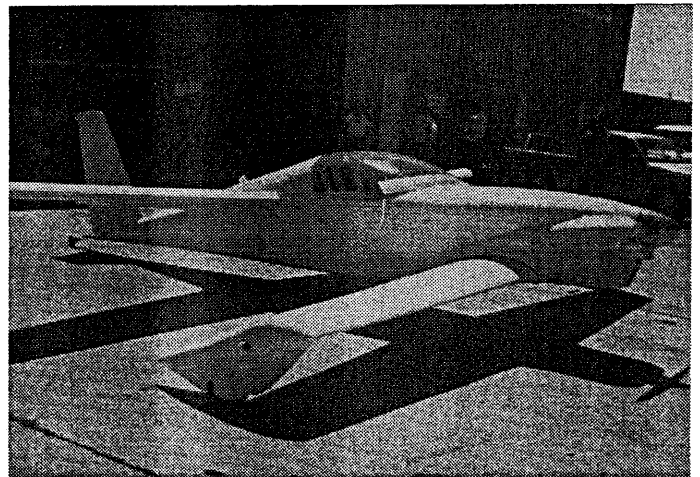
info on a good elevator Trim Mechanism for my Dragonfly.

My plane weighs in at 750 Lbs., Cruises at 125K ind., Stalls at 55k ind.. Revmaster 2100D "Turbo'd" powerplant - Very nose heavy but working on that. On my first flight I dinged the prop. Second flight was 11-2-90 and so far so good. I have talked to Rex about adjusting the CG and reflexing the Ailerons up 3/8" up. More info next time.

Harry Kemp

1309 Aspen Lockhart, Tx 78644

Harry we would like to know how you are doing with shifting your CG around but also would be very interested in your planes performance at altitude with the Turbo, T.A.S. Rate of climb at 10,000, Etc. - Spud



Harry Kemp's Mark I Dragonfly

Nice to meet you Spud,

My wife Jo and I started construction of our Dragonfly on the 29th of June, 1982 and may be close contenders for the "Oldest Dragonfly yet to Fly" contest.

The cockpit is zolated & I hope within the next week or two to begin spraying primer. After painting, the instruments remain to be installed & plumbed. We have an 1835 Hapi & everything we need to pack the panel. The landing gear is the "Mark 1 3/4"

In early 1983 Jo was diagnosed with Multiple Sclerosis, which slows her down physically, but has done nothing to reduce her love for flying. She's given me loads of help from the sidelines to help this project to completion.

We're truly pleased to hear about the new newsletter & best of luck.

Jo & Buok Buchanan

4727 Milne drive Torrance, Ca 90505

Welcome aboard I And Jo keep cracking that whip I - and keep Buok working hard on the project - Spud

Justin Mace and his Subaru Project

My Dragonfly first flew in 1986. I have accumulated two hundred forty (240) hours behind a VW conversion. Heat has always been a problem for me in southern Arizona. I had wanted to install a water cooled engine since before the plane was finished but none were available. I heard about the 1990 Subaru Legacy engine and thought that I would be a little heavy but with the extra HP it should be OK. My plane weighed in at 660 Lbs. So the extra weight won't be any worse than many DF's that scale over 700 lbs with the VW engine.

I purchased a slightly used (2000 Mi.) Legacy engine from a salvage yard in Phoenix. The car had been rolled, with virtually no damage to the engine compartment. The engine was purchased complete. That is with the multi-point fuel injection, combustion computer, electronic ignition, starter, alternator and air cleaner. The date was Jan. 9, 1990.

At this time, I have the motor mount finished. A new light weight alternator mount has been fashioned. The multi-point fuel injection system is being used due to the automatic altitude compensation. No mixture to mess with. The exhaust system is currently what's holding up the parade as soon as we get that back we can get back to wrapping things up in the installation department. The original electronic ignition system is to be used.

The cooling plan is to have a P-51 type scoop, in an attempt to correct the forward CG due to the heavier engine.

One other area that is going to effect the performance of the aircraft but has really given the plane an aggressive look. The prop needed to match the engines horsepower was made by Aero Props out of Okiahoma. It is 54" 3 blade with a 7" (that's right, 7 inches) chord. They refer to it as their Super Airfoil and has a very abrupt airfoil similar to the shape of the Canard on a Dragonfly.

The conversion is going quite well abet slow to this point. I am well aware of the problems associated with this type of conversion, but, so far these have been only minor ones.

Justin Mace

7541 N. Shirley Ln.

Tucson, Az. 85741-1916

Hello Spud,

Enjoyed talking to you the other day and here is the info you wanted for the newsletter. Enclosed is the best I could do without my drawing board which disappeared long ago!

The offset on the lock tab fits over the " T " nut and was formed using to sockets of an appropriate size, and

squeezing flat sheet between them in the bench vise.

The balsa airfoil pinned with common sewing pins to hold in position while the epoxy cured. T-88 used for all. Slot in lock tab allows about 25 degree shift min. to max. Loosen all three screws to shift.

Set initial setting to 30 Degrees, Flew hands off, solo neutral trim first time.

One area where I have had some difficulty was with alternator output. If some of the other subscribers have had problems, as I did, with the Hapi internal alternator producing insufficient output to maintain the battery at full charge, the following may be the solution, information was supplied courtesy of Bruce Biggard of Synchro Inc. who were suppliers of the alternator parts to Hapi.

Alternator output voltage is controlled by that seen by the regulator sensor lead. On the original rectifier/regulator, this connection is internal and the alternator output is limited to 14 volts. at the white output lead. However, the alternator current through the wiring, switches, and circuit breakers (main Culpit) produces an IR drop so that the voltage seen by the battery is never full charging voltage. Furthermore, the condition gets progressively worse as electrical increases and more current is drawn from the alternator, increasing the voltage drop. There is no practical way to overcome this condition with the original regulator/rectifier.

The replacement separate components suffer from the same condition if connected as recommended by Hapi (black regulator to white rectifier) but by connecting black sensor lead directly to the battery + terminal, control voltage is from the battery rather than the regulator output and the alternator then picks up whatever voltage is needed to maintain full charge.

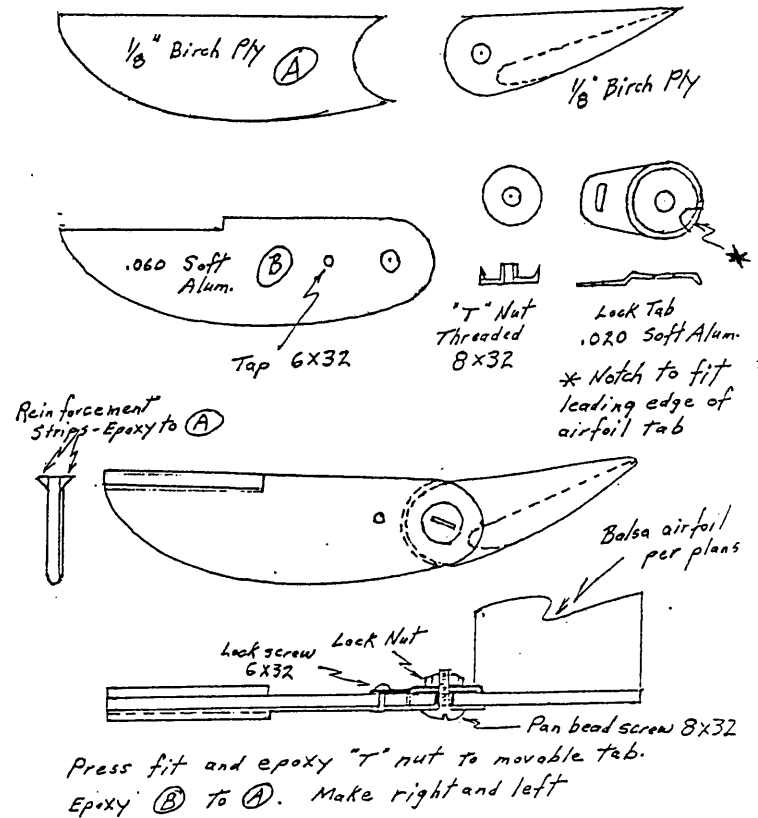
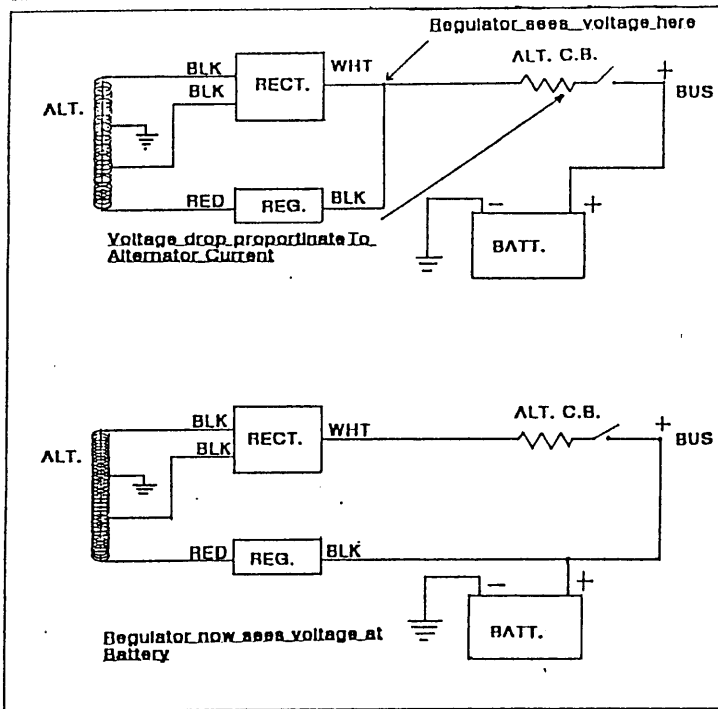
Output is still less than I would like at rpm's below 1500 but should be no problem for normal operation.

In talking more with Rex Taylor about this problem he said he doesn't have this problem, but his plane uses fuses instead of circuit breakers. There is some definite Pro' and Con's about the use of CB's versus Fuses. If we have any experts in this area I would like to hear more views on this subject.

If anyone in the group has a need for more electrical capacity, I'm working on an idea for a simple external drive for an alternator. I moved the electronic ignition modules off the rear of the engine and on to the firewall to get them away of the excess heat. This makes the rear of the crank available where the mags were mounted on the engines so equipped. The crank is set up to carry a VW pilot bearing for the transmission mainshaft so a simple adapter could be mounted in the same place as a mag and carry a single bearing for a shaft which would also engage the pilot bearing and be driven by a fitting to the gland nut with a pulley mounted outboard on the shaft. This could also drive other items like a vacuum pump.

Leonard T Griffin
 2316 Johnson Road
 Silver City, N.M. 88061

Dragonfly Elevator Ground Adjustable Trim Tabs



Dear Spud,

The brotherhood of Dragonflyers is alive and going strong! It's encouraging to see that the original enthusiasm is coming back.

I just returned from the great southwest (any way to escape to escape the 20 degree "ice" follies) and wanted to share a couple of noteworthy items.

First, Subaru mentor Justin "The Ace" Mace is almost alive and kicking. We caught him on a beautiful Sunday afternoon with a bad cold, and he updated us on his progress. The engine installation (see Kitplanes Issue - Oct 1990) looks fantastic. He is essentially running a stock Subaru watercooled four banger and the factory fuel injection with a modified air box.... more on this in an up coming issue. To offset the CG differentiation, the radiator mounts in a well designed "Mustang like" belly scoop. He'll keep everybody posted on his progress.

Second, Rene de Lauther and the Phoenix Dragonflyer (18 planes in all) are going full speed ahead. Rene and his wife just purchased a home over in California. And Rene is taking his DF out of mothballs seems those 7 to 8 hour auto trips to the coast are getting. Rene has some great intercom ideas, but has temporarily shelved them in favor of getting his plane finished. We look

forward to a progress report Rene, Larry Brown and the rest of the Phoenix builders.

It's a wonderful feeling to be able to travel away from home and feel at home with fellow builders. I appreciate the hospitality of Justin and Linda Mace, and even though he felt terrible, he went the extra yard to come out to the Avra Valley airport to show me his neat project. I gave Rene and his wife a very short notice, and he took his time from a very busy schedule to show me his project and update me on one of the best builders club in the U.S. In the process, I picked up a pair of steel "Phoenix" legs for my Mark II, which look great....can't wait to hear more from this group, who are constantly working together towards common goal of all. Keep up the good work!

That's all I have for now Spud, as my travels take me around the upper midwest I'll be stopping at other builders and will continue to send in reports on our other fellow builders. I'll try to send pictures also.

Bill Brutsman

7901 Park

Lenexa, Kansas

Thank's Bill, The group and myself appreciate the extra effort! - Spud

Dear Spud,

Thank you very much for the letter about the upcoming newsletter.

I am starting to return to my Dragonfly project after about an 3 1/2 years of little progress. In that time we have had a grandson born and living at our house and two daughters got married. That did not leave much time or money for flying or the project. Tell me a teenage son is not as much a problem or expense.

I have got back to building and I'm fitting the gear sockets together and into the foam of the canard.

The last "Dragonflyer" was very incomplete and you might try "fixing up" that last issue as you start out on the New "DBFN".

Jim Brunner Plans # 559

1705 Lawrence place

Mexico, Mo 65265

Good idea Jim I went back to # 31 and it was missing the part on the "NO Fuel Flow" article and the pictures

and sketches of Del Bradleys simple heater system. So we did a little homework and this is what we came up with .

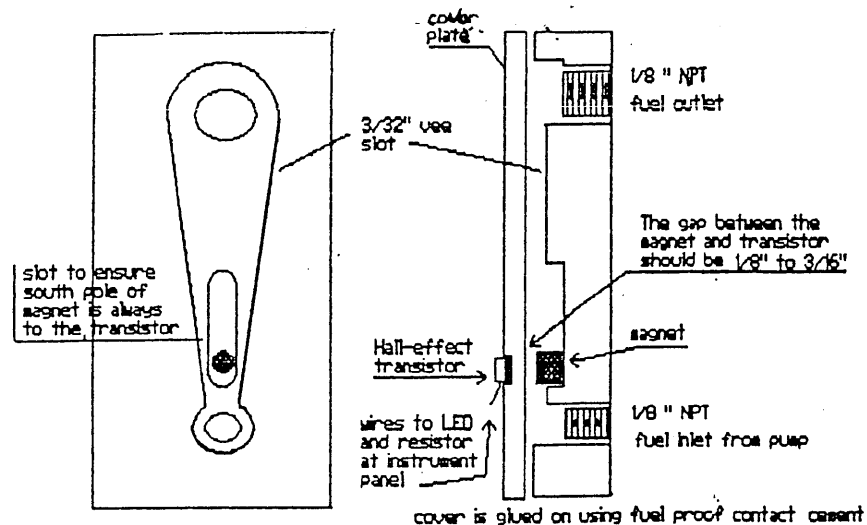
The "No fuel Flow" plan was supplied by Justin Mace of Tucson, Az. seems fairly simple . I have not yet found a source for the Hall effect transistors , if anyone finds these please let me know.-Spud

As far as the heater installation, I have this schematic of the heater box and those of you who don't want to make this piece, its available form Wicks and Aircraft Spruce. As far as pictures at the oil cooler end , I don't have any pictures that are real good ones, maybe we can get Justin Mace or Len Griffin who now owns Del Bradley's Dragonfly to get us some good pictures and a few comments. - Spud.

Fuel flow indicator as used on Dragonfly 764JM

The body and cover may be made of any non-magnetic fuel proof material, I used 3/4" plexiglas for the body and 1/8" plexiglas for the cover.

the cover plate may be glued on or secured with screws. I used fuel proof contact cement

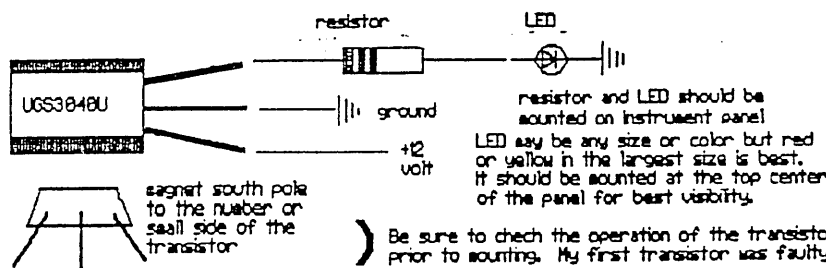


Parts list

- 1 - Hall Effect transistor UGS3848U
- 1 - round magnet
- 1 - 1/4 watt resistor 365 OHM
- 1 - LED Radio Shack part # 726-821 Yellow
726-822 Green
726-841 Red
726-888
- 1 - LED holder
- Assorted #24 or smaller hookup wire
- 1 - tube of fuel proof contact cement

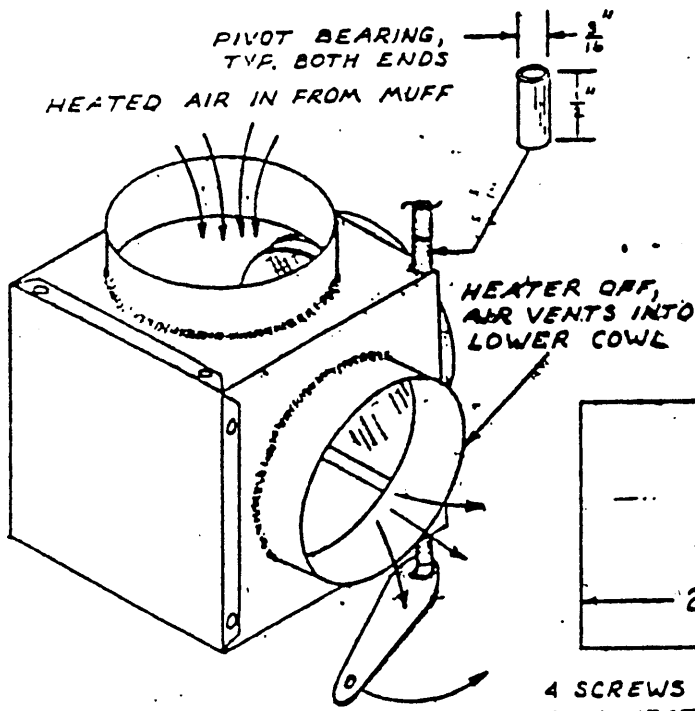


north pole of magnet should be marked south pole faces numbered or seal side of the transistor

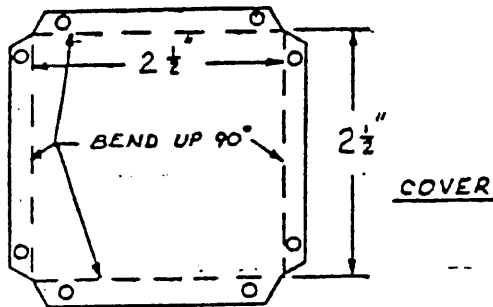
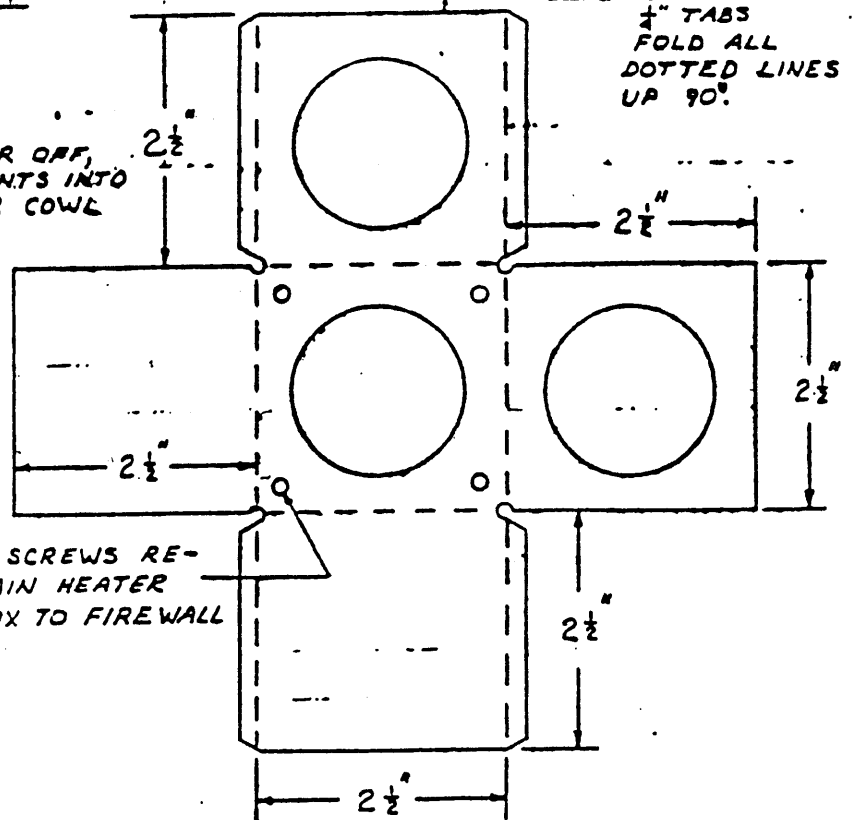


Prior to mounting transistor permanently the cover should be final mounted and the unit flow tested to ensure enough fuel flow to maintain header tank level. It should flow at least 8 to 10 gal/hr.

Be sure to check the operation of the transistor with the magnet, and 12 volts prior to mounting. My first transistor was faulty.



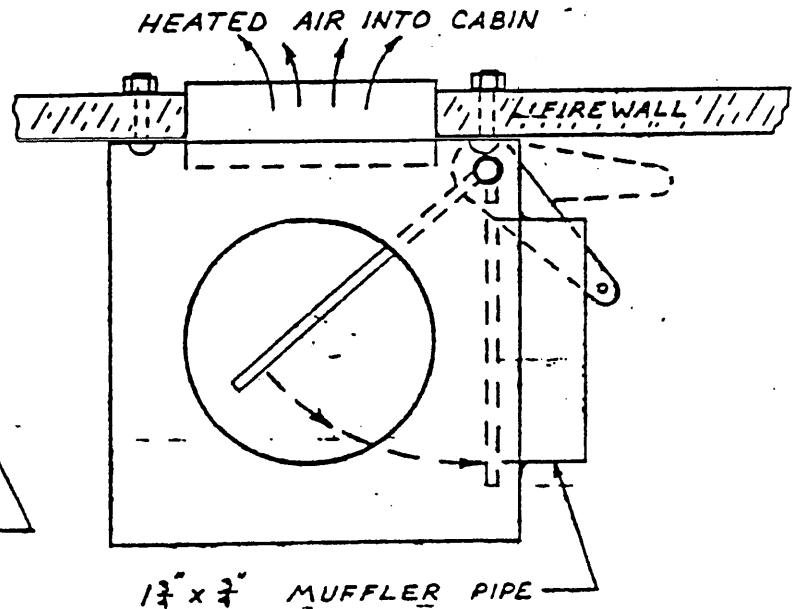
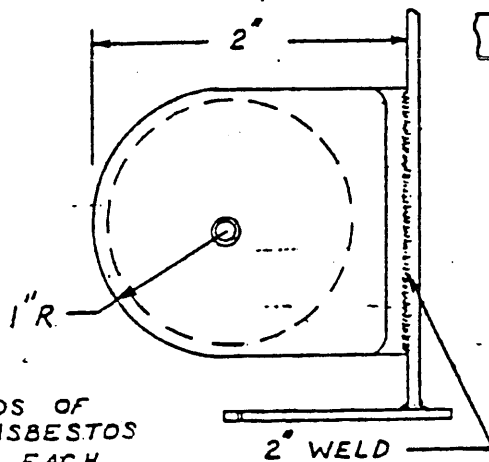
HEAT BOX LAYOUT
 1/4" TABS
 FOLD ALL
 DOTTED LINES
 UP 90°.



COVER



CUT TWO ROUNDS OF
 RUBBERIZED ASBESTOS
 AND RIVET ON EACH
 SIDE OF FLAPPER VALVE
 AS SHOWN



HEATER BOX
 3/32" MED. HARD ALUM.

NOTE:
 AFTER BOX IS COMPLETELY
 ASSEMBLED AND WORKS
 SATISFACTORALLY, SEAL ANY
 CRACKS WITH CLEAR SILI-
 CONE SEAL.

The Engine Shop

We have a new department starting with this issue called "The Engine Shop". Chris Barber of Huntsville, Alabama came up with this idea for an on going section devoted strictly to the powerplants for our Dragonfly aircraft. Chris and I both agree that it will be a benefit to enhance everybody knowledge in this area even if they don't plan on building their own engines. We welcome input from other contributors having experience in these area's. Also please forward all your questions and we'll get them answered. Chris will be starting the first installment - Spud.

Fellow Builder's & Flyers;

We are starting this section of the newsletter to address problems and performance of VW engines. This section will be featuring articles from various contributors to give the readers a cross section of experience. It is intended to put the powerplant aspect of the DF back on track and will attempt to do this in a positive manner. It is not a gripe and complaint sounding board on engines that people have purchased. We will avoid, if all possible naming brands except to identify good parts. The input will be based on successful experience only, from non commercially motivated sources. Some input may conflict depending on what combinations we've tried. We solicit input in this light.

My name is Chris Barber. I am building my Dragonfly because it uses the VW engine, not in spite of it. I have been modifying these engines for several years for use in my cars. Yes they are reliable when modified IF the changes are done properly using good quality parts. My bird is not yet completed, so what I write will be based on my experience with the autos and two used aircraft conversion engines which I have. My plan is to pick topics and address these in each article. The articles will describe how I would assemble the engine using the parts that I know will work. If the engines out there are assembled this way the problems they have experienced will go away. The first step will be understanding the engine so we can proceed in making it work right.

Topic 1) EDUCATION: We can separate the engine parts into three categories: 1) aircraft unique, 2) aftermarket high performance and modified stock, 3) stock. For aircraft unique pieces such as accessory cases, hubs, ignition systems, etc..., Mosler and Great Plains offer plenty. The parts I've seen appear adequate if properly selected for the job. I suggest getting their catalogs. I don't think that Limbach sells individual components at this time, just complete engines.

The majority of parts in the engine fall under categories 2 & 3 and are common to automotive use. There is a great variety of sources of hardware and data out there. This is good news, if not for the large customer base our engines would be too expensive. Just go get the latest issue of Hot VW's magazine for phone numbers of

current suppliers. Don't get trapped into believing much in the articles relative to these higher rpm engines. We will keep you straight there. Notice the prices listed and how they compare to the category # 1 suppliers. There are various reasons for how suppliers set their pricing. For us some are good and some are bad. If you know exactly what you need, you might save a few bucks on some items and get OK quality. I have learned the hard way that between reworks and UPS return charges, I was spending more than if I did it right from the start. Let me now give you one big clue: Gene Berg Enterprises. I have dealt with many of the current VW automotive aftermarket suppliers and his operation is the best I've found. All parts come with their instructions on how to properly install the item. Buy their \$6.00 catalog and read it. Then order their set of information packages and read them too. I have found that what Gene preaches works. He is available on the phone usually for support but really get's upset if you ask a question that is covered in his literature. He is not in the free advice business on how to make other suppliers engines work, but will honestly guide you in selecting a combination of HIS parts that will last.

Here are a few books that have some good information. One is 70's vintage called " How to Hot Rod VW engines" by Bill Fisher. The best section are the dyno testing, head reworks, and assembly. This can be purchased at most VW speed shops or even J.C. Whitney. One gem I found is a collection of surprisingly good magazine articles entitled " All About VW Performance Engines, Winter 1989 from Wright Publishing (714) 979-2560. Rex Taylor and Steve Bennett both have written booklets on how to build an aircraft conversion are available from them. We will refer to parts of these in future articles. The best shop manual is by Bentley but be prepared to get \$30.00 poorer for one and only need the engine section, unless you have a VW vehicle. This is really only needed if you assemble your own engines. We generally use engines based on 1970-on cases.

Now you may be asking yourself why should I go to all this trouble to try to understand this engine. The reason is to achieve reliability for your particular combination of components. Judging from reading letters in past newsletters this is one area where the DF has suffered. Even if you never plan on doing your own wrenching, understanding your engine will pay off when you have it assembled for you or you purchase a readibuilt. The other alternative is to rely on the builder to do the right thing for you. These builders are subject to competitive pressures and must keep their prices down. This may motivate them to use low cost parts. The suppliers of these parts to the builders feel the same pressures which can tempt them to cut corners in quality. That is very bad news. For example, the valve adjusting screw in one of my engines was not heat treated properly and had worn significantly in ten hours the engine ran before the previous owner force-landed the plane due to carb

problems. The stroker crank was cast and not tapered at the hub. Would you believe they had loose fit the prop hub and relied on a bolt to hold it on? It slid right off and showed signs of wobbling on the shaft. The head studs were soft as butter and thus would not hold the proper torque. This engine "ran like a bat out of Hell" sez the previous owner, but would at best have been unreliable and needed frequent repairs. Soon he would have been looking for hydraulic lifters to fix his valve adjusting problem or to stuff a "real" engine into the airplane. That is if he still could.

Now don't panic yet. If you have a Hapi 1835 your hub is tapered onto a VW brand forged crank, a combination which has proven itself. Other engines may use this same combination. This hub has been inadequate for strokers however, which is why they developed the longer contact hubs with split bearings. The bottom end and oil system will be a future article topic.

I hope that we can get some other contributors, particularly on the topic of reliable higher power output. Since we only run these engines up to 3500 RPM, the standard automotive high performance combinations of large dual carburetors, big valve heads and semi-radical cams are not directly applicable, although the cubic centimeter displacement increases are. What I would like to hear is what combinations have been tried and worked. I am sure that there are others out there that have played in this area. My next articles topic is the top end overhaul and will address overheating and valve adjustment problems.

Chris Barber
P.O. Box 5241
Huntsville, Al 35814-5241

Hi Spud,

First of all, I'd like to wish you all the luck in the world. I hope this endeavor is successful for all of us. Ever since Rex and Claude stopped publication of their respective newsletters, I've felt like a orphan. I really used to look forward to receiving them - they gave me a little impetus as far as my own project was concerned.

I was not able to find the article on internal composite corrosion. It seems that all composite aircraft, not just Dragonfly's suffer from this problem. moisture seems to migrate through the epoxy and causes corrosion of the metal fittings buried within the structure. This is supposed to limit the aircrafts lifespan.

I received this info from the local EAA chapter newsletter. The author of the airticle learned of this at an Oshkosh seminar given by Andy Marshall.

My solution to this problem is fairly simple. I've alocined my aluminum torque tubes prior to glassing. I've also replaced the 4130 hinges with stainless steel hinges.

Only time will tell if this has been an affective correction.

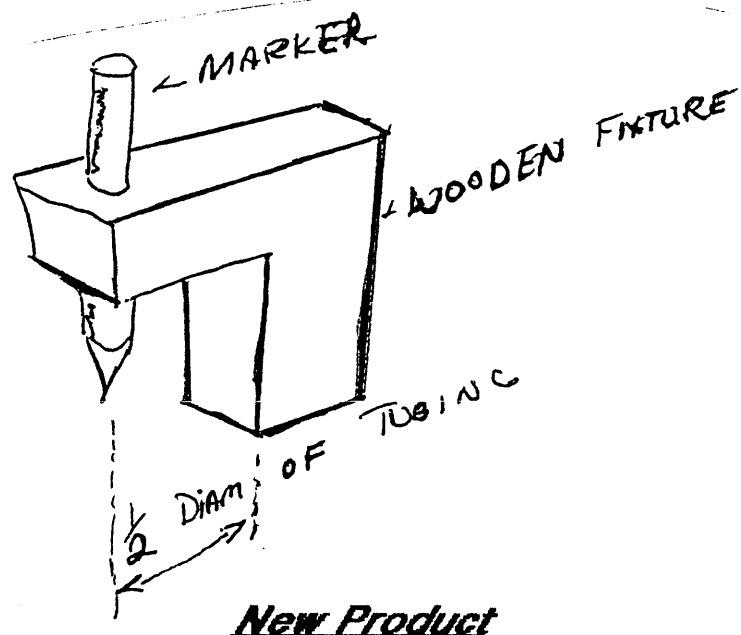
While I'm on the subject of control surfaces, I'd like to pass along one of my construction tips.

I feel I have refined one of Rex Taylor's method given in Dragonflyer # 24. First I made a wooden fixture, as per sketch (below). This fixture holds a fine tip Flair marker (not a lead pencil) to maintain a centerline the length of the torque tube. A hinge gate template can then be centered for locating and cutting the gates.

Once gates are out, thimbles can be epoxied and riveted in place. Tubes are now buried in foam completed and normal glassing can be done. After cure, premarked gates can be opened and you're done. You don't have to go back and drill for thimbles set screws and then refill.

Chuck Kaplan
475 West St
Wapole, Ma 02081

CENTER OF MARKER IS
 $\frac{1}{2}$ DIAM OF TORQUE TUBE
IS HELD AGAINST TUBE
AND MOVED DOWN IT'S
LENGTH.



This newsletters new product really isn't new but nobody seems to be aware of it.

In talking to fellow Dragonflyer's, the DF newsletters and the other home builders, getting a good electrical Tachometer has been a problem.

Some of the problems have been the expense of some that have been developed for the home built community with some question on the accuracy.

How to get these repaired when needed, where to send and how long.

Most homebuilders didn't want to use a automotive tachometer, because of several problems, A.Most automotive pieces are imported and are of marginal

quality(throw away models). B.RPM scale to high (6000, 8000 & 10,000 ranges). C. To big, usually 3 1/8" mount hole was required and outside bezel diameters up towards 3 3/4".

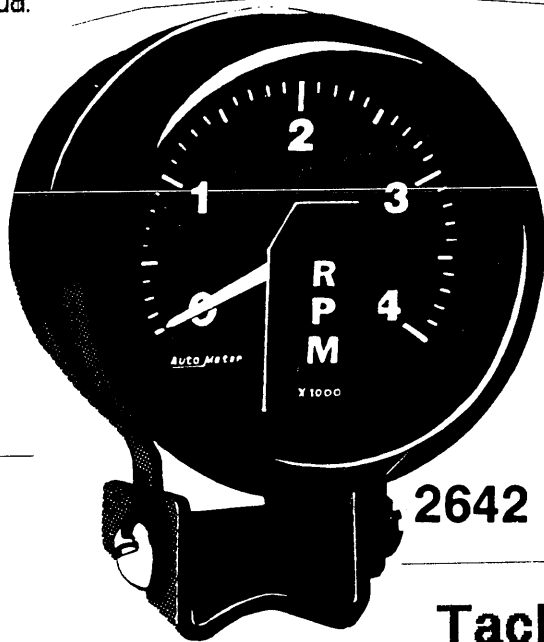
Auto Meter Products of Sycamore, Illinois builds tachometers and gauges for all types of racing, everything is high quality and they have been around for 25 years.

They make a 4000 RPM tachometer, Model # 2642 with a 270 degree sweep (8:00 o'clock to 4:00 to O'clock), that has a mount hole size of 2 5/8", overall bezel diameter of 2 3/4". will work on point type or any electronic ignition. Accuracy +/- 1% , Lighted.

The features that I find in this Tachometer are: Small, I'm able to put it in the lower upright of my instrument panel which I had reduced from 4" to 3 1/4", Known quality and accuracy. Repairability, they fix everything they sell, quickly. lighted, But the thing I like most is the sweep. When you take 4000 RPM's and spread that over a 270 degree sweep, even the smallest change is very readable, 1000 RPM equals about 1 inch of needle movement.

You should be able to obtain this tachometer from your aggressive auto part stores (not chain stores), Automotive racing equipment shops. and the Model # 2642 for the electronic version. If you are unable to find one let me know and I'll get one for you.

Spud.



Electric Primer System

This system is being used on general aviation and other homebuilt aircraft, but I haven't seen it being used on any Dragonfly Aircraft.

To start out, you tap into the pressure side of your of your electric fuel pump,(you can tap into the actual housing of the pump, but you need to be careful) or you

can buy an AN fitting extension that already has been tapped to a 1/8" pipe.

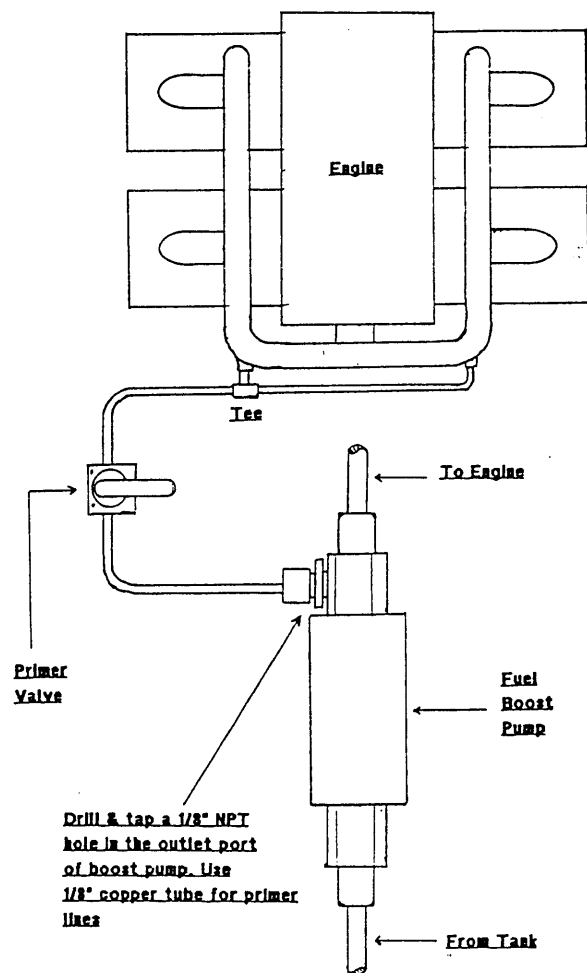
You then find and mount a simple 90 Degree turn, (fuel rated) shut off valve. You can mount this where you can reach it by hand or can can remote mount it and operate it by hand cable.

Your next decision is to prime one cylinder, two, three or all four cylinders. all four cylinder direct port priming does give the most successful start, but if you flood the motor you flood all four. I have seen a few systems where the prime 3 on 4 cylinders and 4 or 5 on 6 cylinders. I would suggest at least one on each side of a VW engine.

Now plumb your system with 1/8" copper tubing (no Plastic I) and your ready to go.

Starting procedures are similar to a manual primer system, simply trade strokes expected to seconds that your pump is left on, 3 stroke pump = 3 seconds electric pump is on. Just open valve, run electric pump for seconds required for your aircraft, shut primer valve, proceed with normal start up.

Hopefully the sketch will clarify any other questions.- Spud



"The Classified's"

For Sale: Dragonfly MK II, 300 TT, \$12,000.00 less Radio's, Revmaster 2100 75 HP, 100 SMOH (Reason for O/H - Installed Hydraulic lifters) Nav lites, Strobes, intercom, Mode C, Reflexor, Aileron Boost servo's, Rosenhan Brakes, 21 Gallon Fuel tank, full plush interior, Warnke prop. Reason for selling- liked the Dragonfly so much I built another one with all known workable mods from the ground up. Jerry Scott 7210 Piute Crk Drive, Corona, Calif 92719 (714) 736-8418

For Sale: Dragonfly Project- Must sell; no time to finish. Canard and wing completed; fuselage completed except installation of exterior glass cloth. Have all materials to complete except motor, instruments, and canopy. Excellent workmanship by A & P. \$1850.00. Robert Sherer, 8300 N.W. Forest Drive, Kansas City, Mo 64152 (816) 741-4887

For Sale: Original fiberglass cowling unused and uncut except aft trimming. Is UPSable \$100.00 Call Phil Williams 10-6 Est. (212) 722 -3677 Monday - Saturday or nites (718) 424-7242 or write 63-53 Haring St., Rego Park, N.Y. 11374

For Sale: 1-three lever control throttle/mixture/carb heat-\$25.00,Hapi 1-Large spinner -\$25.00, 1- 54"x50" Kenetics propeller/Hapi hub - \$200.00, 1- gascolator - \$25.00. Justin Mace 7541 No. Shirley Lane, Tucson, Az. 85741-1916 (602) 744-3532

Wanted: If someone out there has Mark I landing gear for sale reasonable, I would be interested. Wheels, brakes,tires, maybe even cut-off fairings that could be fitted onto my canard. Alan Luckey 645 So. 7th str. Indiana, PA 15701

For Sale: Dragonfly "N89VE" MKII 18TT, Excellent Workmanship, New Hapi 60-hp, hyd. lifters, dual electronic ignition; all new instruments, Terra nav/com,Terra loran, Navco transponder w/mode C, intercom with two David Clark Headsets; 135 mph cruise, 3.5 gph, 18 gallon fuel capacity,always hangered, \$22,000.00 invested -take \$15,000.00, reason for selling - loss of medical. Everett Vidrine - 1700 W. Laurel - Eunioe, La 70535 (318) 457-5989

For Sale: Hapi single port 60 hp heads and intake manifold, make reasonable offer. Ted Givens - 6318 Fortune Drive- Orleans, Ontario, Canada K1C 1Z1, Hm (613) 837-6582, Wk(613) 991-9546

For Sale: Dragonfly Project -- Mostly complete, no time to finish. Hapi 60DM-2, MkII gear mod, Prop, instruments electric Gyros, radios, etc. \$5000.00 OBO. Days only (203) 661-6111 ask for Andrew.

For Sale: I have a hodge-podge of pieces, 1- Task fuselage, painted and flown 78hrs, complete with both cowls, rudder, vertical fin, Hapi engine mount, panel, controls, etc. missing canopy. A painted and flown canard with balanced long elevators, no landing gear.

Task mains for tri-gear. A Hapi VW 1835 freshened at 72hrs. Will take reasonable offers on all or pieces. Contact Mike Quigley (915) 751-0228/ 564-7578

For Sale or Trade: Will trade for Corvette or motorhome of equal value. Plans built MKI, 1835cc, 65TT, Warnke prop, dual mags, wing strobes, custom seats and upholstery, Imron pant U555 white, over \$12,000.00 invested . Lets talk based and hangered at Kankakee, Ill. 50 miles so of Chicago. Nick Mustari 3730 w. 97st Evergreen Park, Ill. 60642 (708) 422-6808.

Wanted: unused plan's with intact blueprint plates, must be in good condition and inexpensive. Contact Spud Spornitz (913) 371-5733 daytime (913)764-5118 Wkds

For Sale: Dragonfly project (extra, I have another!). Modified for tricycle gear, But can be fitted for MKII easily. Fuselage, wing, Rudder, canopy, cowling, control surfaces. No canard. Excellent workmanship can be inspected, not painted. First \$2500.00 takes it home.For further information contact Chris Barber at (205) 722-7341 Daytime, Possible delivery in S.E. USA.

Wanted: Plans built MK II canard & gear or a set of MK II gear legs & hardware. Chris Barber (205) 651-4602 Eves, Weekends

For Sales: Plans built Dragonfly S/N 315, Hyd. brakes, MarkII, Forward hinged canopy, w/o engine, reason forsale engine stolen, TT 20hrs. first \$ 5975.00 ask for Bob Black, work (214) 612-2600 Home (817) 428-0638

For Sale: Dragonfly project, spinner, cowling, eng. mount,Hapi insts,VSI, ASI,Task fuselage finished w/ Canopy & all Hdwe installed, Finished Canard, Wing unusable, 1600cc VW short blk w/ Dual port Hds. all for \$2875.00 Larry McDonald (501)825-7251

What's Up & Coming

- **Building/Flying Roster Questionaire**
- **Final plans for Sun N' Fun**
- **Book Review: FAA's Flight testing handbook**
- **Bob Meador's Dragonfly Retract and New Canard**
- **The Evans Brothers Reflex system**
- **Custom made "Stick Grips"**
- **Intercom Info**

Subscribers Information Center

It's T - Shirt Time

Dragonfly Builders & Flyers Newsletter (DBFN) is currently published Quarterly at a rate of \$3.00 per issue/\$12.00 a year U.S. & Canada, \$20.00 (U.S. funds) per 4 issues to foreign subscribers. Send remittance to: Dragonfly Builders & Flyers Newsletter, 1112 Layton Drive, Olathe, Kansas 66061

Ideas and opinions expressed in DBFN are solely those of the individual submitter, application of these ideas and/or suggestions contained in DFBN are the sole responsibility of the experimental aircraft builder at their own risk, which could result in builder/pilot personal injury or death. DBFN does not imply or suggest in any way their usage.

Letters, Pictures and computer supplied data submitted to DFBN are subject to final screening by DBFN/William "Spud" Spornitz and may be restricted, deleted or revised.

Any material supplied to DBFN will not be returned unless requested by submitter.

Classified advertising (non-commercial) for current subscribers may place a ad of 50 words or less for \$4.00 per issue, with one photo a additional \$10.00. Non-subscribers rate per 50 words or less \$16.00. For Larger classified or commercial ads please contact DBFN for pricing.

Back issues of "DragonFlyer", "Dragonfiles" & "DBFN" are available at \$3.00 each. If purchasing less than 5 backissues add .25 cents each.

Information may be submitted to DBFN in several modes, written or typed letters by mail, Fax machine -current number is (913) 371-0824, computer disk 5.25 360k or 3.5 720k in a "ASCII" format and phone interview (recorded for transcribing).

To be eligible for awards, prizes, submitter incentives and classified services the recipient(s) must be current subscribers of DBFN.

The use of "VW" by DBFN is for the sole purpose of application and description only and is not intended to infer or imply a direct connection between DBFN and Volkswagen.

Phone numbers:

Daytime Monday thru Friday 8:00 to 5:30 CST (913) 371-5733 (must be brief)

Anytime evenings or weekends (913) 764-5118

Mailing address: 1112 Layton Drive - Olathe, Kansas 66061

We need to get started on this project !

Star Design of Lenexa, Ks is going to be doing the shirts, they have an in house artist that is just Fantastic !

Hers's the game plan: We have to buy a quantity of 144, the shirts are a 50/50 blend, white, no pocket, available in S,M,L,XL. The drawing will be in the front, the plane will be somewhat of an isometric view in flight, Mark II, The word "Dragonfly" will be on the plane and at the top of the Drawing (I don't want it to be confused with Q-2's) The background will be a sunset, clouds or mountains. The printing will be a 4 to 5 color silkscreening process which won't bleed, chip off or wear off.

One thing that raises the price up a bit is the artists and screen fees of \$285.00. But the price of the shirts are still only going to be \$9.00 plus shipping and for 4 or 5 color..... that's excellent !

Ordering: You are more than welcome to order just one shirt, but this is where I need everybody to step-up and get 2,3,4 or more (you can mix sizes). This is going to be a one time order for the year and thats going to be it until 1992. I'm going to hold everybody's checks until we get all the orders in (at least close) for the 144. and if we fall way short I'll just send back everybody's checks. There is 247 subscribers we should be able to buy at least 144 shirts.

Send \$9.00 for every shirt you want, shipping will be \$2.75 for the first shirt and then add a \$1.00 for each additional shirt you order. Foreign orders must add \$6.00 for "every" shirt they order.

Well gang here's your chance to show your color's ! Don't put this down and forget. Order your shirts TODAY

Make checks payable and send to :

DBFN
1112 Layton Drive
Olathe, Kansas 66061

Up-date on Rex Taylor

Rex, Phyllis and Patrick are no longer with Mosler. I have talked to Rex and Tim Kern CEO of Mosler and a dispute began over the acquisition of Hapi by Mosler. There is conflicting stories by both parties. The best I can tell is that Hapi is now totally part of Mosler and Rex has no longer any connection with it.

I asked Tim Kerns to give us his story in writing on approx. 12-5-90 and most importantly what was Moslers position on warranties on Hapi/ Eloy engines . I have had no response from Mr. Kerns as of 1-20-91.

Rex will be moving and going to work for Montana Coyote of Helena, Montana right after the first of the year.

There is some good news | Rex has gone ahead and printed another 200 sets of plans. They will be available for shipment 1-10-91 at \$250.00, \$275.00 foreign which will include a several plans revisions including a forward mounted canopy, New elevator and aileron linkage up-dates, servo tab system. Those wishing to order may by sending their check or money order to:

Viking Aircraft Ltd. 3302 Airport Road Helena, Montana 59601

Rex is doing the Builder support a little bit differently from now on. It will be by Mail only direct to him (please send SSAE) or thru this newsletter. He feels by answering Questions thru the newsletter, he will avoid answering the same questions multiple times. It shares the questions and answers with the entire Dragonfly family and everybody benefits. And makes it a permanent point for reference.

Rex is also following suit with the Rutan Aircraft in that if you are a current builder or owner, it is recommended that you subscribe to this newsletter -- as this is the only formal means to distribute any mandatory changes, and Strongly recommends that builders have at least Newsletter issues #9 thru #32 .

The prefab kits will be available March 1,1991 contact Rex for details.

Multicom

I have postponed the Dragonfly Builder & Flyer roster / survey until the next issue. I'm still getting responses from the first mailing we did in Sept/Oct., I just got done going thru the FAA's U.S. Registry for all the listed Dragonflies (Whew | that was a project) and made a mailing to them. Kitplanes is putting a note in their news section about the newsletter in the up coming issue. I want to get everybody "On Board" before we do this roster / survey so we get a good cross section - Spud

Subscriptions. I have had quite a few of you ask if they can get longer subscriptions. Simply take \$3.00 times the issues you would like to sign up for - Spud

Dave Bastion Of Flushing, Mi. contacted us and wanted to know if anyone had gone thru any prop testing in a Dragonfly. He meant a good test where you took the same aircraft and tried several size props and /or different brands. If anyone has some good input on this please share it with us - Spud.

Fuel Pumps: I have had a ongoing discussion with Rex Taylor on Gravity feed from a header tank Versus a second fuel pump. He says, nothing beats gravity , its

free, doesn't need electricity and is always there. There have been quite a few guys put their header tanks back behind the upper seat back bulkhead and are using a Faucet fuel pump to transfer forward. The discussion has been around if the fuel pump quits, will the stopped pump allow sufficient fuel flow (by Gravity). Rex thinks the pump won't allow any flow or at least not enough to allow even a modest power setting. Has anybody out there done this research, if so please respond. If not, if time permits. I'll setup a mockup and test this and get it into the next issue. - Spud

A little confusion: If you have noticed in the "Calendar of Events" sections of both Kitplanes and Sport Aviation on June 14-16. It reads;

June 14-15-16 Olathe,Ks.- 1st National Gathering for Canard Type Airplanes. Johnson Co. Industrial Airport. Contact Terry Yake 913/451-8904

Well that sorta got my attention. So I called Terry Yake who's name is in this ad and is a local LongEze builder and pilot. He contacted the powers to be and it doesn't include us. It was primarily meant to be for Rutan Family aircraft and with planes with at least one engine in the rear. They didn't want to get to big a crowd, they didn't know what kind of a turn-out they are going to have. They will see how it goes and maybe they'll let us come next year. So we are "Officially" not invited. Oh Well | Well that brings up another Subject.

Swarming!!!! I haven't hardly gotten a thing as far as Where, What & When ideas on a swarming. 1.Do you want one ? 2. Where do you want one? 3. When do you want one ? Some other things to think about in regards to our event. A. It has to be in a place where we can draw the most flying Dragonflies (No shrunken canards and the motor has to be up front) unless we can attract people & flying DF's we are just wasting our time. B. We have to take care in scheduling around Sun N' Fun and Oshkosh. C. Time of year, even though we could plan to have it in the south, we have to be concerned about where the guy's might be flying in from. We have received input from only four people, unless we start to getting some more chatter on an alternate location, we'll have it right here in Olathe (So. Side of Kansas City), I say that hesitantly because I don't want you to think that I'm just favoring my location, but I'm familiar with area and it's definitely right in the middle of the U.S.. Based upon flying DF population we should have it in California (like Chino). But that seems so unfair for the guy's that live in the eastern part of the country, they just aren't going to travel that far (except Rob Kermanj & Chuck Ufkes they'll fly anywhere). This also takes some long term planning, you just can't say in April that you are going to have it in May, that just won't work. You need at least 60 days min. notice to get into the magazines. And I'm going to need some help, I can't do it all, I'll need help before and during the event. The more I talk about this, the more I like the idea (sorta

like talking yourself into something) of having it in Olathe. Here's some other advantages, here at Industrial airport they are very familiar with homebuilt aircraft- 12 based on the field now, three runways, 7400, 5100 & 4200 feet, Control towered but very low traffic, outside of TCA. We have a fair amount of room at the house, we can bunk up quite a few people, especially the ones that fly-in. Plenty of motels and banquet facilities. Plus it's here, I can work on it in advance and get Bill Brutsman & Bruce Dixon to help with the preliminary chores. Well no matter where we have the Swarming, one thing that seems important is, the airport that we pick will have to be one of our home bases, and that person must be willing to do some preliminary homework.- Spud

Sun N' Fun: There hasn't been a lot of plans set on Sun N' Fun as of this writing. The gentleman that takes care of the forums is out of the country and will not return until the 10th of January. The only thing we can tell right now is that we will be there. We already have the award trophies being made up, so don't forget those categories; Best cockpit-interior, Best engine installation/compartment, Best overall DF, Farthest distance flown to the event, Hi-Timer at event, you can't win if you don't attend. I need more input on Sun N' Fun from someone that has been a regular to this event. The event runs Sunday to Saturday, does the majority of the people come in the first weekend? Do they come in Saturday prior to the start? Should we have our voting for awards that Sunday or Monday evening? Most of us work and I definitely can't stay past Monday night. We are going to coordinate around the first or second weekend. Input so far is the first weekend is the Heaviest. I need everybody's input that is even tentatively planning on coming (flying in or Driving in) to this event. If we can not get a forum slot favoring the heaviest attendance, we will just plan a "Get together" at some common location. There will be one more newsletter before Sun N' Fun - Spud

Don't forget your Homework: As we talked earlier, your assignment for the next newsletter is Canopies and Instrument panels (now don't stop with your regular stuff). Let's concentrate on these two area's and see what we can come up with, send in your ideas and don't forget the pictures. -Spud

A Letter From Q-2 Chief Jim Masal

Hello Spud,

I just spent nearly the entire evening enjoying your first newsletter and for the first crack out of the box you've done VERY well. The contents are good and plenty. In

fact, I tried to call you in person but no answer, CONGRATS I

Feel welcome to use any items from Q -talk so long as you credit QBA and the writer. I'd like to know if I can do the same with your stuff. (I wrote Jim and told him that he may also share anything from DBFN with his readers-Spud)

I have a editorial comment prompted by something in Rex's letter in DBFN # 32. Why is it lately that whenever some intelligent, creative soul comes up with a unique aircraft under the freedom of the FAA's experimental regulations he starts screaming bloody murder when other intelligent, creative souls have the same desire? If that kind of thinking were allowed to prevail, We'd all be building Pietenpol's or at best, T-18's. The bloodline of our aircraft would've stopped at Rutan's first Variviggen.

It is exactly right for the designer responsibility to be limited to a replica of the prototype. It is a builder's freedom to do whatever the hell he likes in the construction of his own aircraft. All the wailing against it is like plugging a two foot hole in Hoover Dam with a thumb. Sure, some of us are going to throw large sums of money down the rathole of change, some airplanes will be scraped off the runway, but we have the privilege and freedom to experiment. Good for us.

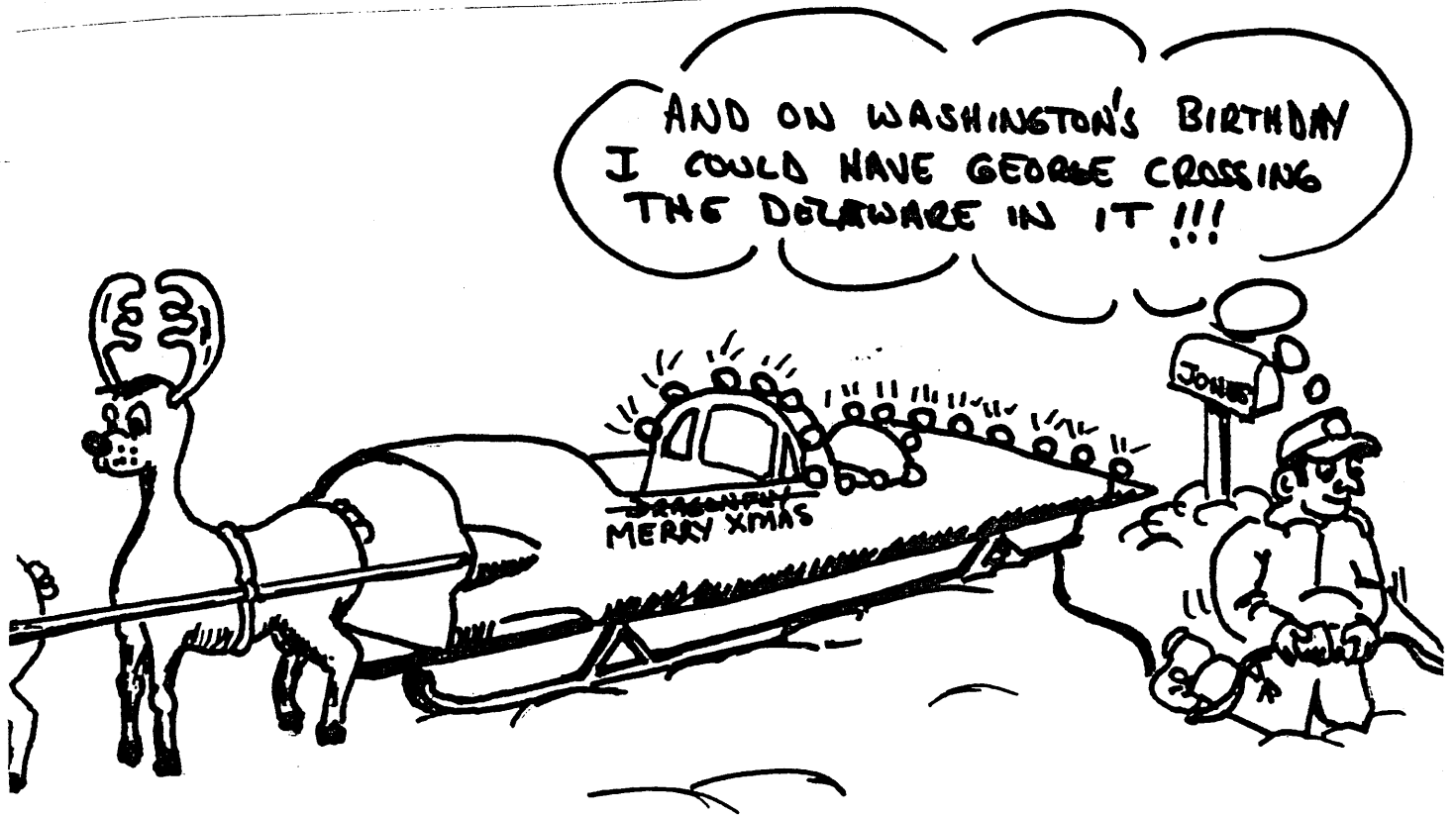
Bad for them is the publicity they get when a poor mod begets a bad result. That's unfair and A BIG problem in search of a solution. While that becomes a sales problem, nobody seems to be able to find even a handful of suits to show it's a legal problem. We all hear it talked to death, but so far it's a fear that hasn't come to pass.

We Q guys are delighted to be parked with you guys at all the airshows. The more the merrier (even if the public mistakes the difference), because it means we did our jobs, got'em out of the garage an into the air where they belong. and that's good for all of us.

Best Regards

Jim Masal Editor of Q-talk, Quickie Builders Association

Jim Masal is the Editor and Publisher of the Q - Talk newsletter which is the official voice of all the Quickie's, Q-2's and Q-200's. It is published 6 times a year at a annual fee of \$20.00. I have taken this newsletter for several years now, found it very inforamtive and I highly recommend it to the people that are like me, that just can't get enough information. Those interested in subscribing to Q -talk may by sending their check or money order to: Quickie Builders Association Attn: Q - Talk subscription Dept. P.O. Box 20334 Dallas, Texas 75220



Chuck Kaplan of Walpole, Ma. sent in this cartoon and it shows someones stalled out project. We have all been there one time or another. I wonder who Chuck was thinking of when he did this cartoon! Does it say "Jones" on the mail box??? Couldn't be.....! We would never pick on one of our fellow Dragonflyer's

DRAGONFLY
BUILDERS & FLYERS
NEWSLETTER

*1112 Layton Drive
Olathe, Kansas 66061*

FIRST CLASS MAIL

Your last issue is