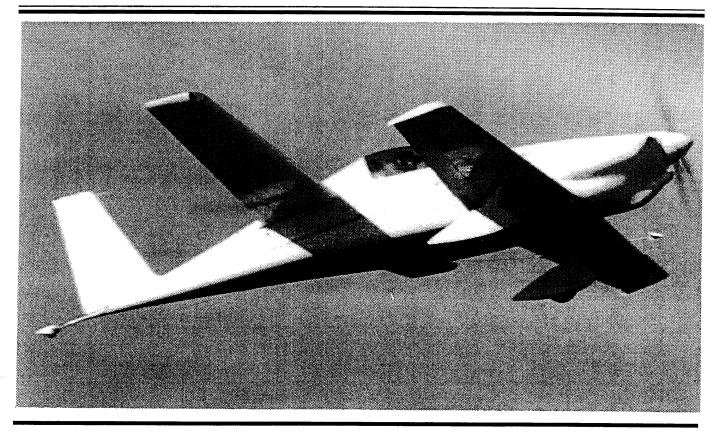
THE OFFICIAL VOICE OF DRAGONFLYERS ALL OVER THE WORLD

VOLUME 72

JULY - AUGUST 1997



Terry & Cynthia O'Neill's Continental powered Mark II Dragonfly of Carlyle, Illinios

The Joys of buying and owning a Dragonfly

Cynthia and I finally worked out an arrangement with Stan to (probably) buy his Dragonfly. First we tried to go to CA to see it... even had airline

tickets, one-way! That fizzled. Also, money', and we worked out an through the mountains in summer- could see what we were buying. time. So he offered to fly it out to Illinois. I had send some 'earnest Finally, on the first Sunday in July,

Stan was worried about my taking off agreement to buy/sell, providing evwith my wife in a Dragonfly, even erything was as represented. I had a after getting checked out in CA by son in L.A. who looked the plane his CFI in a Dragonfly, and charging over and made me a video, so we

Stan's little Dragonfly buzzed over Louis Airport... back to California. I pull the engine off Stan's plane in an Salem Airport, made a high speed felt sorry for Stan....but as I kept hour and a half... and Tom had a shop pass, with a nice, sharp crack to the saying, "I don't want to work on that hoist there in the hangar. Stan said exhaust, and landed. He and Joye had airplane!" I did"nt want to buy a okay, so we did. Then we pushed the battled weather in Arizona and New broken airplane. I wanted to work on engine-less Dragonfly, the engine which Mexico and finally made it via Kansas my own new project. City and a visit to his wife Joye's family, on to Illinois.

the engine inspected as I requested, at veteran antique airplane repair guy... time........Whew! my expense, the first order of business dating back to the Big War (WW II)... was to look at the engine. I had called who Tom said would rather break his. The next day I stripped Stan's engine

was dangling from the hoist, and carried the spare parts, cowl, etc., to my Friend Tom suggested his friend, hangar. We cleaned our hands, thanked Earl 'Skeezix' Adkisson of Atwood, Tom, loaded Stan and Joye into our As he hadn't yet had a chance to have IL, a well-known, super reliable and car, and drove straight to the airport. In

my Continental guru friend Tom arm than lie to you. Skeezix had just down and loaded it into the back of my Rippee who came out this Sunday annualled Tom's Luscombe. Would CRX and drove it a hundred miles to noon to look-see. I had Stan taxi right Stan want talk to Skeezix? Tom was Skeezix's shop... which I observed had up to the maintenance hangar, and we holding out his flip-phone. Stan about 10 years worth of antique air-



had smiles, stories of the trip, and our would, Tom called. Skeezix and Tom plane work in various stages in It. Even first look at Stan's fast glass airplane. kidded, and finally Stan talked with a LeBlond engine being reassembled. Stan pulled off the cowling top, and I Skeezix. Stan finally decided to have Everything from ultralights, to replica asked about the oil on the engine. My Skeezix take down the engine, and Demoiselle's, to a gull-wing Stinson. friend Tom walked up and pointed at either replace the case, or Stan the left rear of the case, and Stan would find one and ship it to A week later Skeezix called to give gasped -- audibly. There was a crack Skeezix. Then Stan would decide Stan an initial report. Crank and cylinabout 4 inches long! Well, there fol- what to do. I told Stan that If Skeezix ders okay. Pistons okay. One ring lowed a lot of confusion, discussion, fixed it, we would buy the Dragonfly. and time-compressed decisions.

Because of the weather, Stan and We had about 2 hours before we Joye got here a day late, and the needed to leave for the airport. Tom My friend Tom had suggested that if I

stuck, all piston pins were 'blue' and so on. It would cost Stan X-dollars to We figured driving time to the airport. repair it. I talked to Stan about options.

Meleski's airline reservations were just said he was sure that Stan, Tom, worked out a price with Stan, maybe I a few hours and 75 miles away at St. myself, and my son Timothy could would want to just run the engine would know I had a good engine, like pulled on two connecting rod bolts, replaced all of them. The two spark new,

an adjusted price, which we paid to Stan via a friend In California, a CFI ... whose mother just happened to live near the airport and my hangar in Salem, Illinois!

Buying the engine BE-FORE it was repaired was a mistake, however, because as I eventually learned, additional problems of engine condition WILL be uncovered by magnafluxing and tolerance checking during a good repair. It had been Stan's engine, HE would have to pay for those additional problems. But as it was now OUR engine, our cost of repair went up about \$1000. However, we did wind up with a beautifully overhauled engine at a reasonable price and we're happy.

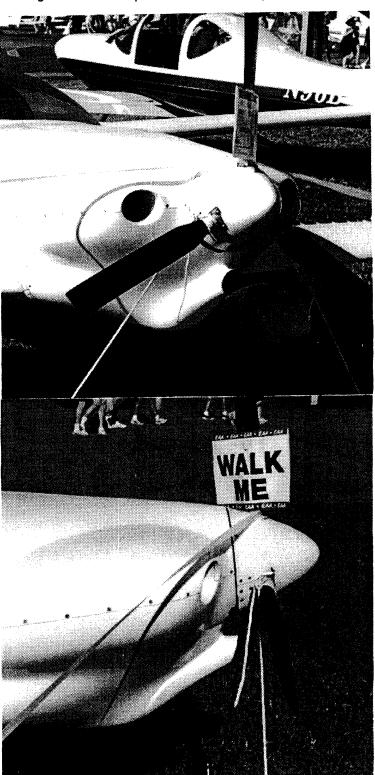
Three months later Skeezix completed the overhaul of our like-new engine, with documented tests and parts costs, etc., and I brought it back to our hangar. The next day the Continental A-80 was hanging on the front of N189SM.

During the three months that the Engine was being overhauled, I was busy modifying the Dragonfly which I'll come back to in a minute.

What else was wrong with the engine, besides the cracked case? The Uni-

versity of Illinois Repair Station Report The tappets were ok, but a little shows the camshaft gear was cracked, worn. The exhaust valve guides the crank gear worn out, and the oil

This is what we finally did, arriving at use a torque wrench... which prob- them, so we replaced them with next



ably contributed to the cracked case.

through a complete overhaul, and then pump idler shaft worn. Threads were were all out of tolerance, so we so we replaced all of them... this plugs bushings came out with the indicated the last overhaul guy didn't plugs in spite of all, effort to save

> oversize. (Skeezix uses Fel Pro anti-seize C5A #510007.)

So, although Stan believed he had a good engine, the guy who did the last overhaul for the guy Stan bought the engine from... screwed some things up. There's just no way to tell without a tear down, magnafixing, etc. All info doesn't get into the log. I have learned from this experience, that I should have asked Stan to repair the engine first, and then when it was done, buy the plane. However, now we know we have a very good engine, zero time. We spent an additional \$189, and had it balanced, with and without the new 3-bladed WarpDrive prop, hoping for extra smoothness. So we're looking forward to some traveling. after a careful break-in.

M o d s t o N189SM:

I have added anti-servo tabs which I can adjust with a MAC electric trimmer, to replace both the sparrow-strainers and the crank-spring pitch trim. It looks and works good, mechanically. I have added a G-meter, since Its possible to put 4+ Gs on DF's at under 110 mph. I'm using 2 CHTs, on rear cylinders.

(oil temp, press, and

I took out the bottom Hapi multi instrument

pressure gauge, and put an oil temp where the carb air temp was, on the armrest. I put an AC mechanical tachometer in place of the turn and bank, and moved the T/B over to the Rate of Climb hole, and I deleted the carte air temp and the rate of climb... which I never use.

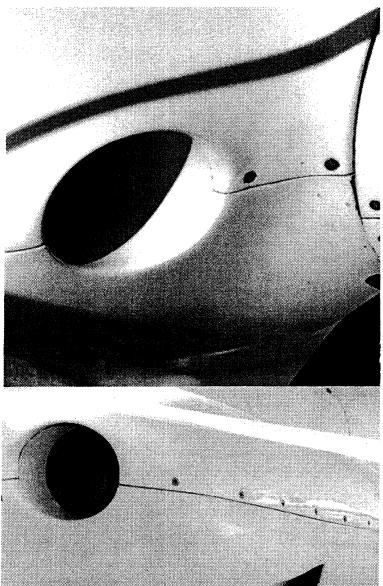
I'm thinking about (later) making the fuel system automatic, by using low fuel warning switches to activate the fuel pumps on the main and the aux tanks. I haven't decided vet whether to pump the aux directly into the header, or to leave the fuel flow sequence as it now is. One advantage of pumping direct to the header would be to make the aux fuel available in case the main tank's pump goes out. But for now will leave it as is.

Flight controls: I'm extending the stick up about 3 to 4 inches... as much as feels normal and comfortable... to reduce pitch sensitivity. I think my anti-servo tabs on the elevators will also increase the pilotfeel control resistance per-G, so that should also reduce the pitch sensitivity... we'll see, in some cautious testing. I

also intend to move the CG forward, flutter... they were each about 13 the elevators at the root so they can especially for faster un-stalling, per inch-pounds out of balance! Even 60 be removed without dropping the some NASA Reports on canards. Years ago the Army Air Force re- canard.

tech) and replaced that with the While the elevators were off, I bal- quired 100% static balance. electric trimmer with switch and It's anced them with two weights on indicator. In place of the trim crank each side, at the middle hinges, for I've put in dual throttles, I used the

over on the left side I put the oil 100% static balance, to preclude venier-type which has a very gradual



friction adjustment from lock to free. I like a free throttle for approaches. This is a lot more work than the cable-types. and I'll have to build up connecting push-pull tubes and a cross-tube with rod ends, to keep the slop out. But I remember the quadrant throttles in the old Navy SNJs. They could be adjusted for zero-friction, and that made the practice-approaches for carrier-landing (requiring close power-control) easy and fun.

My aero-engineer, son was home last week end and we discussed the Dragonfly propstrike problem, and went over the Mk II landing gear drawing to see if I might extend the legs an inch or so, to get as much clearance with our new 54" Warp Drive as it had with the 52" wooden prop. Have to pull one gear leg out and look at the fit. The structure and the legs look strong enough. We'll see.

We get lots of hangar visitor compliments on the pretty little Dragonfly. Added a couple of tiny dragonfly decals for a touch of color. Still need to do fairings to enclose the linkage for the new elevator tabs. for where I shortened

I really didn't want to have to work capacity. The Continental A-80 has we've made to N189SM. on this plane, but I guess it will be about 60 hours on it, and set up

before it turns cold... which reminds me, I still have to make a heating system! It gets COLD here in Illinois.

Letter # 2

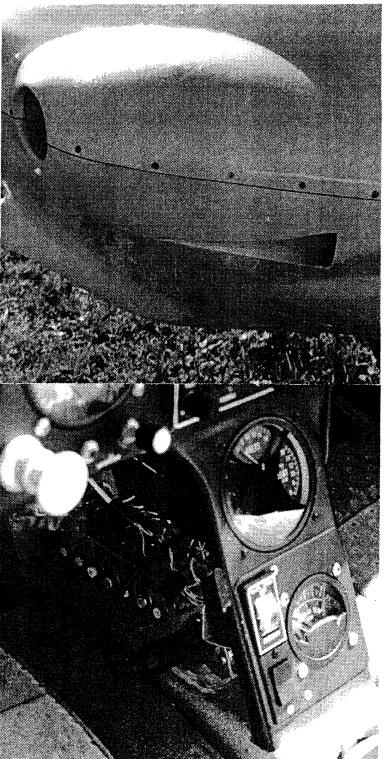
Cynthia and I just returned from our second trip, demonstrating that N189SM is definitely out of the shake-down category, proving the changes I made to Stan Moleskin's Dragonfly Mark II after we bought it a year ago.

We are very happy with it, and get compliments on the Dragonfly beauty at every stop. We also get admiration for the 125-130 kt. cruise we get from the 50-year-old 80-horse Continental, and the 30 mpg. It has given us the performance and comfort we were looking for - - but were skeptical about when trying to decide whether or not to buy a Dragonfly.

Our first trip was this Spring, using a borrowed Sporty's GPS, we flew from Salem IL to Fort Worth, TX, via Springfield, MO into a 25 kt (!) headwind-took us about 8 hours; then to Gainsville, TX. and on to Fort Worth to visit our son, Frank; and returned three days later, same route.

We're flying legs of about 3 hours (or 55-60-hp) cruise. with an hour reserve, and using less

worth it. Hope to get things done about 24"/2400rpm or a little more, Added an ELT, and made a copper-



or equivalent MP/RPM, for 70-75% the ground like an ultralight, but

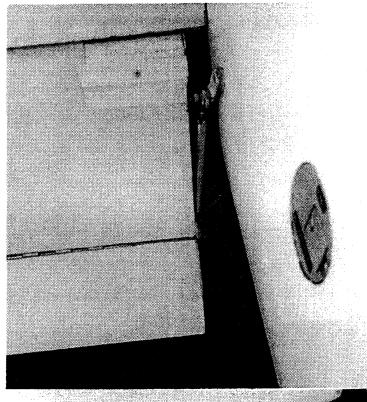
than 5 gal/hr. with about 21 gal. Here are some additional mods

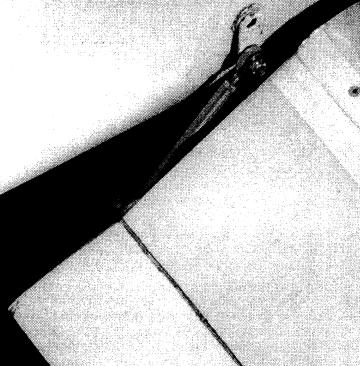
ribbon bi-polar antenna for it. Designed a cabin heater, using the oilcooler-heated externalair and running it through a modified Cessna firewall gate... works fine. Installed a left and a right-side wing-to-wing angle indicator...i.e. a stall indicator or Angle of Attack indicator, one on each canard, to avoid stalls. Removed the canard, to get the elevator off, in order to replace the 'sparrow-strainers' with a combination pitch-trim (electric MAC unit) and anti-servo tab, with indicator and control on the console in front of the stick... works perfectly. Took out the crankspring-cable pitch trim stuff. Static-balanced the elevators, using two internal ballast weights. each side, one near each of the outer elevator mount brackets. Moved the landing springs an inch further out of the slot, for a little more prop clearance. After flying with the wood 2-blade, we installed a 3-blade WARP DRIVE prop... which had a harmonic vibration problem at 900 and at 2300 rpm. Was able to swap the blades for a set of thinned-tip blades from Warp Drive, which eliminated the problem. Tried pitch settings from 18 degrees (lumps off

spins too fast in cruise) to 24.5 degrees for 2600-rpm cruise... but fold pressure gage. Changed to an Of course two days later the VGs ics, and found his spacing was

AC mechanical tachometer. Removed the loran which didn't work, and installed an AIRMAP195 GPS. Also had the transponder checked and set.Removed the two bald and underrated tires and installed two Lambs with tubes. Drilled two drain holed behind the an auxiliary gas tanks, for spills. Moved the numbers down to the fuselage. from the tail. Replaced the hard tailwheel with a softer one. Replaced the aileron servo-assist pushrods with similar ones, but using steel tubing and silver solder; and relieved the aileron near the pushrod hinge so the rods can be straighter, less bent. Had the alternator completely overhauled after it failed... no one knew what vehicle it was from, not even the builder. The day after it came back to NAPA, a customer brought in an identical one for repair... from a Kabota tractor! Now I know where to get a replacement, next time. I checked the geometry of the airplane which wanted to turn right, and found the airframe is perfectly straight; but the aileron tab pushrod was bent!... so I redid them. It then

holds the engine down to 2200 rpm \$60. and had sent nothing. I finally installation indicated there weren't for takeoff. This engine is rated at made my own VGs from aluminum, enough VGs to do the canard... but I 80-hp at 2700-rpm. Added a mani- and complained to the Post Office. referenced Hoerner's Fluid Dynam-





flew perfectly straight. Added vortex came in the mail...with an arrogant, un-populated part of eastern CO, generators... tried to buy some, but self-justifying letter, and no apology stopping at Wray for gas. Then the seller (after 4 months) had my for the delay. Also, his template for through a sky full of big thermal

wrong... so I'll put them on soon. Not that I've had any lift-loss problem yet... but read many reports of same, so just wanted to avoid any problem.

The handling Is quicker than Cessna or Piper, but not 'over-sensitive'. like a KR-200 was that I flew before we bought the Dragonfly.

The performance is revealed by our last trip.

We flew from Salem, IL. to Longmont, Colorado (el. 5052), in three legs, stopping at Trenton, MO., and McCook, NE enroute. Our airspeed was about 130-kts, and GPS ground speed about 105-110 because of the headwind. We left IL at 11:00 a.m. and arrived in CO at about 7:30pm., slipping through the 30-mile veil at 6700 ft., some 1500 ft. above the ground. Daughter Lucia picked us up 15 minutes later for our visit. Three days later we took off for Rapid City, SD, to see Mt. Rushmore, and flew about 8500 n. most of the way, having to go around a few big clouds, but enjoying flying in the Big Sky country, visibility 30+ miles! After three days in SD we added a quart of oil, and headed south across the VAST

boomer thunderstorm raining on the Texas panhandle, and landing at Borger, TX near Amarillo, where the temp on the runway was 99 degrees! through the sky at about 7500 ft.

Finally, on this last leg. the thermals and the headwinds died, and we had a comfortable flight Into/under the TCA to land a t Hicks Airport, 30 minutes before sundown. where we met a friend who happened to be at his hangar, and let us tie down his o n grass apron. Son Frank picked us up shortly after, for a TX visit. Three days later we put in a halfquart of oil, and at 9:15 am flew out of Hicks, and on up to Neosho.

MO for gas and a snack; and then climbed as we flew eastward toward home, up to 13,000 n. to clear the highest clouds, where only 18" MP was available (40-hp) and then back down a little, cruising smoothly and cool, in the middle of July, on back to

Dragonfly, around a colossal big we were in our car, leaving the airport for home in Carlyle... from we would really like more power for Texas to Illinois in less than 6 hours, takeoff and climb in the mountains, including a stop for gas. We flew this circuit in about 23 hours, total, with front of you... something like Reg

And on to Fort Worth, TX, boring no stiffness or aches or cramps... a Clark's turbo-soob would be nice... comfortable ride... and we're 'S- or maybe a supercharger added to

'bumps' handled easily with the home port at Salem, IL. By 3:15 p.m. TCA, looking westward at those beautiful Frontal Range mountains... which seem to grow higher right in

> the little Continental to 'normalize' it? Something to think about. We have two other offspring, one in Seattle an one in Los Angeles, who we want to visit... and a daughter 500 miles north of Seattle, in British Columbia.

Next week we're heading north to Oshkosh, about 2.5 hours, weather permitting. I think we'll see more airplanes in the air, there, and some more Dragonfly's.

eniors' with a lot of miles. We only Terry and Cynthia O'Neill saw two other airplanes while cruis- Dragonfly - N189SM ing in the air.... so what is this Carlyle, Illinois 'crowded sky' baloney?

One thing became obvious to this Look very close at this Dragonfly every-'flatland' pilot as we took off from one. Stan Meleski did a very nice job on Longmont CO, under the DENVER making & fitting up this cowling for the

E-mail "troneill@accessus.net"

Continental. - Spud

MULTICOM

1997 TANDEM WING FLY-IN!

Another newsletter

I've started another newsletter. The name of the newsletter is VW Aviation News or VWAN for short! Over the last nine years that I've been doing the Dragonfly newsletter I've notice there is quite a few of other groups didn't have a newsletter or if they did have a newsletter the submissions were minimal. Also over this time frame I have had quite a few people contact me in regards to doing the newsletters for their groups. Well my first love was the Dragonfly and always will be. And yes, I have full intentions continuing the Dragonfly newsletter with out fail. The more and more I watch everything that was going on in all these groups, the more I found that there was a TON of information that could be shared back and forth. After some strong prodding from my friend Steve Bennett of Great Plains Aircraft (Steve said this newsletter was long overdue.....Looks like he's right again!) we did some small mailings just after Sun N'fun to the groups that didn't have a newsletter in place or if they were listed as owning or building a aircraft type that used a VW based engine for power. This included the "Low and Slow" and the "High and Fast". Well to my very pleasant surprise (read that as shocked!) the subscriber base to this new newsletter is now well over 200 So if you are like me and just can't get enough information. You are more than welcome to join us! We are publishing 5 issues this year for \$16.00. Make and mail your checks to: Bill Spornitz - 1112 East Layton Drive -Olathe, KS 66061. Any question contact 397-0518 (913) me at dbfnspud@aol.com

Howard Hardy Memorial

As most of you know, late last month a very noteworthy Q-Bird guru passed away. I have organized a fund to put Howard Hardy's name on the Memorial Wall at Oshkosh. Many of you have already sent me your donations and for

continued on page 10

learn what's new and maybe to see just how some else did their plane or training for the ever so important day Ottawa and if I get the airplanes to Ottawa, then the people will come. "FIELD OF DREAMS". So I set a goal - 30 tandems wing airplanes at one time at the field, surely this would be a record of all records. My super good friend Jimmy Masal said right Spudley, what you been smokin! I asked Jimmy if he would like to bet again. He said no sir! I've already kissed you rump one to many times betting with you on plane count at Ottawa - No thank you. So just was how was I going to reach this all time goal...... hmmmm.......What would be the incentive for the tandem wing guy to fly their plane to Ottawa, especially the guys that are farther away on the west and east coasts. I got it! We're going to give away a Garmin 89 GPS to one of the pilot of a tandem wing airplane. This is how it will work. For ever 250 miles the tandem wing pilots home base is from Ottawa, Kansas he or she will get a serialized ticket "dropped in the hat". Example if you 900 miles away you'll get 3 tickets, if your 1400 miles away you'll get 5 and so forth. Your odds will be excellent. Let's say we have our 30 airplanes and the pilot say get

Here comes Our Tandem Wing Fly- an average of three tickets, that's 90 in number #7! This is our seventh tickets. Think of it you tandem wing year at Ottawa. It's only 21 days pilots. You'll have a 1 in 90 chance of away as of this writing. I've got to tell winning the Garmin 89 GPS to fly home about something thing I've been up with. Now this drawing is for the attendto..... No Good of course. I've pon- ing pilots. It's our reward to them for dering and pondering what can I do completing their plane and bringing it to to make this annual event even us at Ottawa, Kansas. Now I can't bigger or at least better......I thought guarantee that we'll be doing this in the long and hard. What do we come future, but we will be doing it this year! for? Hmmmmmm. We'll we come for A few rules apply: 1. You must be a fully the airplanes. Builders come for their paid attendee of the overall event and annual injection of building boost, awards banquet. 2. Must be a current subscriber to the appropriate groups newsletter, DF's = DBFN and the Quickspecial little item. Some come for the ies, Q-2's & Q-200's = Q-talk. 3. Disrides, to see if the Dragonfly is the tance measurement will be in statue project for them or a little bit of miles and direct line (point to point). So there you go ladies and gentleman, I in their own Dragonfly. I figure it this hope I've set the stage hopefully for our way, my job is to get the airplanes to largest turn out ever. Mark those calendars and send in your registration today!

It's sorta like the our own little We have a couple of details still up in "FIELD OF DREAMS". So I set a goal - 30 tandems wing airplanes at one time at the field, surely this would be a record of all records. My super good friend Jimmy Masal said right Spudley, what you been smokin! I asked Jimmy if he would like to bet again. He said no sir! I've which many of you are already familiar already kissed you rump one to with.

We've already had some Dragonfly pilots pledge to be at this years fly-in, they are: Justin Mace in his Subaru powered MK II DF, Mark Snow in his Continental Powered O-200 MK II, Kimbul McAndrew in his O-235 Lycoming powered Q-235, Terry & Cynthi O'Neill in their Continental powered Mark II Dragonfly, David Bourque of LA in his MK II DF and many many Quickies, Q-2's and Q-200's!

The event is Friday August 29th, Saturday August 30th and Sunday August 31st.

So What Are You
Waiting.....Mail Your
Registration Form Today!

OSHKOSH 1997

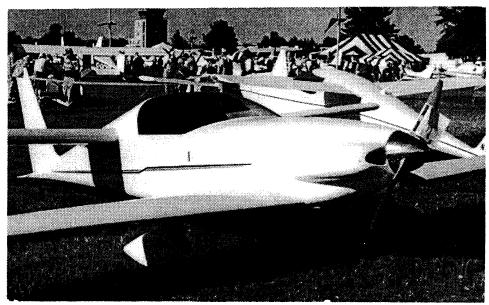
OSHKOSH REPORT by Matt Gunsch

Well another Oshkosh has gone by the wayside and we are already looking forward to next year. The Dragonfly and Q-birds had some problems with parking this year, like we were kicked out of our normal area and scattered around the homebuilt area. It seems that Van's RV series took over our area and no one thought about those groups that got displaced, the Kitfox parking was threatened but was saved by one of the builders who refused to move his plane.

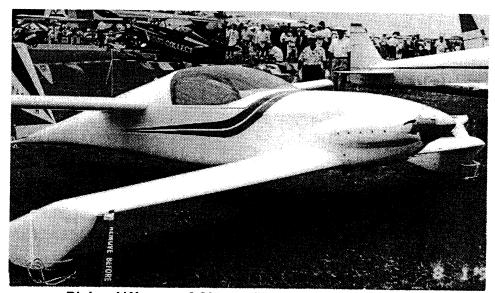
We had a good turn out of planes and builders: Planes: Terry O'Neil of ILL, Roger Enns of Ontario, Canada, Rich Werner of StL, Mo, Bud Clarke of Helena, Mt. Brad Hale of Chino Ca, The Arizona contingent had a good attendance as well, those attending were: Bob & Jo Boydston, Justin Mace, Jim & Betty Ohlin and myself Matt Gunsch

Spud announced a new newsletter that he's producing that is geared to the Volkswagon engine in aircraft, contact Spud if interested in this new newsletter. Steve also had on display in his booth a new VW engine for aircraft use, it uses a reduction housing with a prop flange on the transmission end of the engine and a alternator drive pulley on the other end, just as it is installed in the cars. He hopes this will allow more power and reduce the chance of crank bre akage, Steve also has a new catalog out this year.

The Dragonfly - Quickie forum was Thursday evening and we had a good turn out again this year with 80+ attendees both builders and lookers, but the Banquet was even better with over 150 attending. This year we were joined by the KR



Brad and Beth Hale of Chino, CA's Mark II



Richard Werner of Chesterfiled, Missouri's Mark I



Roger Enns of Ontario, Canada's Mark II

series builders and fliers. The KR's were celebrating their 25th year and we welcomed them as the KR has much in common with the Dragonfly and Q-birds. It was enjoyable to be able to put a face with a name to alot of those I talk with on the Dragonlist and from the newsletters

That's all for now Matt Gunsch, 602-252-4720 E-Mail: N329DF @ AOL.com

A comment from Spud

Oshkosh continues to get bigger every year and this year was no exception, but I don't know if I can say its getting better! It seems like it's becoming so commercialized and it seems that the little guy is getting squeezed out. Now I don't have the answers to this problem other than maybe its time for an "Oshkosh Alternative" for the little guy. I'd like to here everyones thoughts on this issue and we'll talk more about it in up coming issues of the newsletter.

Very Best Regards -Spud Spornitz

"Multicom" continued

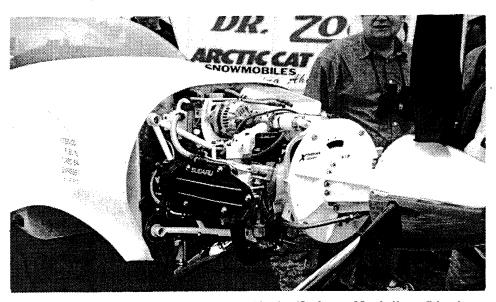
that I thank you each from the bottom of my heart.

I am still a little short of funds and would like to send the order forms in as soon as possible. Would each of you who committed to donate and have yet to find the proverbial "round-to-it" please locate said circular object as soon as possible.

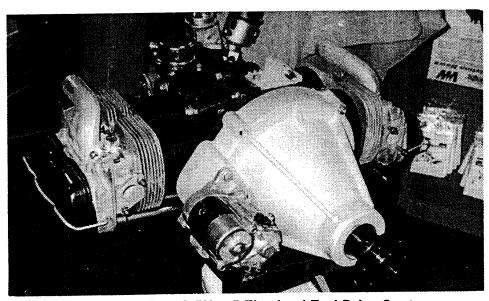
For those of you have not had the opportunity, I would like to extend a warm welcome to participate. I set the target donation at \$20, but any amount would be truly appreciated. If you so desire, you can prepare a check made out to the "EAA Aviation Foundation" and send it to me at 998 Pleasant View St, Castle Rock, CO, 80104. I will be submitting the application to EAA at the end of August. Thanks to all, Terry Sickler



Terry and Cynthia O'Neill of Carlyle, Illinois's Mark II



Bud Clarke of Helena, Montanna's Turbo/Subaru Mark II on Display



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Dragonfly project. The project should be to completion. At least 85% More somewhere between 50 % and 99%. We details available online at the do not need any type of power plant or Dragonfly web page. Call after prop. Please contact Daryl Larson, Box 5:00 PM EST 207-324-6072 428, Killam, Alberta, Canada T0B 4C0. \$9,500.00 Phone (403) 385 3568 E-mail :larson@agt.net

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