

# SONERAI

OCT-NOV-DEC 1991  
**NEWSLETTER**



Dennis Brannon  
leaving Oshkosh

Check the prime  
Two blades and

--She Starts!--

## Oshkosh 1991

So Oshkosh 91 has come and gone. We ended up with a few less Sonerai's on the field than in years gone by, but some people said they were better looking than in the past -- we all have our own opinions of course. A few of the regular attendees didn't have a chance to make it this year so we ended the week with 12 Sonerai I and IIs. Surprising to me there were no tri-gears and no stretches so those of you with that type better make plans for next year. Those in attendance:

John Giordano	Dean Mc Ginnis
Brian Dempsey	Ed Sterba
Dennis Brannon	Dave Patterson
Chuck Stottlemeyer	Fred Keip
Dale Severs	Jim Phillips
Tim Buechle	Bob Scannell

Sonerai judging took place the first 4 days of the Convention and the following winners included:

Best Overall Sonerai ( a tie vote )	Dennis Brannon and Bob Scannell
Best Paint Scheme	Chuck Stottlemeyer
Best Interior	Dale Severs
Most Innovative	Dean Mc Ginnis

Tim Buechle went overboard in making trophies for the award winners that need to be seen to be appreciated. They are a Sonerai hand carved in relief in wood with a brass nameplate. He thought there might be some way to have awards made by somebody else next year, but we all declined the invitation, so Tim has been elected the Official Award Craftsman for Oshkosh Sonerai's. Great Job!

We don't normally have a Greatest Distance Flown Award, but if we did, this year it would have gone to Dean McGinnis for his flight in from Lakeland, Fla. We hope to have his "adventure" presented for the Re-Up issue in December. Somehow he found me in a campground of 30,000 people after only talking to 3 people. I'm going to have to do a better job of hiding next year.

## Oshkosh Sonerai Dinner Specs

We had exactly 100 people show up for this year's Sonerai dinner on Monday night. That is all the room they had set up for us so it was a nice tight fit. In getting signed up for the same night for 1992, we found out that if needed, they can make room for 130 people in the same room, so I indicated that may be necessary. By the way, the Vari-Eze dinner taking place downstairs at the same time as ours upstairs, apparently had a total of 80 folks. Hmmm?

1992 Re-Up Notice

Yes, it is that time of year again to see if you want to stay on the Newsletter list. There will be a re-up notice of 4 pages or so sent out about the first of December, so everyone gets two notices actually. I have managed to crack the code of the Social Security main computers, so if you chose not to sign up for next year I have the ability to reek havoc with your last twenty years of life. The choice is yours, but think it through carefully. What is \$12.00 compared to financial security and your Grandchildren's college fund?

<<< Electric Sonerai News >>>

I have had requests for back issues of the Newsletter and have had difficulty getting the out of print ones back in print as a lot of you know. John Norton came through with a lot of them for me and I have sent some of them out to people. However, I find myself still shuffling a lot of paper through the mail so the idea was to see about fitting all the back issues on a 5.25" floppy IBM computer disc. In order to make it readily compatible with the many different word processing programs people use, I had to get it into something everyone could "import" into their programs and that is called ASC II. So, I took our perfectly good Word Perfect articles and magically transposed them into ASC II. Going all the way back to the Oct. 87 issue and charging ahead to the last Jul. 91 issue, I just got them all fit on a single disc, uncompressed.

Of course there are no pictures and I left out some of the introductory paragraphs, but it fit quite well. There are 107 files and about 1024 bytes left over so you can see it was a tight fit. If you have any type of Utility Program you will probably be able to print them outright. I'm sure you know more about this stuff than I do so you'll figure it out. Cost for the disc is \$10.00 postage paid.

Going Green Maybe?

My alternator magnet ring started giving trouble about 2 years ago, the magnet caps were coming loose and making noise when the engine was turned over. As some of you may know, eventually they can jam up the alternator/crankshaft if things get bad enough. So after repairing the problem twice and still having loose magnets three days before leaving for Sun N Fun this last Spring, the magnet ring came out for the last time. A new one is available with difficulty as I understand it, but after living all year without an alternator I think I have decided to go "green" as they say and invest in solar cells to keep my gell cell charged up.

Since N78ES is parked outside all the time (poor thing), I have been maintaining power with 125 milliamps of solar panels laid on the wing after flying or while at fly-ins, etc. The only thing that will let this be possible is the advent of the loran for nav at 50 milliamps drain. My Escort 110 pulls about 1.8 amps (1800 milliamps) on receive and I'm afraid it will have to go for this green revolution to succeed. A handheld Comm when hooked into the aircraft's system pulls about 100 milliamps, so the loran and such a unit need about 150 milliamps for normal duty.

The solar panels that will eventually be used are 7" X 14" and put out 350 milliamps at 6 volts. In series that should work out to 12+ volts at the same amperage, which is more than enough to keep the loran and handheld going at the same time and then some. I'll probably have to use a voltage regulator to keep from overcharging the battery when the Sonerai sits for any length of time. As to mounting location, the inboard left wing panel would be very easy but these units are flexible (6" radius bend) so they may end up on the turtle deck. I'll have to have them in my hand to get a better idea.

It looks like the Escort 110 is for sale, and a small comm is in the works. Anyone need a radio that should be legal at least for the next 4 years?

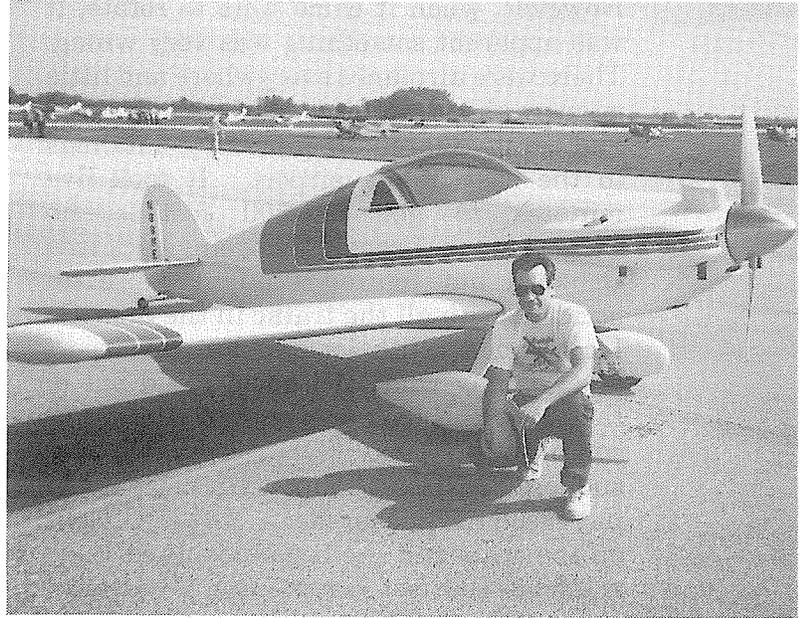
## Prop Tape

I talked to Harry Fenton of Slick magneto fame the other day -- seems that I was experiencing a tail wheel noise on landing lately but decided to blame the problem on my magneto just to drive Harry a bit more crazy. He really appreciates this kind of harrasing call during his busy day. It's sort of like the calls I get about propellers being the "root of all evil" when someone else has a problem. Harry, by the way, flys a Sonerai II so we always have a lot to talk about.

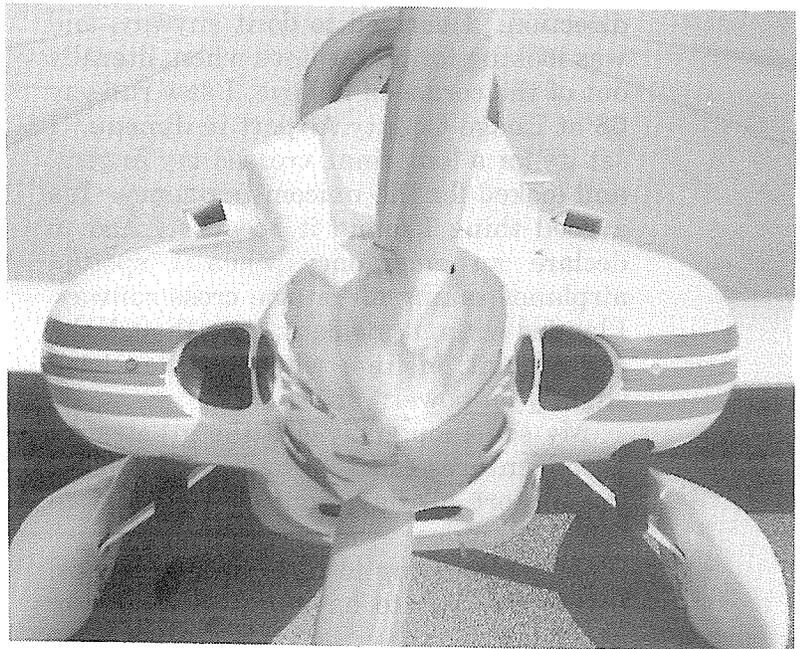
Anyway, after giving him a run down on my "magneto problem" and getting around to the real reason for the call, (to line him up to talk at our EAA Chapter meeting), he told me about his own recent revelation in Sonerai flying. His propeller doesn't have any type of leading edge protection to ward off grass and rain erosion, so he has had the leading edge covered with the "prop tape" available through some of the ultralight people. Well, it seems this tape has been taking a beating and it was time to remove it and get some more. But in the mean time he was going to keep flying the Sonerai until the new tape arrived. Except, he discovered that the airplane picked up quite a bit of speed with the tape off the prop. Like 10 mph or so!

There was no noticable difference in the climb and takeoff performance but this nice increase in cruise and top speed. Harry said that he thought he had lost this speed when the tape went on for the first time but discounted the difference to his imagination. But, now here it was back on the airspeed just like before. Can the tape be that big a factor? It is something I had thought about before -- the fact that you were sort of tripping the airflow over the camber of the blade just at the wrong spot, about 20% chord. We both remembered the article in Sport Aviation on the Q-2 that had the spanwise paint striping applied to the canard and lost so much lift. So maybe it can happen on a propeller?

The tape is pretty thick in order to do it's job and this is probably a factor in whether this phenomom actually occurs or not, but Harry is convinced it is real and I am prone to believe him. Anybody else see this sort of thing happen?



Mark Elyea's newly finished Sonerai. He just has his forty hours flown off and attended the North Central EAA Fly-In at Rock Falls, IL this Sept. The airplane is outstanding by my standards. I forgot to ask Mark how his top mounted scoops were doing.



## SONERAI MISADVENTURE

My ten-year-old son and I took off from Oshkosh Tuesday morning along with everybody else in the world. N2EX seemed a bit sluggish on the take-off roll, but I usually fly off grass, so my cues were off. However, when it came time to rotate, it was apparent something was very wrong. There were airplanes everywhere and little runway ahead, so I turned right as briefed and barely cleared the industrial buildings to the east of the airport. It took five minutes to get to 500 feet -- no exaggeration. I considered going back into Oshkosh but figured I might cause an accident with all the traffic in the area. So I continued south looking for an airport and coaxing what altitude I could out of the 1834cc. It took another ten minutes or so to get to 1000 AGL. Then all of a sudden, BANG -- a hammering noise really increased the pucker factor. The EGT went off the scale and she began losing altitude at about 100 feet per minute. By then I was at Beaver Dam, about 60 miles south, looking hard for a private field as shown on the sectional. No dice. The next airport was at Juneau, about ten more miles east, so I headed that way, still losing altitude. At 300 feet AGL I picked out a nice two-lane highway, but every time I'd consider landing, cars would go by in either direction. I decided to do it anyway, and was looking for power lines when, literally out of the corner of my eye, I saw runway 08 at Dodge County Airport in Juneau. I set up for a long final, crossed my fingers, and looked for the unicom frequency. It's a good thing I found it because I had to declare an emergency when I spotted airplanes taking off on the cross-runway. I landed without incident, even though the engine quit on final when I pulled back slightly on power.

My son thought it was the greatest of all adventures until he had to sit around the airport all day, waiting for Mom to drive 250 miles.

If you're going to have an emergency, this is the way to have one. Everything

just fell into place.

But I should point out, too, that I always take my guardian angel flying with me. She sits on my right shoulder and doesn't weigh a thing, but she won't go along unless I ask first.

**THE FIX.** My luck continued by picking out the best airport with the best FBO in Wisconsin. Pat, a young A&P, turned over all the shop's resources. A compression test showed zero on number four. Pulling the head revealed a sizeable chunk missing on the exhaust valve; apparently, a piece had broken off and went out the exhaust pipe.

It took two weeks to get everything lined up so I could go back to Wisconsin. In the interim, I felt as if one of my kids was missing. It didn't seem right to not see my friend the in the right rear corner of the hangar.

I decided to order a new head from Steve Bennett at Great Plains. In the excitement I had neglected to look at the CHT for that cylinder, so I didn't want the risk of metal fatigue.

This is where the story gets interesting. I'm the kind of person who hates to ask anybody to do anything for me, so four people insisted anyway and we got the job done. My friend Daryl Burns insisted on flying me to Juneau. FBO owner Chuck Swain came out on Sunday morning to help. Ed Sterba came up from Delavan to help spin wrenches. Even though I brought half my garage with me, in retrospect I can see that each player contributed something that I couldn't have anticipated.

We got the engine back together in four hours, and she purred all the way back home. I promised Ed I would re-check the valves, and I promised myself to pull the head on the other side.

Some advice: Check your valve clearances frequently. (It had been about 25 hours, which is longer than usual for me.) When something happens, accept help.

Ed's comments -- first of all I'm upset that John has access to a laser printer and I don't, and it will probably be a while until I do. Aside from that, a Newsletter Editor's job is to go blasting all over the country helping fix people's Sonerai's -- you all aren't aware of that apparently. It's part of the job. We were all talking as the work was progressing and since John has an electric starter on his Sonerai he misses the enjoyment of a compression check every time he starts the engine. Pulling the engine through by hand gives a pretty good assessment of how each of the cylinders is doing, you tend to get a better feel for the general engine health. So, probably the valve that proved to be the culprit would have been identified a bit earlier, but maybe not.

And on a slightly different note -- we also noticed that John's ailerons didn't seem to be drooped the 1/4" or so that is normally recommended. We usually do this because the airfoil we use is not designed around a flat bottomed aileron or flap. So you normally make sure that the aileron is down a bit to keep it in a positive flow of air and to continue the correct airfoil shape. This, as we have said in other Newsletters translates into the aileron counterweights sticking up about 1/4" above the rest of the wing surface.

O.K. -- John just called back to let me know that he had been living with a fairly poor climb performance these last years and finally got around to getting his ailerons down in place. The results of the change were about 300 f/m increase in rate of climb and more than 5 mph in top speed. The climb is easily explained by the flap-like action of the ailerons, but the speed increase we are guessing results from the noticeable pitch down resulting from the change also. With the nose lower you have in effect changed the angle of incidence of the whole wing so you don't need elevator pressure to hold the nose up and all the resultant drag it signifies. Yes, some airplanes reflex the flaps up in cruise for a

higher speed but they probably have a greater angle of incidence built into the wing. Our incidence is basically zero, so a reflexed aileron means a negative angle of incidence. Well, John said it was definitely an improvement and worth the minimal effort and I agree. Free speed, just what we all want.

#### One Man's Answer to Fuel Tank Suction

We had the Forum on the back porch of Homebuilder's Corner this past Oshkosh as stated and had the overfilling of fuel tanks brought up again as we have in the past few years. Most everyone is aware of the potential problem, and there are obviously several ways to eliminate it (I just don't fill the tank past the upper mark on my fuel gauge). I thought I took a good picture of Dean Mc Ginnis' installation but sure can't find it now.

Dean's fuel tank was custom made out of heavier than normal material, normal being .040" and his is .062", so his remedy was made a little easier than yours perhaps. He drilled and tapped for an 1/8th" fitting and installed another elbow at the front top surface of the tank. If your tank is as thin as mine (.040") then it would be necessary to either weld in or rivet and epoxy in a 1/4" (?) thick aluminum block for threading. So now you have two fittings on the top surface of your tank that can be used for your breather line. The trick is to connect them both together with a line and then take a Tee fitting half way between them that connects into your breather. And there you have it!

As you accelerate for takeoff and the full tank of fuel sloshes to the rear, the forward vent is exposed to become your breather. If the fuel should try to close off the forward vent line, then the rear one is available to let air into the tank. Can you fill the tank as full as you used to before fuel starts going overboard? I'm not sure, but Dean seemed to think he didn't lose any capacity since the tank is sitting pretty level anyway. I haven't tried doing this yet, but when the Sonerai comes home at the end of November, and I have 3 months to stare at it every day, then I just think I'll probably do it.

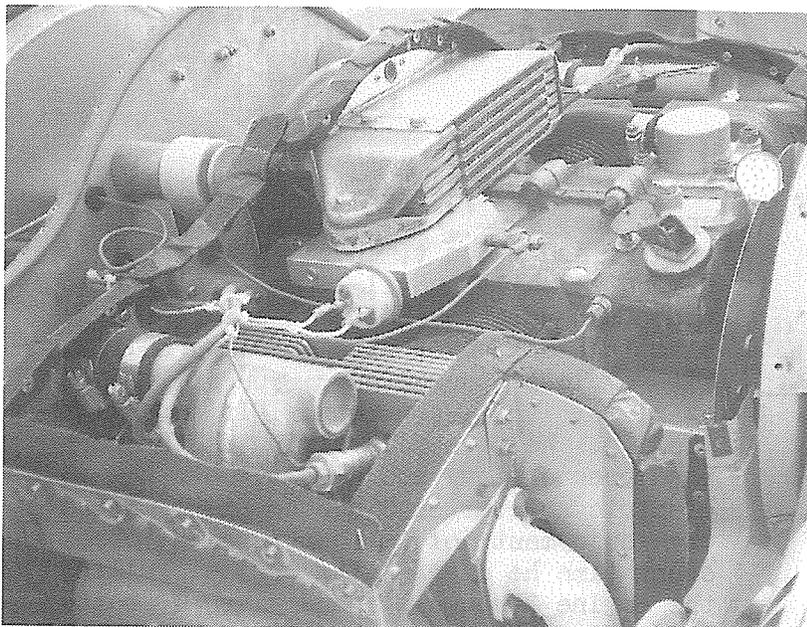
## Baffles For Everyone

If your cylinder heads are running at 375 F. or less at cruise, then you can spend your time better by reading something else. Maybe the stock market or Popular Mechanics or something like that. If, however, the temps seem to hold over 400 F. in cruise and up to maybe 425+ F in climb, then maybe this is for you. Baffles, love them or leave them.

Usually we either use a pressure cowl baffle arrangement or what is called box baffles. There is probably some other way to do it but these two and their many variations are the main types. I seem to get a lot of phone calls from people who have purchased Sonerai's and have a hot running engine which may be one of the reasons the airplane got sold in the first place. Have you ever tried to explain the baffling of any engine over the phone? Not so easy, so I began looking back through the Sonerai Newsletters to see which issue included the details on baffling and found out that it hadn't been covered. So here we are.

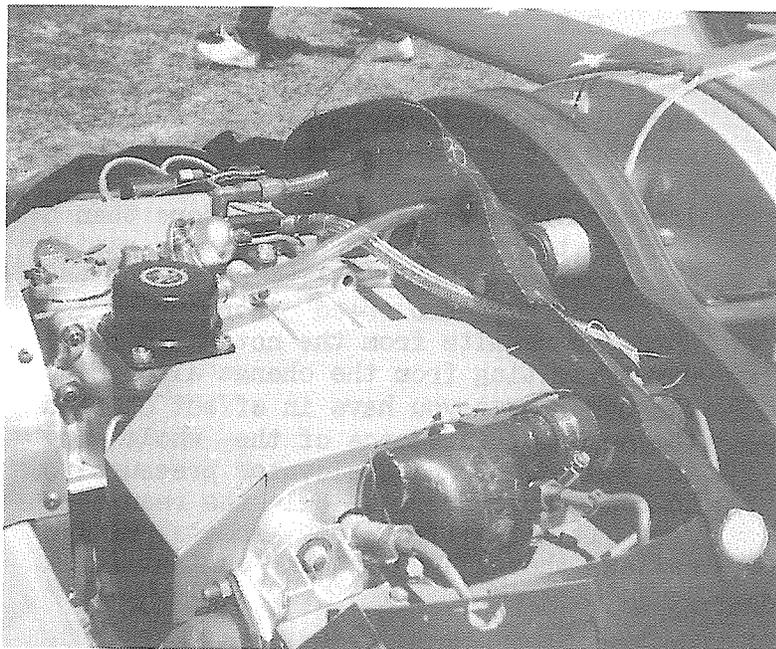
Hopefully the accompanying pictures will help. The pressure cowl needs to have the baffling extended out far enough to ensure that air is forced down through the holes in the outer portion of the heads by the spark plugs. This is one of the hottest parts on the engine and can't be ignored too long. The difficulty always seems to be making sure the flexible baffle material stays sealed to the cowling with air loads imposed on it. This is rather hard to see in flight, of course. If you use a top mounted oil cooler, don't forget that the back side of the cooler needs to be in a low pressure area or you'll get no flow.

The box type baffling is in some respects easier to seal to the engine, there is simply less flexible sealant needed and little chance of any of it unseating in flight. The difficulty has been to get air out far enough on the heads to get flow where it is needed. I ran my engine for 3 years without any cooling there and it was quite hard on the exhaust valves. So now I have additional baffles under the outer portion of the heads that force air up through the holes in the heads and have brought things under very good control. Some of the Sonerai's set up this way run about 325 F to 350 F at cruise. I have copies of the underhead baffles available for the asking.



And now, the big question, -- which type is better?? The one that works for you. Some of the box baffles that covered over the spark plugs in order to force air through those outboard holes, made it tough to service the spark plugs which is the main reason I took so long to get my cooling out there. I wanted to see everything on the preflight. That is why I have the underhead aux. baffles, it doesn't get in the way of the plugs. The pressure cowl is nice in this respect, but may make it tough to service the valve train without taking off the bottom cowl, so maybe it is a draw.

One thing is for certain, -- if the temps stays up for very long, you will probably be seeing the valve man before you should.



Chuck Stottlemeyer had his Sonerai II at Oshkosh this last month and had his engine converted from the Posa to the Zenith carb described in the Jan. Sonerai Newsletter by Al Bertellman. Anyway, Chuck found that by turning the Zenith 90 degrees so it faces sideways, he was able to clear the firewall without resorting to any offset of the intake manifold. Of course you still need to have a flange mount on the end of your Y-casting but at least it isn't necessary to do any major rework to it. The throttle cable should make a nice sweep from the left side of the fuselage and you have the option of figuring out the best way to hook up a mixture control (someone will eventually show us how to do that).

Chuck is very happy with the Zenith's operation so far as pertains to throttle response and especially starting characteristics. So many people have been inquiring about this carb that Great Plains Aircraft Supply has decided to offer it for sale. You know how to get hold of them, I assume.

Since this is a float type carburetor having a venturi, I asked Chuck about carburetor heat. He didn't have any heat for the Posa and decided to try the Zenith without it either. I mentioned the simple carb air temp probe I have been using and we discussed how it might be used in the Zenith or at least just down stream of it in the manifold. In the mean time Chuck is conducting some extremely sophisticated tests using a statistical analysis methodology to determine if carb heat is needed at all -- you set up a very long final approach with the engine at idle the whole time and then see if you become a "statistic". So far so good is the report. I believe he is probably being about as safe as any of us in his testing actually, and the results do seem favorable, but we both agreed that carb icing is really nothing to ignore on any carb.

Chuck Stottlemeyer  
1831 N. Log Cabin Dr.  
Anderson, IN 46011

We have talked in the past about several instances where ailerons have come loose from their actuating arms in flight with rather dire results. In these cases the rear taper pins were not in place when the incident occurred (for one reason or another). However, at Oshkosh this year a Sonerai pilot explained that his accident was caused by the aileron pin moving out of the arm with the taper pins in their proper place. As we walked around the fight line looking at other Sonerai's he soon noticed that most of them had their aileron pins protruding through the actuating arms by 1/4" or more. It became evident that on his aircraft (which he purchased completed) the pin just barely stuck through.

That doesn't explain how the pin was able to come out of its proper place. I can't picture the forces on the aileron that allow it to move outward, or the actuating arm to move inward, but they must be there and should not be ignored. This aircraft rolled inverted on takeoff.

There is an obvious lesson to be learned here --- the pins must extend into the actuating arms by some reasonable distance --- 1/4" or so? One of our builders at Oshkosh also had the pins cotter pinned in place, which is probably a good idea. But if the pins extend far enough into the arms to allow for a cotter pin, then they probably extend far enough to not come out, but better safe than sorry.

What can you do if the pins just make it into the arms? This may not be so easy to fix. Can you move the whole arm and shaft assembly outward by shortening the inboard arm's shaft and letting it slide outboard? Probably. Do you move the whole bearing block outward by new holes through the spar carry-through? Probably not as good an idea, new holes in the carrythrough won't make it stronger. The end result of our inspection was to get me to look at my aileron pins a bit more carefully. How are yours?

I talked to Wolland Sterchi on the phone the other day. He has a Sonerai I with an O-200 in it that has been around for quite a while. Matter of fact, he was featured on the cover of one of the Newsletters down at Sun N Fun not too long ago. Anyway, he wanted to know if I had any information on any inboard ribs cracking on Sonerai's. I told him that about 7 years ago I noticed that both my inboard rib attach points to the rear spar had broken loose some time in the past. This is the point where a single pop rivet is holding the rib in place until you have the skin attached. I felt then and still do now that the single rivet wasn't near as important to the structure as the many other rivets in the area. Well, he has developed the same problem and is working on a repair.

My fix was to use a piece of galvanized sheet metal to fabricate an angle that is fastened to the rib with two rivets and through the rear spar at the same hole. Since I have been taking the airplane home these last 3 years, I always give that area my special attention when the wings come off. So far, so good. The main problem this year will be to make another attempt at controlling the corrosion of the rib and skin caused by exhaust gasses.

Why do we get that crack at that point? I feel that the rear spar is putting a bit of pressure there that it doesn't on the other ribs. When attaching the wings you probably notice that the rear spar may have to be pushed up to get the rear taper pins in place. Any better ideas? Anybody else break loose there?

Wolland had another idea for preventing spinners from cracking around the blade cutouts. In the past I have talked about reinforcing the cutout with galvanized sheet metal and aluminum filled epoxy, but Wolland has done his reinforcing with fiberglass cloth and SafeTPoxy with good results. A 1" or slightly wider strip is cut to follow the cutout and then the aluminum is sanded and cleaned to form a better bond. I don't know if this will stop a crack from forming, but the idea is to get a jump on it and not let the crack start, so do either method to a new spinner, and don't wait for a problem to develop.

Just a short note here --- in reading the August 91 Sport Aviation article on the revised Brokaw Bullet, I noticed that the "new airfoil" they are using is the same airfoil used on the SIAI-Marchetti SF.260. As they say "it's a much better airplane now at both slow and high speeds. It handles better all the way around." That sure sounds like an airfoil we would want to have for our Sonerai's, right? Well, it just so happens to be the one we have been using all these years as talked about in the last issue of the Newsletter. Why change a good thing.



Bob Scannell's instrument panels

#### Cherry Rivets Available

Those of you wishing to purchase your Stainless rivets may want to call 1-800-289-2479 to talk to the Cherry Commercial Fastening System for the location of the nearest distributor for the wing rivets most Sonerai builders use. Minimum order of 1000 rivets, so don't ask for 25.

\*\*\*\*\* \*\* WANT ADS \*\* \*\*\*\*\*

For Sale -- Sonerai II N176EM TTA 81 hrs  
TTE 12 hrs. Excellent condition 1700 cc  
Monnett conv. Warnke adj. prop, Genave  
100 radio, 519 lbs. empty. Has Monnett  
spar beef-up done. Asking \$6500.00  
Tom Kolb 216-257-7529  
Ed Fisher 216-428-7947 after 6 PM

For Sale -- Sonerai IILT almost ready to  
fly, will finish and sell with special  
roll-on trailer, or trade for something  
slower Up or Down, 2 place. My equity  
\$8000.00 Claude Icard P.O.Box 274  
Rutherford College, NC 28671  
704-874-2033

For Sale -- Sonerai II midwing 1835, wing  
mod. done, Genave Nav-Com, red with white  
trim, featured April 1983 Sport Aviation.  
Minneapolis, Minn.  
612-753-3245

For Sale -- Sonerai IIL Kit - all welding  
done, 50 % complete, 1900 Limbach engine  
and access. \$ 6000.00 or best offer  
303-666-5494

For Sale -- Sonerai I Project: Welded  
fuselage-tail-controls--primed-- spars,  
caps, ribs and sheet stock, some hardware.  
Manuals and video. \$2000.00  
Bob Schank 313-697-7057 home

For Sale -- Sonerai IILTS project, fuse.  
welded, have rest of kit to finish  
aircraft including Stits material, two  
fuel tanks, no engine \$ 3000.00  
Pete Fidler 708-526-3022

For Sale -- Sonerai II midwing, HAPI 1834  
dual ign., starter, heater, stab. trim,  
under 100 hrs. excellent cond., trailerable  
asking \$ 8500.00  
Dave Zeidler 516-868-8827  
3490 Stevens Rd Baldwin, NY 11510

For Sale -- Sonerai IIL Kit-- all welding  
done, 50% completed. \$1500 + Limbach  
engine and accessories. Trade?  
303-666-5494

For Sale -- Sonerai II 1850 Monnett conv.  
127 hrs. TT, 35 hrs. on top OH, wing mod.  
Genave radio, Sterba prop, asking \$7000.00  
James Mc Dougall 13950 Oxnard St.  
Van Nuys, CA 91401 818-782-9031

Wanted -- Monnett X-Casting  
Wally Beckett 105 Maringouin Ln.  
Mandeville, LA 70448

For Sale -- Hapi Magnum engine 82 HP,  
hydraulics, cooler, dual Electronic Ign,  
35 amp alt., Supercarb, High torque  
starter, Diehl case. 15 hrs TT  
asking \$ 4800 Also, BRS-4 ballistic  
parachute for Sonerai II \$ 1700  
Ray Macaro  
124 Longmeadow Brandon, MS 39042  
601-825-8067 evenings

For Sale -- New Sonerai Spinner \$30.00  
Tail spring \$30.00, Slightly bent 1/2"  
landing gear \$50.00, axles-wheels- mech.  
brakes \$50.00  
Gary Eichhorn 4680 Glenridge Tr.  
Stuart, FL 34997 407-287-3912

Wanted -- set of Sonerai I wings, either  
complete or as kit (damaged??)  
Mike Kellems P.O. Box 507  
Burkesville, Ky 42717 502-864-5658

For Sale -- Parting out Sonerai II with  
220 TT airf. & eng.-- incl. HAPI 1834 w.  
starter and alt., transponder, STS Loran,  
Ellison carb, Hydraulic brakes, STS  
handheld and headset, two props, & more.  
Floyd Blaine 1127 Taylor Ave.  
Godfrey, IL 62035 618-466-8996

Wanted -- 29 mm Posa Jim Meier  
1347 Fish Hatchery Rd.  
Oregon, WI 53575

For Sale -- Sonerai IIL project, fuse. on  
gear - prof. welding, complete wing kit  
w/ mod., cowling and tank. \$1600.00  
Steve Steinmetz ph. 815-962-1772  
428 N. Pospect St.  
Rockford, IL 61107

For Sale -- Canopy for Sonerai II, bronze  
standard size \$165.00 + ship  
Bill Rossman 1754 Parkview Cr.  
Palmyra, WI 53156 414-495-4370

For Sale -- Sonerai II L 170 TT, 20 on  
new engine, 720 Comm, Loran, excellent  
workmanship Asking \$15,000.00  
Dale Severs 221 Southridge Dr.  
Gurnee, IL 60031

# Sonerai News

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SONERAI NEWSLETTER

C/O Ed Sterba

412 S. 5th

Delavan, WI 53115

414-728-1367

## To:

FRED KEIP PD 90 PD 91

11428 SIX MILE RD

FRANKSVILLE WI 53126

