

# SONERAI NEWSLETTER

JAN-FEB-MARCH 1999

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PHONE: 414-835-7714  
(AFTER 6 PM CST)

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## **JON HUBBELL'S SONERAI IIL**

*Jon's airplane is powered by an 1835 cc VW with CB Performance heads set up for dual ignition. He says they run cooler and give better performance than stock heads.*

### **WELCOME TO 1999!**

I hope the holidays were enjoyable, and most of all, I hope Santa brought something for your Sonerai.

And welcome to this first issue of 1999. I'm looking forward to another year of flying my Sonerai IIL, N99FK, and of course, producing this newsletter. Of course, this being the dead of winter in Wisconsin, I'm not getting a lot of flying done, but it gives me the opportunity to think about the upcoming fly-in season. Sun'N'Fun is scheduled for April 11-17 and Oshkosh is set for July 28 to August 3. We're planning on forums at each event, and hoping that a bunch of

Sonerai's show up. So, plan on coming if you can. Also, don't forget all of the regional fly-in's. In a way, they're more fun than the big ones, so be sure to take them in as well. See you there.

### **IT'S RENEWAL TIME**

It's that time of the year, again. As you know, the **Sonerai Newsletter** subscription runs from January to January, so if you want to continue receiving this fine publication, it's time to send money again. Please take a look at the mailing label on the envelope this newsletter came in, and check the "PD"

date. If it says "PD98" and you want to have it keep coming, send me a check for \$12.00 (in US funds, money orders and cash are OK, too.) If it says "PD99", your paid up for the year. Please make the check out to me (Fred Keip) and not the "Soneraï Newsletter". Also, I'd appreciate an update on your progress and your e-mail address if you have one. Thanks.

## BUILDER'S SUPPORT UPDATE

When I took over the newsletter from Ed Sterba a couple of years ago, I also inherited the position of "Resident Soneraï Guru." This is a task that I enjoy doing, and I hope that I can continue to help you guys out. As usual, all I ask is that you call after 6 PM, and that you don't call collect.

But I am not the only "guru" around. The following is a list of guys who have volunteered to take your calls as well:

1. Jim Quinn, Endicott, NY, Phone: 607-786-0995 or 315-735-3846. Jim has a Soneraï II with an A-65 Continental. It has over 1200 hours on it now.
2. Fred Flynn, West Chester, PA, Phone: 610-873-9122. Fred has a Soneraï II.
3. Dave Wilcox, Gilbert, AZ, Phone: 602-231-5824. Dave has a Soneraï IILTS with a Continental A-80.
4. Larry West, Tum Tum, WA, Phone: 509-258-4024. Larry's airplane is a Soneraï IIL with a 2275 cc VW. Please feel free to call any of these guys. All we ask is that you call at reasonable hours, and again, no collect calls.

## SONERAÏ NEWS

→ For those of you who have your airplanes flying, please fill out the **Soneraï Survey** on page 7 of the Oct-Nov-Dec 1998 issue and mail to Dave Wilcox at the address on the survey. If we can get a large enough sample, the results will tell us how the real Soneraï's actually perform. Once the data is available, it will be published right here.

→ Ed Sterba has moved to Florida. And yes, he will continue to build propellers. His address and phone are:

Ed Sterba Aircraft Propellers  
513 68th St.  
Holmes Beach, FL 34217  
941-778-3103

→ News from **Great Plains Aircraft Supply**:

1. The engine assembly manual has been updated and is now available.

2. The new 1999-2000 catalog is ready.
3. They are now in the process of cleaning up and enlarging the plans to an 11" x 17" format. Steve would like to incorporate a number of assembly photos into the plans, and would like to borrow a set of "stretch" photos from any of you that have them, so they can be scanned in. If any of you are interested in helping out, please call Steve at 800-922-6507.
4. For those of you who don't want to build your engine, Steve is building engines, again. Give him a call for quote.
5. The drive extension is still being tested, now as a tractor drive. It has been tested as a pusher.

→ **Soneraï Newsletter** back issues are available in two forms. A 3-1/4" diskette which contains most of the significant newsletter articles published by Ed Sterba from 1987 through 1995 is available for a mere \$10.00. There are also hardcopy back issues for \$3.00 each. I have the last two issues from 1994, all of the issues from 1995, 1996, 1997, and 1998. If you want any of the above, send me a note requesting the ones you want and a check for the correct amount. The postage is included.

## JIM'S OSHKOSH ADVENTURE - PART 2

By Jim Hardy

The last issue dealt mainly with the trip up and experiences there in. This is supposed to deal with the week spent at Oshkosh and then the trip back. I do hope, at this point, that I can still remember the things that happened that I keep remembering on occasions that would be considered significant.

### The Week of Oshkosh

I arrived on Monday, the 27th, two days before the air show actually started. Again it took about two hours to get the bird tied down with all the questions and fascination. When you think about it, this was rather flattering. These people were not the general public. These were the people, like myself, that were considered part of the show. They had their own airplanes there! Anyway, with the bird tied down, I begged a ride to my home for the week.

For the third year now, we had been staying with the Todryk's who live in Oshkosh. They were found by luck through the Housing Hotline set up for the air show every year, for people like myself that decided to plan a little late. Very gracious people to the point of self sacrifice. The other residents of the week are becoming old friends as we have been seeing them



for three of the past four years. This makes for great conversation on the back deck in the evenings after the show. I was unable to go to the airport on Wednesday, since I had to get to Milwaukee to pick up my wife. I informed one of the fellows going on out that he could tell the neighboring airplane to feel free to uncover the canopy on my bird for display on this the first official day of the show. The Three fellows from Connecticut took it upon themselves to take care of this task. Great help! I just wish I could have seen this team, led by a nuclear sub. engineer trying to figure out just how to get the cover back on that evening! With best intentions, a very appreciated and effective, but backwards solution was reached. This again made the back deck conversations enjoyable for the evening.

By Thursday, I was getting smart. I had a pocket full of mints and a jug of water by my side to fight off the dry throat! Too much talking! I left the cowl off for a majority of the week. The people really seem to enjoy this. Lots of questions! I don't think there was a one that I hadn't asked myself at one time or another. My wife heard the stories so many times that she started being able to answer a few herself, when I wasn't available. One fellow told her he desperately wanted to buy the airplane cause he "really loves those Subaru engines!" Once informed, by a "girl", that it was a VW, he with red face in hand, disappeared into the masses. You can call it anything you like, if your money is good. Sold!

Friday I decided to give the bird a good preflight (condition inspection) to determine if I had an air worthy bird for the trip back. Starting at the tail, I noticed that in addition to the tail wheel push rod being bent, that the whole assembly was fairly loose. The nut holding the tail wheel castor was loose, and the nuts at both ends of the push rod were loose. Check part 43 and you'll see that one should not be using fiber lock nuts in a rotational situation. So that's what it means! Castle nuts coming up at the next condition inspection. Moving forward I found nothing significant until I reached the wheels. The people at EAA had cut nice grooves in the sod to help keep the rows straight. The groove was cut about 1 1/2 inches deep. My wheel pants were only about an inch off the ground on hard surface, so this actually pressed them into the dirt. No damage obvious but I would leave it alone until I moved the bird for departure.

Firewall forward, I found only a few things. No oil (Amzoil) had been burned off, and no seepage noted. When it got to the prop, I did notice a dusting material coming off each bolt in a scimitar pattern,

and the spinner was able to wobble! We have a loose prop! I guess the dryness in TX and the hours since I last torqued it has taken its toll. I decided Saturday would be the maintenance day.

Later Friday I had some good conversation with John Monnett, the designer of the Sonerai. Though he playfully beat me up over my pressure cowling, he agreed to stop by and look at it during the day on Saturday. That night at his annual hangar get together for his builders, he continued to abuse me over the pressure cowling. I guess he has me talked into building a box type cowling over my cylinders and heads. They are known to cool the heads better. And head cooling is really the only problem I am still fighting on this bird.

Saturday's work on the airplane took about half a day for 30 minutes of items. Again, not only were they interested in the airplane, but asking why I was having to do all the work. "Is this a problem?" I would tell them no, just maintenance. I found a few of the prop bolts back at about 5 ft-lbs, but no other abnormalities. I snugged them all to about 13 ft-lbs and called it good. The forward spinner bulkhead was cleaned up and I added a round of electrical tape to snug its fit to the spinner bowl. Since I would pass the 25 hour mark on the way home I went ahead and checked the valve clearances. Opening the valve covers I found everything spotless and in place. All clearances were normal, and no adjustment was needed. I entered a few things in the log books and put it all back together, considered ready for the trip home.

Sunday was spent pretty much roaming the show again. The only time at the Sonerai was spent merely again cleaning and looking over it closely to see if I had missed anything for the next mornings early departure.

Other events of a more personal nature happened but for the life of me, I can't remember just what day or time it was. Out of nowhere I had my EAA chapter (661) vice president, Brad Smith, show up to abuse me for a while. My Sonerai mentor, Formula "V" race pilot and friend Tom Walker was around daily to assist and field questions from the masses. Then a model airplane mentor, coach and friend from my Jr. High days in Chicago, showed up on the spot and good sparing and fun was to be had. One other event has been mentioned in the last issue, and that is the appearance of some fellow with a kit bag closely looking over and photographing my airplane. Through his Polish accent I learned that he writes for a Polish aviation magazine and would like to do an

article on my Sonerai. He requested some air to air photos be sent along with information about the airplane. In the next few weeks I hope to get the photo's done and get a pile of information out to him. Yes I'm flattered!

#### The Trip Home

Early Monday morning the 3rd of Aug. I had my wife drive me to the Oshkosh airport so that I could unload anything that I didn't need on the trip back. Heading south towards the Texas heat, if I was to make my goal of Shawnee OK. I knew I would have to leave early and light. At 0530 in the morning, you can drive anywhere you want around Whitman field, so we parked right in front of the plane! Basically I gave my wife every thing except, my fire extinguisher, tie down ropes, tool kit, and an extra quart of oil. Check the weather? Nope, go till you can't, stop till you can. This had to be the motto for the entire trip. Airplane untied, I pulled it out of the parking groove, and proceeded to preflight it like 800,000 people had been pawing over it for the last week. All in order I turned around and took a picture of the silhouette of my aircraft, tightly outlined by the 1.6 million feet (assuming everybody brought two each) that trampled the grass to a mere powdered dirt by the end of the week.

Leaving this time in the morning also cuts out all the pilot briefings and lines that come with the mass exodus. Not to mention the embarrassment of having a line of professional pilots watch this little white airplane cut a perfect zig zag course down a perfectly straight runway! I called the tower for clearance on my little hand held. "Experimental N72133, taxi to runway of your choice and call back for take off clearance." Going south, and wanting Marcia to see the departure, I taxied to 18R. "White experimental, 133, cleared for take off, come see us again!" "Experimental 133 rolling, good day fellows!" Left, right, left, 75 mph, up and out of here. Beautiful morning for flying.

Almost immediately I entered light rain on the climb out. I was still able to climb out to 2500 feet and feel comfortable with the visibility and cloud clearance. I changed frequencies to 122.75 to listen to anybody that may be heading the same way. Not this morning, just a few heading inbound to the fly in from the south east. I set a course for direct Shawnee and saw that I would be flying over Iowa City, Iowa at the two hour mark. This then, would be my first fuel stop. The rain continued for the biggest part of the leg. It seemed that every drop that ran up my canopy would proceed in perfect line to the back edge and then drip, or spray, directly down the back of my flight

suit! Refreshing!? Not having a wing man, also allowed the comfort of removing my David Clarks, and enjoying the freedom of motion, and freedom from brain crush! Arriving at Iowa City with out incident, I would be landing in the rain and on the runway with the highest terrain at the approach end. From base to final, I chose not to roll out, just added top rudder to convert the turn into a steep slip. This brought the glide slope to an angle to clear the nicest houses on the hill, and still keep the runway in sight over the nose of the Sonerai. Taxiing in I found the FBO that earned the honor of the highest fuel price I have ever seen! Is it arrogant to say I've seen a lot? \$2.25 per gallon! I know I'm only taking on 8 gallons, but I know what they are paying for the stuff! There ought to be a law!

With gold laced fuel in tank, I blasted off again in light rain and virga. Had to show a Cessna 441 my belly to get his attention on the initial climb out. Always looking for a reason to rearrange the blue side. Who says it always has to be up? This leg, other than pronounced head winds was a smooth uneventful flight. It looked like my two hour window at this point would take me to the Lexington MO. area. Two hours and twenty minutes later I was circling a field that I had picked out, and the GPS had informed me had Avgas. Runway looked nice and long with hard surface. In hind sight, even a 100 foot long runway would look long if it was only one foot wide! I must be getting good at this little plane, I got in on and stopped in about 1200 feet, and yes, on the runway. My turn radius did require a small excursion to the tall grass to get back to the pumps, wherever they were. After walking through the "offices" of the airport, I finally found an individual that seemed to be bothered by my need of fuel service. After waiting for him, for about ten minutes to tell his girlfriend good bye, he imparted some fuel to me, informing me that it was predominantly for the sky diving operations. Judging from the pumps I wasn't sure if the fuel was not the cause for the urge of those people to depart from a flying airplane!

I used most of the 2600 ft x 20 ft runway on my departure to the south west and headed again for Shawnee. In dead air and a leaned engine I would be able to make it in one leg. Not having it that way, I again started planning my next stop. In this area I am quite familiar with the center frequencies and enjoyed listening to them. Though, I found, and aimed at an occasional shower, I was entertained by the radar drivers with their pressurized turbo jets, avoiding by at least a state, the same showers that I was using as a free bug wash. I think they should be required to fly general aviation for at least 20 years



before they are let loose on jets. You learn in a hurry what is, and is not worth running from. (What soap box?) Bartlesville Oklahoma was about an hour out and designated the "top off" airport.

The cool air from the showers made the climb out fairly comfortable as I headed towards Shawnee. Why Shawnee? Well, a 75 square foot wing airplane, operating near gross with a little 1600 cc VW engine, just can't take the afternoon heat of the south west. Gutless is the feeling and word. I figured I could make it to Shawnee before the temps got out of the lower 90's. I'm not taking off into the 98 degrees and staying in ground effect all the way home! Landed on the big wide runway at Shawnee and tied it down for the night. After about four hours of riding horses, eating and the like, I realized it was still in the 80's. Ran to the airplane, jerked the ropes out of the holes in the wings, and headed home.

The final leg was spent at 4500 feet. This gave temps in the upper seventies at altitude. Airplane and engine still running flawlessly. You spend so much time, carefully building the aircraft so that nothing will ever surprise you, and then you are surprised when nothing goes wrong!? Again with out event, I started my decent into that dreaded Texas heat. I aimed at the two households that had really been monitoring my progress over the week. After giving the first a fitting salute, I noticed that my elbows were hot against the fuselage fabric, and the airplane was not enthused about climbing. It was hot down here! So I left the airplane at the present pattern altitude and headed towards the house. Nice landing! You just have to love that grass on such a squirrely little airplane. Taxied back to the hanger as my wing ship for the trip to Oshkosh, buzzed down the runway.

Shutting the engine down at the hanger brought several things to mind. Would I ever do it again in this airplane? Never! Maybe if we had a flight of Sonera's, but not alone. I was beat! Next, this "experimental" aircraft had really proven itself in all but icing conditions, and came out with out a scratch! I climbed out and looked back at the airplane. I no longer see an experiment in aviation, but a dependable old friend. Does 65 hours make it "old?" Though it is still an airplane, I will always treat it with the respect that one should, I now realize that we have a good little airplane here. Lastly, I just had to say out loud, "Randy, it can be done!" Sorry guys, this is an inside joke at the Chapter 661 in Denton TX.



Photo 1 - Front Ribs to Main Spar

## ASSEMBLING THE RIBS TO THE SPARS

*This is the third in the "How-to" series on building the Sonera wings.*

Having completed the fabrication of all of the wing's structural pieces, it's now time to start assembling them into something that will begin to look like a wing. It will help at this point to have two saw horses for each of your wing panels that are tall enough to put the wings at a comfortable working height. This will save a lot of wear and tear on the lower back. So, let's get started.

### Step One: Match Drilling the Ribs

The first thing you need to do is make up 22 complete rib sets. This is done by aligning each nose rib with a corresponding main rib and then drilling, or punching, two holes in the spar attaching flanges. Start out with one of the airfoil layout drawings that we made in the first of this series, and

lay it flat on a table. Next, take a nose rib and a main rib, and align them on top of the drawing, and clamp them together. A small spring clamp works well. Then, drill or punch two 1/8" holes through the flanges, simultaneously. Of course, you'll need to deburr the holes. Finally, match mark each rib so that you don't get the parts mixed up later on. I'd suggest using the rib location ("1R", "1L", "2R", "2L", etc.). Use a "Sharpie" or felt-tip pen. Also, drill or punch a 1/8" hole in each of the main rib rear spar attachment flanges.

#### Step Two: Spar Layout

Using the dimensions shown on drawing S-19, layout the locations of each of the ribs on the front face of the main spars and the rear spars. Again, use a sharp felt-tip pen. The most critical location is the 7th rib from the root end. This is the rib where the two wing skins overlap.

#### Step Three: Nose Ribs to Main Spar

Set the main spar on a bench, or a pair of saw horses, with the front face of the spar facing up. Place each of the nose ribs, except ribs 1 and 2, on the spar and align them to the layout line done in Step Two. Make sure the top and bottom flanges of the rib are flush with the top and bottom flanges of the spar. Clamp each rib in place and, using the holes drilled in Step One as a guide, drill 1/8" holes in the spar channel. It will help to use a 12" long, 1/8" bit, or a small angle drill attachment with a #30 bit. Use clecos to hold each rib in place. For ribs 1 and 2, it will be necessary to trim off the flange to make the rib 1/8" shorter to accommodate the 1/8" thick spar end plate. These ribs will be attached using the reinforcements that will be made in Step Six.

#### Step Four: Main Ribs to Main Spar

Simply cleco the main ribs to the main spar using the clecos holding the nose ribs in place. Rib alignment will be automatic. For ribs 1 and 2, trim the mounting flange back 5/8" to suit the thickness of the main spar assembly. Again, the reinforcements from Step Six will be used to secure these ribs to the spar. (The plans say to reform the flange, but that is not necessary.) You will probably find it necessary to trim the ribs to clear the upper cap strip 1-1/4" x 1-1/4" angles.

#### Step Five: Main Rib to Rear Spar

Position and clamp the main ribs to the rear spar using the layout lines on the spar to properly position each of the ribs. Make sure the top flange of each rib aligns with the top flange of the rear spar. Use the holes in the rib mounting flange as a guide, and drill the 1/8" holes through the rear spar web. Cleco

everything together. Hopefully, you didn't predrill the five rib location holes in the rear cap strips as shown in the plans. If you did, don't panic. You'll find that the rib mounting flange is not long enough to allow for a proper hole edge distance. To fix it, cut off the flange and make a small angle bracket with a longer flange and pop rivet it to the rib. Now that all the ribs except 1 and 2 have been fitted, go ahead and pop rivet the assembly together.

#### Step Six: Make the Rib Attachment Reinforcements

Cut out and form the 1/2" flange on all Parts #1, #2, and #3 (0.025" 2024-T3 Alclad), and drill the #30 holes in all of the parts as shown on drawing S-16. It will be necessary to trim one of Part #1 to clear the main spar angle, all of Parts #2 to clear the main spar angle and cap strips, and three of Parts #3 to clear the front main spar end plates. The trimming of Parts #2 should be done when each part is fitted to its mating rib so that the depth of the cutout can be determined. Next, cut out all Angles #1A, #2A, and #3A. (6061-T6.) Drill the #30 holes, as shown, in six of the Angles #1A, and all of the Angles #2A and #3A. These are shown on drawing S-18. Note that the three of the Angles #1A have the leg of the angle on the LH side, while all of the others are on the RH side.

#### Step Seven: Installing the Reinforcements

First of all, all of the parts and angles that were made in the last step are used to reinforce the connection between the nose and main ribs and the main spar. All of these parts are mounted on the side of the rib opposite the rib flange. (That's the RH side of the rib, since all of the flanges on the "S"-wing are on the LH side.)

Let's start with the installation of ribs 1 and 2. First, it will be necessary to locate and install Angles #1A and #2A at the rib location layout lines. (You'll need three #1A's and a #2A on the RH wing, and four #1A's on the LH wing.) Use the four #30 holes already drilled in the angles as a guide for drilling the spar plates. Cleco in place and then drill the holes for the 5/32" spar rivets with a #21 drill using the holes in the spar as a guide. Next, align Parts #1 and #2 to the ribs and drill all of the #30 holes in the ribs using the Parts #1 and #2 as templates. Cleco the parts in place, and locate the ribs in position, verifying that they are in line with the other ribs already installed. Clamp the ribs to the Angles #1A and #2A and drill the #30 holes in the angles. Disassemble all of the parts, deburr, prep and prime, and rivet together. Finally, drill and attach the rear flanges to the rear spar.





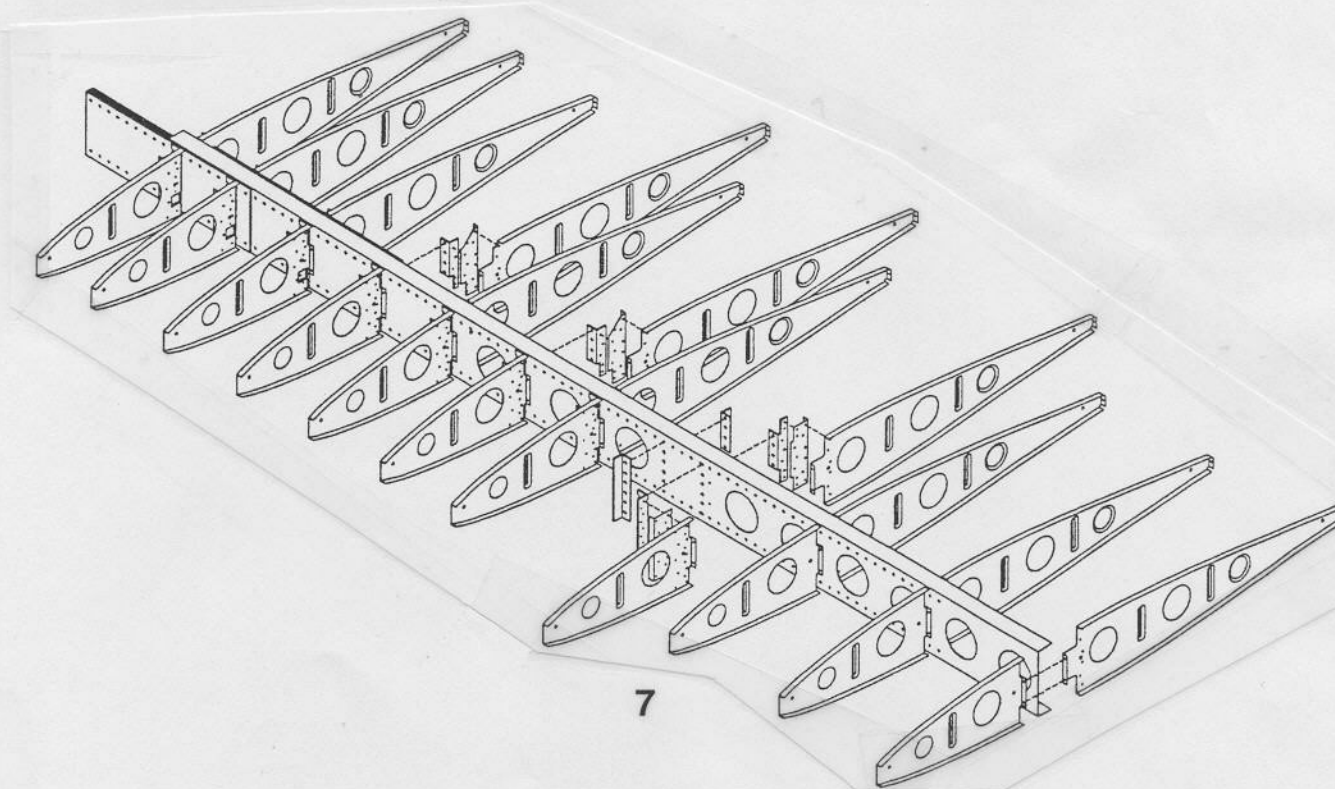
**Photo 2 - Main Ribs to Main Spar**

For the remainder of the ribs, the process is similar. First, locate and fit Parts #2 and #3 to the ribs, and drill all of the #30 holes in the ribs. Cleco the parts in place after deburring. Next, locate and fit Angles #1A and #2A in place and clamp in place. Using the four #30 holes already in #2A as a guide, drill the #30 holes in the spar web and Angle #1A, and cleco in place. Then, drill the #21 spar rivet holes in #1A. Finally, drill all of the #30 holes at the Angle/Rib/Part interface. Again, disassemble, deburr, prep and prime, and rivet together.

Note that on the LH wing it will necessary to file small scallops in the various pieces to clear the already installed spar rivets. Also, if you are planning to install the wing fold mechanism, be sure that all of the appropriate holes are cut in the ribs and reinforcement parts to clear the fold tube and the fuselage support tube.

Photo 1 shows the reinforcements installed on the nose ribs of my original nine rib "A" wing. The S-wing should look the same, except there won't be the angle stiffeners between the ribs except between ribs 7 and 8. Photo 2 shows the same thing on the main rib attachment. (Don't be confused by the fact that the rib flanges point to the right. The "A"-wing has LH and RH ribs. The attachment of the reinforcements is the same.)

Next time, we'll build the wing fixture and put on the skins.



# WANT ADS

*These Ads are provided as a service to you, the subscriber, and are free of charge. I only ask to be informed when the Ad is no longer valid, and needs to be removed. Thanks.*

For Sale - Sonerai I, 4 Hrs T.T., less Engine. \$3,900, Jim Jaeger, Box 438, Kewaskum, WI 53040, (414)626-2611 (3/97)

Air Schank Going Out Of Business Sale - New and used Sonerai parts, Engine parts, Tools and hardware, New and used instruments. Call or write for 5 page list. Bob Schank, 35 Clarence St., Belleville, MI 48111, (734)697-7057 after 5 pm. (3/98)

For Sale - 1600 VW engine, 0 TT. Disassembled - all new parts. Complete engine. Mexico universal AS41 case, Case inserts. Case machined for Great Plains Force One Prop Hub. Has Force One Hub Parts. Dual Port Heads. Forged counter weight balanced crankshaft. Balanced pistons and rods. Pauter performance cam. Horz oil cooler and adapter plate. \$1900 Bob Schank, (734)697-7057 after 5pm (3/98)

For Sale- New Bogie tailwheel \$10.50, Used Bogie tailwheel and Monnett tailwheel caster with 2-5 1/2" springs (needs the chains) \$25.00, New unmachined Monnett "Electro X" casting \$100.00, Used Monnett Sonerai I fuel tank (needs cleaning) \$55.00, Used pair of axles, 3/4" shaft, 5 3/4" long \$4.00, Used fuel shutoff valve \$5.00, Surplus fuel shutoff valve \$6.50, Used set of rudder pedals asm. with toe brakes (see Sonerai I drawing page 11 and 15c) \$20.00, Used Sonerai I torque tube asm. (see drawing page 5) \$40.00, Used two rudder cables with MS667-3 clevis ends 10'-9 3/4" long \$7.00 for both, Used two aileron P-P rods, one is 13 5/8", the other is 14 1/4", both with AN481-4P on one end and REB-3N on other end \$6.00 each, New (4) 87.5 cylinders and pistons \$75.00. You pay the shipping. Bob Schank (734)697-7057 (3/98)

Wanted -Sonerai Super Vee Cowling. Mike Smith (601)324-2801 Daytime (4/97)

TAPER PIN REAMERS FOR RENT - Brown & Sharp #3 and #5 for AN386-3 and AN386-5 taper pins. \$1.00 per day for both reamers, \$150 deposit. David E. Wilcox, 517 E. Saratoga St., Gilbert, AZ 85296, (602)231-5824 (1/98)

For Sale - 1992 Sonerai IIL, 300TT, dual ignition, electric start, new tires, brakes; has S-mod, basic VFR instruments. Not a show plane, but well built and flies great. \$6000.00 firm. Also have new in the box Bendix/King KX99, Garmin GPS-90, intercom. Dennis Barnette, (601)256-9767 or e-mail at dennis1@mail.tsixroads.com (3/97)

Wanted: Sonerai I, Prefer flying, but call on any type. Jack Spring, 248 Jack Spring Ln.,

Kentwood, LA 70444, Home (504)229-8297, Work (504)344-1533. (2/98)

Wanted: Sonerai IIL completed and flying, prefer something built in the 1990's. Contact Ed Collins, (530)872-4400, or write 261 Chandler Dr., Paradise, CA 95969, or email BEIDMAN@AOL.com (1/98)

For Sale: Sonerai II kit. Welded airframe with tail feathers, flight controls, and gear. 1835 cc VW with Electro-X mount (10 amp alternator), 4016 Slick Magneto, Posa carb, propeller, spars finished, Super-Vee cowlings, fuel tank, most instruments. \$2750.00 OBO Zeke Zechini, (703)707-1949(work), (703)830-1046(home), or mark.zechini@lmco.com (1/98)

For Sale: Complete Sonerai II kit. Fuselage and tail welded, some instruments, all parts to complete except engine and paint. \$3800. Ed Torbett, (815)895-3888 (3/97)

Wanted: Any Sonerai parts to help add to Sonerai/KR-1 Museum, tax deductible. Call or write: Tom Hall, 658 S. Abbey Ave., Springfield, MO 65803, (417)862-3837 (1/98)

For Sale: Sonerai IIL w/ 75 hp Lycoming O-145-C3, Magnum Ivo-Prop, ground adjustable, 12 gal wing tanks, S-wing, new 3/4" Grove landing gear, new canopy, improved cowlings, 60 hrs TT. Flies great at 3.5 to 4 gph! \$9500 OBO. Call Craig Merrill, (803)521-4577 (2/98)

Wanted: Engine/project for Sonerai II, prefer 2180 w/ dual ignition but will consider all. Jeff Newlin, 12173 E. 1700th Ave, Hutsonville, IL 62433, (618)563-4456 before 10 PM central. (1/98)

QUALITY RIBS L.L.C. SELLS COMPLETED RIBS FOR SONERAI AIRCRAFT. Contact Great Plains Aircraft or Quality Ribs L.L.C. direct at (602) 892-7189 for a brochure on the company. (2/98)

For Sale: Complete VW intake system, professionally built with a Rajay turbocharger, heads, and Posa carb. \$600. David Fitzjurs, (501)963-6037 after 5 pm CST. (2/98)

For Sale: Sonerai IILT on gear (easily converted to IIL), Trim system, controls & rudder cables in, Fuel tank, pump, and all plumbing included. Built per Monnett to stay light. Project 95% complete. Bubble canopy needed. Panel done, instruments in. Lots of hardware. Spars done. 1 wing 75% finished on steel jig. Junker engine on fuse for cowlings fitting. New pickled 1914 VW with all plumbing except carb. New Sterba prop. This is a very nice and complete project.

Too much to list. Will consider parting out. Bob Wood - Sheboygan, WI, (920)803-9205 (work), (920)803-9206 (fax), (920)452-4095 (home) (2/98)

SPECIALTY WELDING CAN SUPPLY YOUR COMPLETELY WELDED SONERAI FUSELAGE AND OTHER WELDED COMPONENTS. Contact Greg Klemp at Specialty Welding, W6461 County YY, Neshkoro, WI 54960, (920)293-8089 or (920)293-8007 (Fax) (2/98)

For Sale-Two Sonerai Projects, 1850 cc VW, four 150 hp inverted Tiger inlines, new Sterba Sonerai prop, stock Subaru EA-81, Sonerai cowlings, canopies, etc., Hatz biplane wings, center section, and fuel tank, Christen Eagle ailerons. Will happily trade or negotiate within sane boundaries. Also have 2 1/2 runway acres on Arizona Airpark, M. Lee Wachs (707)463-0467 (3/98)

For Sale: Sonerai I - Very nice single place, five minute wing fold design, \$3000, one hour south of Oshkosh, (414)626-8726 or (920)533-4379 (4/98)

Wanted: Sonerai IIL, IILS, IILT, or IILTS, condition not too important. Call Joe, (352)628-1027 (4/98)

For Sale: Sonerai IIL, 80% complete, fuselage, control surfaces, and canopy bow welded, flush-riveted S-wings w/ wing walk, cowlings fitted, all VFR instruments, zero-time 1915 cc Great Plains VW engine w/ oil cooler and Elison carb, 5/8" gear w/ hyd. brakes & wheel pants, seats & cushions, I-Com intercom, ELT, fuel tank, BRS chute ordered, flight manual and construction manual, excellent workmanship, Must sell, \$10,000 OBO, call Jerry Kennedy, (405) 733-4932 (4/98)

For Sale: Sonerai IILT, 95% done, needs covering, all parts to finish, 1835 cc reman. VW, prop, instruments and flight controls installed. \$5000 (541)564-8153 (4/98)

Wanted to Buy: Set of wings for Sonerai II, and Sonerai II mid-wing fuselage. Call Tom Hall, 658 S. Abbey Ave., Springfield, MO 65803, (417)862-3837 (4/98)

For Sale: Sonerai IIL, no engine or wheel pants, modified x-casting. George Miller, (414)878-1982 (1/99)

For Sale: 1835 VW, removed from KR-2, 40 hrs TT, Diehl case w/ starter, single Slick mag, HAPI Supercarb, HAPI prop hub, spinner, Rayjay Turbocharger, American 52x48 prop, engine stand, \$1000 OBO, Harvey Salevski, (414)543-4132 mornings (1/99)