



The Newsletter of Monnett Experimental Aircraft, Inc.

Hi Fred & Marion - see you at E.A.A.

July, August 1983

Dear Annual Oshkoshers!

The Big Convention is around the corner and here's all the scoop!

E.A.A. Oshkosh 1983 July 30 - August 6

Our facility will be open everyday from 8 am to 5 pm. Please note this is a change from last year. We will not be open in the evening but only til 5 pm.

Our Shuttle Vans will be running daily to bring people over from the Fly-In Site. See the map provided in this Monink for location of the Shuttle. It is near the North Forty Registration Area and will be marked by a Green & White Wind Sock and Logo Flag. One of our vans is silver & green and one is green & white. The shuttle will run every half hour with the first one leaving from the Fly-In Site at 8 am. The last one will leave our building at 5 pm to return to the Fly-In Site. We use the same road that the buses use to take people to the transient aircraft and camping area. It is inside the field as you can see on the map. If you miss our shuttle or don't want to wait the 1/2 hour in between you can take the buses and walk from the runway into our building very easily. It is behind the first set of green hangers just past the firestation. We realize things were a little hectic last year and it took us a few days to get our shuttle running smoothly. But this year we have got it all down pat! Of course it is easy to drive your own vehicle over too!! Just get out to 44, turn right, to 20th Ave., turn right, to M.E.A.

We will have a **booth**, C-12, in the South Exhibit Building. General information and mini brochures will be available there. But we'll be selling merchandise and talking with builders. etc. from our building. I will probably be in the booth most of the time so do stop by and say hi!!

Our annual **Builder's Party and Open House** will be Saturday, July 30th, 8 pm, in our Hanger/Showroom. Any of you who have a set of Sonerai, Monera, or Moni plans are invited to join us for a few drinks, a couple of snacks, and lots of comradery and converstaion!

Bringing your **Airplane to Oshkosh** this year? We hope so! We have a little momento for every one who brings their Sonerai, Monerai, or Moni to the show. For the past couple of years, I have had a very difficult time catching everyone and getting all the names and N numbers straight. So this year, I'm asking **you to let me know** if you bring your plane. There will be a place at the party to sign your name, N number, & plans number. If you can't make the party, just come to the booth anytime during the rest of the week. Along these same lines, we would like to know how many rows to save on the flight line for our builders. Call Carol or Livia if you know for sure that you are coming and this will give us an idea of how much space to save. The Sonerai Line was quite impressive last year!! Any Moni

or Monerai builder who would like to store their trailer along the side of our building (inside the airport fence) is welcome to do so. After you set up on the flight line, you can bring it on over and we'll be happy to let you park it here. I know that sometimes it can be a hassle as to where to put them at the show. We do have to add however there will be no camping in trailers around our building or in our parking lot.

John's Forums will be held at our building again this year. There will be one on Sunday, Monday, and Wednesday at 9 am. These will be comprehensive forums on all our aircraft and there will be time for questions afterwards.

Our regular mail and phone orders will be delayed from July 30 to August 6 during the Fly-In. Shipping and mailing will not be done then but will resume August 8th. All of our staff will be concentrating on the walk-in business for that week. If you plan on coming to Oshkosh and picking up a large order, it would help to order ahead and Pat will be sure to have it ready. This would really help us out and result in less waiting for you.

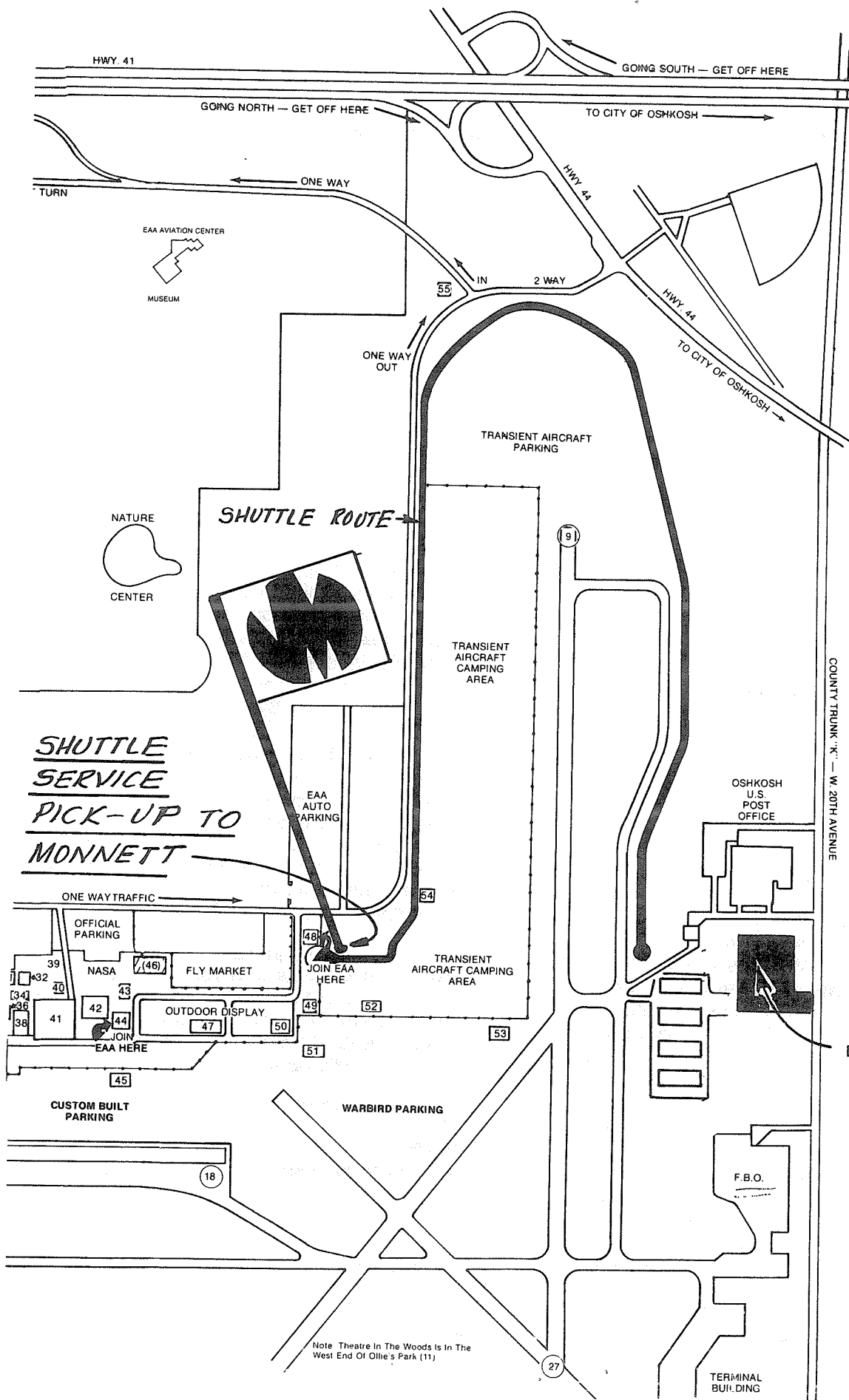
One last word about the Fly-In. We always get such nice letters about our friendly, courteous staff and our hospitality. We all work very hard and appreciate these comments. John and I are proud of our entire staff!! But we also always get one letter about our rudeness, curt comments or some such thing. Just please remember that this may all look like great fun for us - but we all get very tired and worn out also. It is a grueling week, with long hours. A lot goes on behind the scenes to make things run smoothly. So please be patient and understanding if someone seems short and rushed. We all try our very best!!

Some of you have been asking for flight reports and articles about the airplanes. Here is a list of the major articles appearing in the magazines of late. I have grouped them according to topic, then magazine. If you are unable to find a friend who subscribes, check your local library, or our waiting area in the office at M.E.A.!

MAJOR ARTICLES

SONERAI	
Sport Aviation	Sept 1980
Cover & Low Wing Article on Sonerai II by Jack Cox	March 1983
Sonerai II Tri Gear by Jack Cox	April 1983
Sonerai Article by Bruce Thompson	
A.O.P.A. Pilot	Dec. 1980
Popular Mechanics	Jan. 1981
Homebuilt Aircraft	Sept. 1982

Continued on page 3



monnett experimental
 aircraft, inc.

895 w. 20th ave.

Major Articles cont'd from pg. 1

Ray Macke Building a Sonerai II by Robert Hegge	Oct. 1982
Sonerai Cover & Fly-In Article by Dave Gustafson	July 1983
Sonerai IIL Tri Gear Cover & Article by Dave Gustafson.	
Also follow up on Ray Macke's Sonerai II.	
Air Progress	May 1983
Sonerai Tri Gear by Dave Gustafson	
MONERAI	
Sport Aviation	July 1980
Monerai Progress Report by Greg Erikson	
Soaring	Aug. 1979
George Moffat Flight Report	Feb. 1980
George Moffat Flight Report Follow Up	Sept. 1982
Article by Jim McCulloch on Flying A Monerai.	
Homebuilt Aircraft	Jan. 1981
Monerai Construction	Mar. 1981
Monerai Construction	May 1981
Monerai Construction	Dec. 1982
Popular Science	Monerai Cover & Article
MONI	
Sport Aviation	Sept. 1981
Moni by Jack Cox	
Sportsman Pilot	Spring 1981
Moni by Jack Cox	
Air Progress	Dec. 1981
Moni Article & Photos	Nov. 1982
Moni Article by Pete Lert	
Private Pilot	Jan. 1982
Moni Cover & Article by David Lewis	Oct. 1982
Moni Flight Report by LeRoy Cook	
Popular Science	Feb. 1982
Moni Article	
A.O.P.A. Pilot	Aug. 1982
Moni Cover & Article by Ed Tripp	
Homebuilt Aircraft	Dec. 1981
Moni Cover & Article	Feb. 1983
Moni Construction by Don Dwiggins	Mar. 1983
Moni Construction by Don Dwiggins	Apr. 1983
Moni Construction by Don Dwiggins	May 1983
Moni Construction by Don Dwiggins	
GENERAL ARTICLES ON JOHN MONNETT AND MONNETT EXPERIMENTAL AIRCRAFT, INC.	
Aviation Review by Air Progress	Spring 1983
Profile in Achievement by Dave Gustafson	
Flying	Mar. 1983
Do-It-Yourself Dynamo by Nigel Moll	

M.E.A. Fly-In Brat Fry ---- A Success!!!

Our M.E.A. Fly-In last Saturday, June 25, was a huge success. The following builders brought their airplanes:

Sean Sweeney & Dan Krugar came the longest distance with their Monerai #111. They trailered here from Nevada!

Walt Warning from here in WI had the only Moni. #71. His is getting close to flying, only waiting for his spark plugs!!

Glen Eisenbrand, SII, flew in from Ft. Atkinson, WI

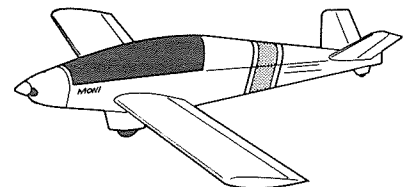
Ed Sterba, and his wife, SII #461, flew in from IL along with three others from IL; Jim Wendal & Dave Schatz SII #768; Bob and Bobby O'Day SII #298; Jim Pichiolino SII #291.

Greg and Carol Shonk flew the longest distance. They came up from MO for the weekend, flying their SIIL #944 here and back. (Now that's true love!)

Lyle Roberts SIIL #764 did a fly-by for us!! Lyle flew here from Waupaca, WI, could transmit on his radio but not receive so the tower redlighted him. He went back to Waupaca. His wife was here so she went back, picked him up and they drove over once again. But we credited him with a fly-by and a participant anyway!

Many builders came even tho they couldn't fly in. We served over 200 people lunch so it was a good turn out. We even made it into the airshow on Sat. for the Ultralight Fly-In. John flew the Moni and Chuck Andrews flew a really nice routine in the Sonerai Tri-Gear. Thanks Chuck! (What is this I hear about the Monex flying again in the Lovers, Baker, Falk 500 Race during Oshkosh? Here I thought I had heard John say it would be a museum piece and now since Chuck was here again - low and behold they are working on it for Oshkosh!) Watch for Chuck in the race if all goes well.

moni



Tri-Gear Moni Flies!! That's about all we can say for now. John has flown it a couple of times and a flight report will follow later. He was satisfied with its handling characteristics but the jury is still out on the performance figures (awaiting installation of wheel pants and fairings.) Look for it at the Fly-In.

First Flights

Bob Makieu #93
23261 Harmon
St. Claire Shores, MI 48080

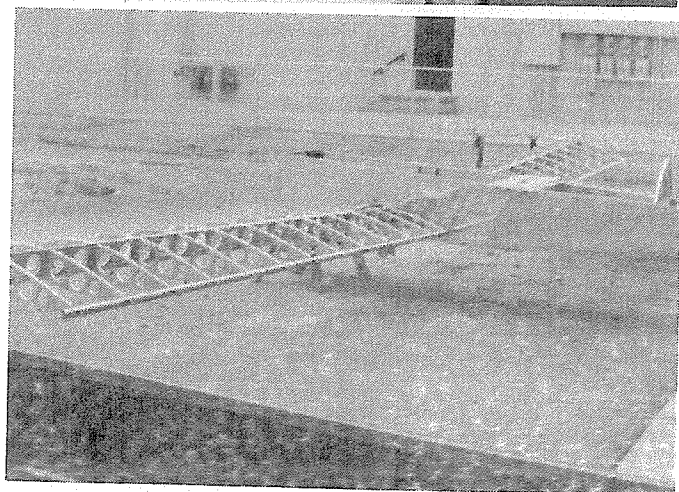
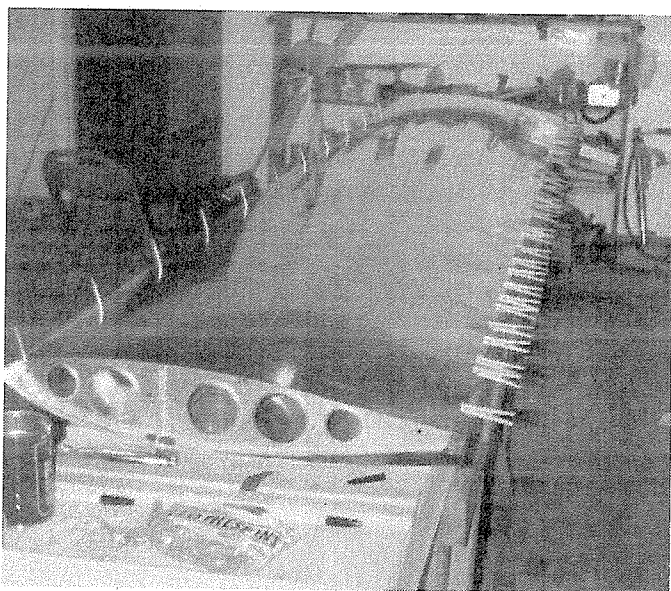
First flight was May 28, 1983 in 20 mile an hour winds.
Bob now has 60 hours on his Moni!!!

Gil Houston #64
8 Vista Gardens Trail Apt.204
Vero Beach, FL 32961

First flight was June 28, 1983. Kit was shipped
6/11/83 - Just a year to build!!!

News From Builders

Ed Woynowskie #113
640 S. Terrace Drive
Grand Junction, CO 81503

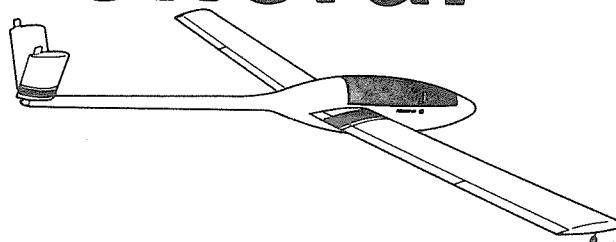


Construction photos. Note the clecos on the trailing edge of the wing - Ed calls them "Mexican Clecos".

Dan Matthews #218
43 Thorncliffe Park Apt. 704
Toronto, Ontario
Canada M4H 1J4

Dan writes with his kit order: "I hope that I will be able to enjoy this aircraft at the earliest possible date but will make no promises to myself about the completion date because I have never attempted such an undertaking before. Perhaps many of your purchasers are in the same boat as I am....my license has expired (due to high costs) but in the past, July of 1979, I became Canada's first deaf private pilot and I believe the first deaf, monocular visioned pilot in the world....."

monerai

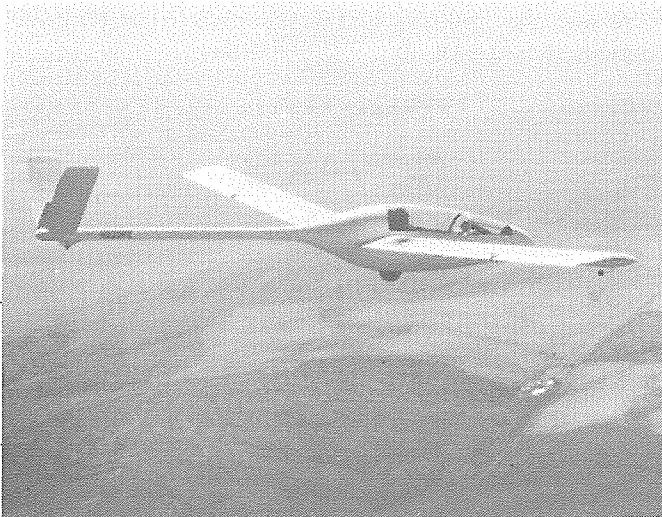


The weekend after Oshkosh, August 12 - 14, John and I will be at the S.S.A. Homebuilder's Workshop at the Mid-Atlantic Soaring Center in Fairfield, PA. He will be bringing either a Monerai or a Moni. Anyone building a Monerai or Moni is encouraged to bring their project - flying or under-construction! Free tiedown space will be provided but bring your own ropes. We are bringing the family with us and hope to do a little sight seeing after the workshop. Certainly lots to see out there I hear. John may also go to the Western Division Workshop in Tehachapi, CA. Sept. 3 - 5. He would not be bringing an airplane to this one but taking an airliner out. So we will be looking for some builders to bring their projects to this one for sure.

Several happy Monerai Flyers have suggested we need to send in some flight reports on the Monerai. (As Peter Graven says under First Flights) It means a lot more to hear this kind of information coming from a builder than a kit manufacturer. Of course, we will say glowing things about our airplanes. Most publications feel this way about commercial enterprises. So we need **you** all to write some things. Write an article or letter to the Editor and send it to Soaring. The new editor is Bob Said, SOARING, P.O. Box 66071, Los Angeles, CA 90066. If you feel you just can't do an article, send a short flight report or summary of flight characteristics to me. I'll compile them in some sort of article and send it in. I have a good start with many of the letters sent to us already. I have used them in my Monink. So let's get our pens and pencils ready and flood the mailbox!!

First Flights

Peter Graven #228
14905 S.E. 46th Pl.
Bellevue, WA 98006



First Flight was May 22, 1983



Peter writes: "See satisfaction on the face in the post flight photo. All mods are in - ship is very responsive but not overcontrolling. Well balanced controls and a real delight to fly. The 6th flight was 2.3 hours in both weak and strong thermals up to 800 fpm - climbs fine in both. Flaps seem very different from anything in power plane and there is still considerable disorder in the cockpit in landing. Am sure this will cure itself as soon as I get comfortable with slowing it down enough to take advantage of the flaps.

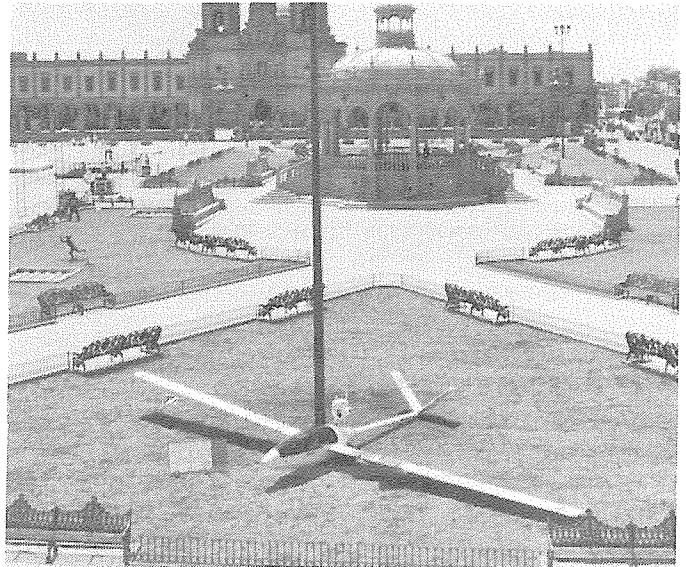
I still think you should get another article in SOARING. The originals with un-modified pitch have done all of us a disservice. With the mods in it's really fun to fly.

After several assemblies with the wing root plates I'm about to conclude they make it much easier. Just put the fuselage pins in first and it makes line-up and insertion of

the main spar pins a lot easier....

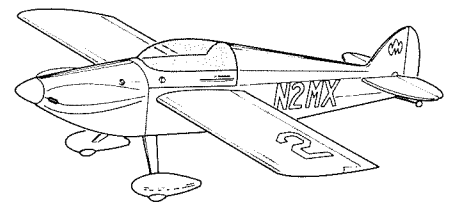
News From Builders

Jose Leon #117
Arcangelo Corelli 4865
Fracc. Prados De Guadalope
Guadalajara Jalisco
Mexico



Picture shows Jose's Monerai on display in a small town square near Guadalajara.

sonerai

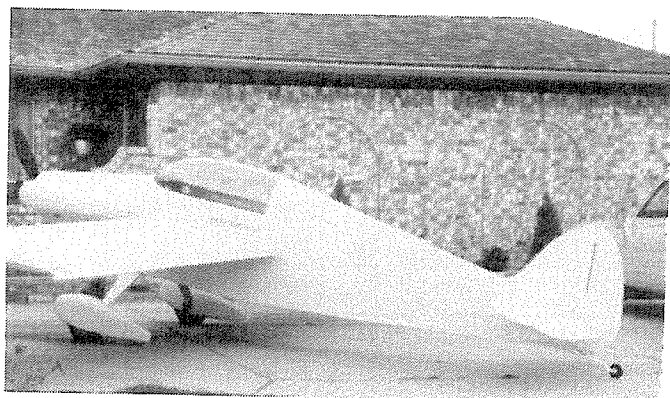


Sonerai Tri-Gear plans are completed, printed, and even mailed out. The conversion kits on order have all gone out too. This seems to be a popular option!

Our 500 x 5 ABS Wheel Pants will be temporarily out of stock for awhile. We hope to offer them again in the future but for now if you need wheel pants the fiberglass ones will be the way to go. These are still available. (As are all other sizes of ABS Wheel Pants.) It was necessary to do some re-tooling and change the design in an effort to improve our 500 x 5 ABS Pants. We are sorry for this inconvenience.

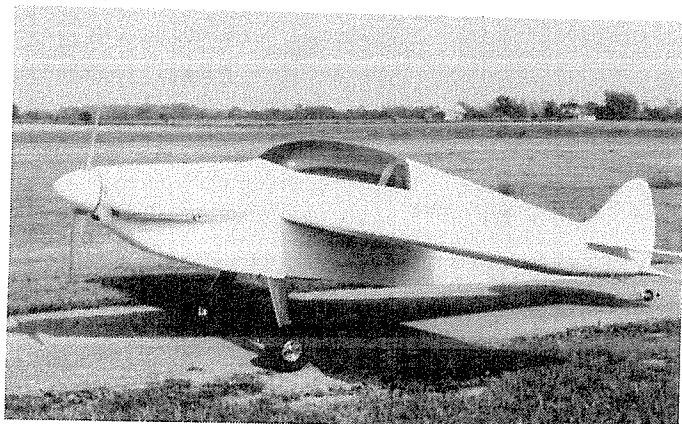
News From Builders

Jim Wells SII #275
3706 Ledgestone Drive
Houston, TX 77059



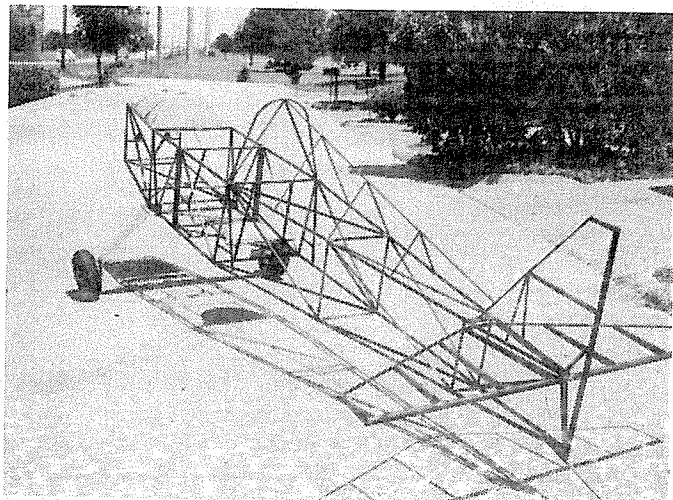
Getting ready to convert his Sonerai to a Tricycle Gear.

Dave Geiling SII #248
140 Brookside Ct.
Franklin, IN 46131



Ready for final inspection!

Larry Bradshaw SIIL #771
2306 N. Shiloh
Garland, TX 75042



Larry writes: ...“I want to take this opportunity to do two things. First to thank you all for the continuing help and support as I work toward that glorious day of first flight in a Sonerai III. Second, to renew my subscription to your newsletter which is also a valuable asset to those building any of your designs. ...As you can see in my photo, I now have the fuselage on gear and complete except for controls which are in process now. Construction during the winter was slow but now that warm weather has returned progress should pick up.....”

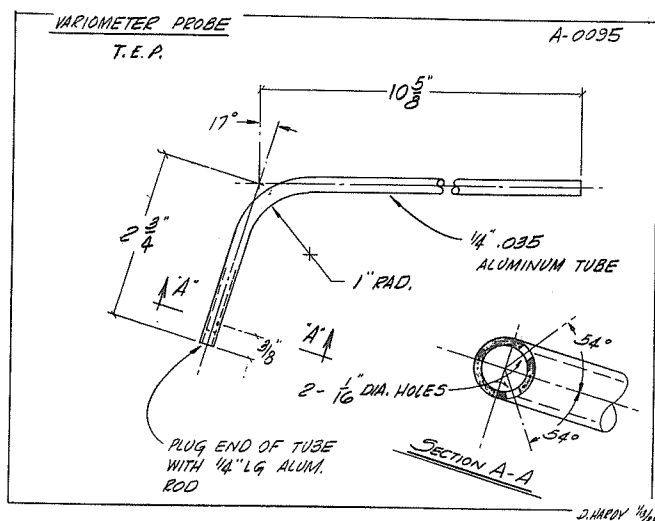
NOVAK'S NICK NACKS

(Title this month by Keith Brown)

MONI

Riveting Sequence - It is much easier to rivet bracket #6 in place on the left fuselage side **before** the diagonal tubes (#11 & #12) are permanently riveted into position at station #2. The reason for this being, that if the diagonal tubes are installed first there just isn't much room for the rivet gun when installing bracket #6.

Total Energy Probe - If you're going to be installing a variometer in your plane someday, you'll also need to install the necessary plumbing and a total energy probe. The plumbing and hook up will depend on the particular instrument and installation instructions are normally included with the instrument.



With the basic vario there are two fittings on the back of the instrument. One fitting attaches to the pressure line that runs to the T.E.P., and the other fitting attaches to the line from the air tight flask. The flask acts like an accumulator or a shock absorber for the system. The T.E.P. can be purchased or one can be made from 6061T6 tubing as shown in the drawing. The T.E.P. is just pressed in to the aluminum block in the same manner as the pitot tube.

Be Careful - when drilling the top longeron after the

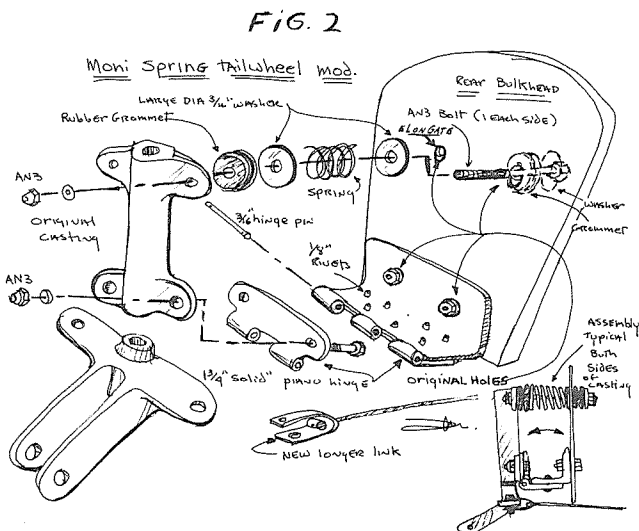
pitot/static system has been installed. It would be easy to accidentally drill into the vinyl tubes especially when trying to fit the turtledeck in place. If it happens, it will probably result in erroneous airspeed or altimeter indications. It may be to your advantage to install the vinyl tubes after the turtledeck skin has been fitted and drilled.

Spring Mounted Tailwheel - Many of you have been asking for the spring modification for your Moni tailwheel. We are working on a set of drawings and materials kit which should be available in another week or so. You can pretty much see by the assembly drawing (Fig. 2) what is actually

from a lot of wear and tear in addition to furnishing the pilot with a smoother ride.

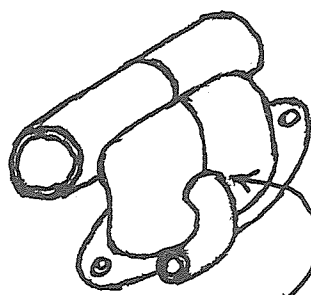
SONERAI

Monnett Engine Conversion - As with many opposed engines that have intake manifolds of unequal length, the two cylinders on one side of the engine tend to run leaner than the two cylinders on the opposite side. The difference in the two sides can be seen by the color of the exhaust stain. Usually the right side of the Sonerai cowl has more soot on it than the left side. One thing that can be done to help the problem is to add a crossover tube between the intake manifold head castings. The tube helps by equalizing the pressure between the two sides. The results seem to be more even fuel mixture to all cylinders and a little smoother idle.



involved with the modification. You still use the same four 3/16" holes that were used to mount the casting, though the top two holes must be enlarged and elongated to provide unrestricted movement of the long AN3 retaining bolt. A piece of aluminum angle is used to support the pivot hinge (1-3/4" solid extruded piano hinge) out from the rear bulkhead, with the original two lower mounting holes being used. The lower end of the casting is then bolted to the hinge, and now the assembly can pivot. The spring portion of it consists of a series of rubber bushings (grommets) and a spring. The rubber is used to soften any sharp impact loads as they are transmitted to the bulkhead. As you might have guessed, by moving the assembly rearward, you will have to lengthen each cable by approximately 1" to maintain the correct tailwheel steering cable spring tension. If you have not already made up the cable it will be easy, otherwise you will have to add a "spacer" link up near the springs at the mixer assembly or you can cut off the old barrel and solder a new barrel and longer link in place on the tailwheel end of the cable.

Now that you have a tail wheel assembly that can pivot, your tailwheel pant will need a few modifications. The top trailing edge will have to be trimmed down about an inch (otherwise you'll end up with a perforated tail cone) and the bottom leading edge of the pant should be trimmed up about one-half inch to provide ground clearance when the springs are compressed. The whole thing really won't take you that long and it will save the rear part of the fuselage



DRILL TO INSTALL
FITTING OR TO WELD
ELBOW IN PLACE.

FIG. 1

To make a fitting for each end of the tube the head castings can be drilled in the center just above the flange (Fig. 1) and a short aluminum tube bent in a 90° elbow can be welded in place, otherwise the hole can be tapped (pipe thread) for a 90° fitting such as an Airborne #1K1-6-10. On our installations, the elbows point towards the firewall and the crossover tube passes from one manifold back around the rear of the engine (above the mag) and to the other manifold. The tube can be made of 5052 aluminum and sizes ranging from 3/8" to 5/8" have been used. For connecting everything together we have just used a hose and hose clamps over the tubing and manifold fitting. All of the connections should be air tight just as all the connections in your intake manifold. A loose fitting connection or head casting could cause a lean mixture and possibly serious engine damage.

Welding Rod - Many builders ask us for the recommended filler rod for gas welded aircraft structures constructed of 4130 steel. Contrary to what most welding supply stores or industrial welders will tell you, you should not use a 4130 filler rod. A 4130 rod would probably give you the strongest weld fillet, but this is not necessarily what you desire. Instead you need a weld fillet that will be soft enough to resist cracking under all of the loads and vibration that it will encounter. A harder fillet material, like glass, will also be more brittle. The geometry of the structure supplies the airframe with its strength and the thickness of the fillet is usually greater than that of the

base metal anyway. A high quality copper coated, mild steel rod is what you should use such as a Linde #7 or equivalent. Normally, a rod of 1/16" or 3/32" diameter is used depending on your preference. If you are just learning, try a little of each (one pound). Once you've decided what size you prefer, buy at least five pounds (weld rod is sold by the pound) to get you started.

Randy Novak

We have another new A & I mechanic!! Mark Lokken has just joined Randy and Ken in Research and Development area. Mark and his wife, Susan, recently moved to Oshkosh from Janesville. We certainly welcome them aboard and are happy to have Mark in R & D!!

A new updated Slide Presentation about M.E.A. is now available for rental. This is good for an E.A.A. Chapter meeting or just a meeting of family and friends who want to know more about what you, the builder of a Monnett Aircraft, are really doing!! It has just been updated to include the new Tri-Gear Sonerai and all the latest info about our factory. It does give a general overview of construction of the aircraft but is not meant as a construction presentation. Rental is \$10.00 which is credited when the program is returned to us. (minus shipping charges).

Alas our publication schedule has now reversed itself and you are receiving July/August issue the first of July. Next issue will be September/October due out the first of September.

Please keep your letters and photos and flight reports coming!!! Also be sure to let us know the following information:

- When you first fly your airplane. (Carol can send you your Pilot Wing Pin, and I can put it in the newsletter)
- When you sell your plans or kit or plane. (Have the buyer send us his name, address, plans #.)
- When you have a change of address. (This is very important to us to have your correct address on file.)

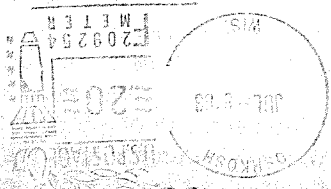
During the Fly-In, Carol will have a book for all planholders to sign and also have a change of address form handy. Thank you for helping us keep our planholders files up to date!!

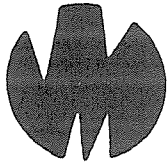
Anxious to have you join us and be Oshkoshers for this one week out of the year..... See you soon!!!!

Betty Monnett

Frederick Keip SII#356L
11428 Six Mile Rd.
Franksville, WI 53126
9/83

monnett experimental aircraft, inc.
p. o. box 2984
oshkosh, wisconsin 54903





monnett experimental aircraft, inc.
895 w. 20th avenue
p. o. box 2984
oshkosh, wi 54903
414/426-1212

July 5, 1983

Dear Moni Builder and Monink Subscriber:

It is with a great deal of sadness that we have to report on a recent fatal accident involving a Moni in the Oregon area.

The airplane had logged about seven hours of total flight time. While on its return to the airport witnesses reported seeing the left wing separate from the airplane resulting in an inevitable spin or spiral to the ground.

The F.A.A. and N.S.T.B. have examined the wreckage and with our cooperation it has been determined that the left wing skin pulled loose from the substructure. NO bonding epoxy was ever applied to the main spars along their length as is explicit in the builder's manual! By not bonding the skin to the spar the entire load carrying structure was changed. The primary bonds of the ribs were subsequently placed under severe "peal" loads for which they were not designed. The spar did not fail and it remained on the airplane.

Sadly this accident could have been prevented. The builder must follow the plans and directions faithfully. Any doubt or misunderstanding during construction should have been cleared by Monnett Experimental Aircraft. A single phone call could have helped. Inspections by the pilot/builder prior to each flight could have detected the movement of the unbonded skin over the spar. There simply was nothing to hold the skin in place and transfer the flight loads to the spar which ultimately allowed the skin to slip off the ribs and spar like a glove.

It is important to understand that this was not a failure of a bonded structure, but a failure of an incomplete structure.

There is no basis for doubt in or any loss of confidence in Moni's design as we believe it has been and continues to be tested and proven, but it does have to be built and maintained properly as with all airplanes that carry us and our loved ones.

Sincerely,

John T. Monnett, Jr.
PRESIDENT

JTM/cw