

This newsletter has some good points and some sad points.....

First the good, I flew the Charger to Fla Bob airport at Riverside for the Starduster-Skybolt get together. John Cloud who is stationed at Fla Bob also had his Charger there. Had a good time talking with Ed and all the other people around the airport, and according to Ed we had some Starduster pilots upset by coming home with the first place plaque.

But that is where the good times ended. If you have flown in the southwest, you will appreciate what I am about to say. The wind always blows out here, and I mean really blows. When we left the protection of the coast and went through Banning Pass we got into winds in excess of 60 mph. When we attempted to land at Blythe, CA, I could not make the runway at my normal landing speed. I had to attempt a landing at a higher airspeed than the airplanes takeoff speed. I wheel landed the plane, but when I attempted to put the tail down I came back up in the air. I settled it back on the runway and turned away from the wind to brake my lift and turn off the runway. The total distance from the initial touchdown to turning off the runway was approx. 100 ft. The winds were blowing at 42 knots gusting to 54 knots.

The next day the winds were still blowing, but not as hard. The lightest winds the rest of the trip were at our home field. There it was blowing at 28 mph 90 degrees to the runway, now there is excitement.

The weather around here has been very bad as far as winds and clear air turbulence. At our field over a three day period, a 177 Cardinal hit a bad downdraft of the end of runway 03 and had a very hard landing, no damage to the aircraft, but terrorized the people inside. The next day my instructor was flying his Champ, and after he had all the wheels on the ground, a dust devil picked him up in the air about 25 ft.. There he was 25 ft. in the air, nose pointed to the ground and no airspeed. He was able to gain enough air speed before he made contact with the ground.

The next day I was flying, and on landing approach at about 10 ft. off the runway and on centerline, I was hit by, what everyone was saying, wind shear. Before I could react, it turned me 45 deg. and slammed us down into the dirt on the side of the runway with a force that had my back hurting for a couple of days. At this time I knew that I was heading for the cattle fence. The one thing that I was grateful for is the fact that the airplane's reaction to power. I hit full power and was off the ground before the fence. But I was not able to miss a dirt mound. The force from hit lurched the plane up about 70 deg. I was able to recover and keep it in the air, but at this time I wasn't sure if I had any wheels on the plane.

The next landing was made very carefully. I came in on the left main only thinking that if both wheels are off, or bent out, I would ground loop rather than go over on the nose. Well the wheels were on but both were bent out. When I contacted the runway I veered to the left and went off the runway again, I slid sideways, but I was able to prevent the ground loop and get the plane under control.



The post-mortem is, two bent gear legs and a buckled tube between the front landing gear attach fittings, no scratches or dings on the outside of the entire plane. I feel that I came out of the experience very lucky.

Getting back to our weather out here, within that same week, a Cessna 210 went in killing all five on board. Two days later a T-Craft spun in injuring the two on board, they will recover, and a four place plane was forced into the side of a mountain at Grants. All incidence were attributed to wind turbulence and wind shear.

Enough of the bad news.....

We got the plane repaired and got it to the Biplane fly-in at Bartlesville, OK. The Charger got a lot of attention and had a lot of good comments. Ed, you should get the word around about the Charger. I had one person ask me if was an original design.

Paul Fuller flew out from Indiana to get a ride in the Charger, now that's dedication. I enjoyed having him fly the plane. After flying the Charger at altitude in New Mexico, it was exciting to fly the bird at sea level.

The trip to Riverside and Bartlesville gave me the first opportunity to have the plane at cruise for a long period of time. At 2500 rpm I indicate 125 mph and burn 8 gph. I am convinced that hp for hp the Charger will out perform almost all other biplanes. I fly with a Starduster that has 60 more hp than I have. Larry said that he can take me any time he wants to, but he said that he has to go to 2900 rpm to do it. If we both stay at 2500 rpm I can out run him.

Dave Davidson; One of these days we are going to get together. I missed you at Riverside, and I understand that I missed you at Bartlesville by approx. two hours. Some day we will make contact.

This will be the last newsletter until Oshkosh. Don't forget the Charger forum on Saturday, and all you Charger flyers, try to get your plane to the fly-in. We want to let the public know what a MA-5 CHARGER is, and avoid a question I got at Bartlesville, and I quote, "WHAT IN THE HELL IS A MA-5 CHARGER", I guess they don't read Sport Aviation.

Jack Zimmer is still looking for a flying Charger .....

GOOD LUCK AND BE WELL .....

Well, the big event of the year is over. Everyone went home inspired to get to work on their project, or like some of us, "where do we go from here", now that our planes are in the air. I think that we will find something to keep us busy.

Oshkosh - There was a good turn out for the convention and we had a good turn out at the Charger forum on Saturday. Those who were not there missed out on the history behind the development of the MA-5 Charger given by Ed and some reflections from some of the people who are flying their Chargers. All in all, the forum was a success: but as usual there was not enough time. Later that afternoon we met at my plane for a question and answer session. We had a number of people turnout and I was able to meet a number of Charger Association members that I had only known by name and street address. I'm sure that I missed some, but we will try it again next year.

The trip to Oshkosh in my Charger was a lot of fun and we met some very nice people along the way. My son and I left Albuquerque on Monday July 26. We could not have had better weather. The plane flew like it was on autopilot. We flew with hands off the stick and feet on the floor from Albq. to Tucumcari, NM and from Tucumcari to Liberal, KS. We ended the days flying in Chariton, IA. The next morning we left Chariton and made Oshkosh by noon.

We may have had good weather going up, but we paid the price coming home. I hit nothing but rain, wind and low clouds, but we made it back safely and in one piece. Glen, I tried to make it to your place, but the weather kept forcing me to the south. It was almost impossible to get north of Interstate 80. We will try again next year.

Remo Galeazzi sold his Grand Champion Charger to Norman Kheman from Hampshire, Ill. 312

Norm, you have a great plane and I'm sure you will have a lot of good times flying the plane.

Remo, I'm sure that you did not give the plane up without a lot of thought. I'm sure you're not done yet and you will have your hands in some project somewhere.

Nick Owen was at Oshkosh with his Charger. Nick's Charger is reported to be the lightest Charger flying.

There was reports of another Charger showing up at Oshkosh but we were unable to find out who it may have been. If anyone has any information on this plane, would you let me know.



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Items for Sale.....

Charger wing material including spare, wedge blocks, cap strips, etc.,  
everything except wing tip bows and tanks. contact.....

Don Anderson  
778 San Lucas Ave  
Mt. View, CA  
(415) 968-4598

The following is a list of Charger parts for sale:

Prices	*Fuselage (1 pc) welded box with all major fittings, brackets & tabs
"	*Trim yoke for horizontal stabilizer
"	*Landing gear (2 pcs) with shock units-welded assemblies
"	*Internal controls- welded assemblies - sticks and column, rudder/brake pedals, link tubes, belcrank for push tubes
"	*Wing struts - welded assemblies - cabane and interplane
"	*U-channel for formers
	* All welding by Ed Marquart !!!
<u>\$5,000.00</u>	
20.00	Landing gear shock pads (8 pcs)
369.00	Spar kit - spars and wedge blocks milled to size
50.00	Precut material for drag/anti drag wires
260.00	Turnbuckles for drag/anti drag wires (AN 155-16S)
82.00	Capstrip, enough for 4 wing panels
29.00	Trailing edge for all wing panels
	Metal fittings manufactured by Ken Brock - Part Nos:
	201R(4 pcs), 201L(4 pcs), 202R(4 pcs), 202L(4 pcs), 203R(4 pcs), 203L (4 pcs), 212(4 pcs), 213(4 pcs), 214(8 pcs), 215(4 pcs), 216(4 pcs), 217(8 pcs), 218(2 pcs), 219(4 pcs), 220(2 pcs), 221(6 pcs), 224(16 pcs), 225(8 pcs), 226(4 pcs), 227(2 pcs), 228(4 pcs), 229(2 pcs), 231(2 pcs), 251R(2 pcs), 251L(2 pcs), 252R(2 pcs), 252L(2 pcs), 253(8 pcs), 254R (4 pcs), 254L(4 pcs), 255(2 pcs), 256(2 pcs), 257(2 pcs), 258(2 pcs), 261(4 pcs), 262(2 pcs), 263(2 pcs), 276(2 pcs), 277(2 pcs), 278(4 pcs), 279(4 pcs), 280(4 pcs), 281(4 pcs), 282(4 pcs), 352(10 pcs), 353(2 pcs), M551(1 pc), 837(2 pcs), 839(2 pcs), 955(8 pcs), 657(16 pcs).
785.00	
405.00	Scott 3200 tailwheel system, complete. T-craft spring, spacer, rudder arm, compression spring kit. All new, July, 1988. Never installed.
50.00	Set of old Goodyear wheels and tires for roll-a-round purposes.
500.00	Fuel tanks - wing (2 pcs) and main (1 pc), has been pressure tested!
230.00	Brand new 4130N tubing for the complete tail surfaces
526.00	Freight

\$7906.00

\$7906.00 total (Prices based on A/C Spruce and Ken Brock catalogues and quotes by  
Ed Marquart).

Selling price \$7750.00 FIRM! (NO LESS)!!

Contact: Dick Goff  
1003 Bayou, Apt. #3,  
Vincennes, Indiana 47591

Tel: 812-882-4912

MA-5 CHARGER ASSOCIATION  
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We need some input from the members to put into the newsletter. I would appreciate hearing from builders as to how their projects are proceeding, and include any hints in building that can be passed on to other members who are building. Also, if there are any members who have questions, let us know, maybe we could even get an answer for you.

In this same light, If anyone needs any information on the Charger you can contact:

Ed Marquant  
P.O. Box 3032  
Riverside, CA 92519  
(714) 683-9582

In closing I made a copy on an article that appeared in General aviation News, on Dave Davidson's trip from Garland, TX to Barrow, Alaska. This is only the first half, I will include the final part in the next newsletter.

GOOD LUCK AND BE WELL.....



Well the time is getting near, you better start thinking about your Christmas wish list.

One of the things that I want to talk about is Wood Propellers with Epoxy Leading Edges. The members that have seen my Charger at Oshkosh noted that I had a wood prop. It looked nice, but I've got a story to tell you.

Jerry and I were flying from Albuquerque to Casa Grande, AZ for the Copper State Fly-in. We started out in very nice weather (the FSS told us that we would have fair to partly cloudy skies and should have no problem), but as we came through Tucson it started to get rather cloudy. Some of you may wonder why I was down in Tucson which is out of the way when one flies from Albuquerque to Casa Grande, I do not like flying over big hills, especially in an open cockpit aircraft at 11,000 ft. in the middle of October.

Well back to the story - As we got north of Tucson the bottom dropped out of the clouds, and any members that live in that area know what I'm talking about. We had water coming in the airplane from all directions. I contacted Tucson tower for a radar vector to the airport. Tucson gave me an approach frequency, but I couldn't raise anyone on that channel. I think that my radio was getting wet. I went back to tower frequency and they handled us from there. They sure were a lot of help in a real time of need. So in spite what some pilots say about controllers, there are some that will go the extra mile to help you.

We got on the ground and parked, and to our amazement most of the leading edge epoxy and wood was gone from the prop. I'm glad I didn't know it in the air.....

I'm not saying that wood propellers with inlaid epoxy leading edges are not any good, I'm just saying "be careful".

Enclosed in this issue is some pictures of Jack Bigham's Charger with a sliding canopy. Jack, if you could send me more information or sketches on the canopy details, other members may be interested.

Also in this edition is the final chapter on Dave Davidson's trip to Barrow, Alaska.

I better stop for now or we will not be able to afford the postage.

Oh!!! By the way, my replacement prop is metal.....

GOOD LUCK AND BE WELL.....

I'm sitting in a big silver bird on my way from Seattle to Phoenix, looking at Mt. Rainier peeking up through the clouds. It is quite a sight, although it would look a lot better if it was viewed from a biplane.

I hope everyone got through the holidays in good shape. As for myself, I travelled about 4500 miles round trip from Albuquerque to the east coast and back.

On the trip east, I delivered my propeller to Sensenich in Lancaster, Pa., to show them what had happened to their propeller when one gets caught in a rainstorm. To my surprise, they were quite aware of the problem and said that some LONG-EZ drivers had met the same fate; but not to the degree of damage that I had.

The final outcome of the discussion with Sensenich was that they are going to repair the propeller and spray on a protective coating that Sensenich hopes will solve the rain problem. This work will be done at no cost to me. I'm glad for that because, when my wife went into Sensenich's plant, she was loaded for "bear". When we met Bruce Schaefer of Sensenich he asked if I brought along my moral support, (my wife). Carol told him that it was her prop and I was her moral support. At this point we all had a good laugh.

All in all, Sensenich has a nice group of people and are very helpful. Also, they are not afraid to admit when they have problems, which is refreshing in today's business world.

On the way home from Penna., I tried to stop in to see Gene Bell in Friendly, WV.. With the combination of running out of time and bad timing I was not able to stop in to see him, although I did talk to him on the phone.

Gene is progressing very well on his project. Wings and tail feathers are complete and is working on the fuselage. He had just purchased an engine. I think he told me that it was a Lyc O-320, but I'm not sure.

Gene also told me that he had the opportunity to get a ride in Bill Heisel's Charger.

If one wants to get inspired into continuing building, or start building a Charger, try to get a ride in a flying Charger. I guarantee that it will work every time.

The weekend after New Year's, I went out to Redlands, CA to pick up an engine with a friend of mine. I had an opportunity to stop in and see Ed at Flabob. While I was there, I met Brad Ballen. Ed is welding up his fuselage. Brad said that his wings are finished; except for cover, and is working hard to finish the project.

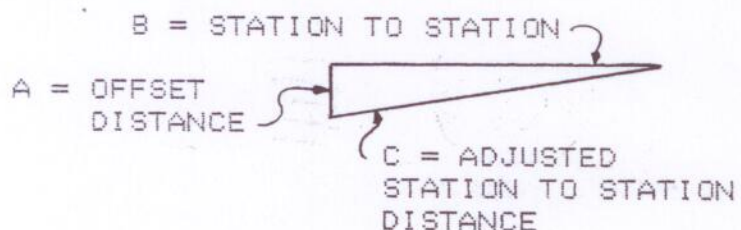


### FUSELAGE CAME UP SHORT:

I talked to some builders and they told me that they laid out their side panels very carefully, but when they welded up the final assembly the fuselage came up an inch or so short.

For those who are starting and for those who wonder why this happened, this is my explanation.

The dimensions given on the drawing is down the center line of the fuselage, so if you lay out the side panels using these dimensions, you are using center line dimensions. When you bend the fuselage in from the cockpit to the tail post you create an arc and therefore, shorten the center line dimensions.



To determine the amount you must add to the center line dimensions, use the following formula.

$$C = \sqrt{A^2 + B^2}$$

For the Charger the corrections are as follows:

	Sta. to Sta.	Offset	Adj. Sta. to Sta.	Diff.
C - D	32.000	1.500	32.035	0.035
D - E	28.000	2.500	28.111	0.111
E - F	27.000	3.000	27.166	0.166
F - G	25.000	3.000	25.179	0.179
G - T	22.000	4.000	22.361	0.361

The total shortening of the fuselage is 0.852 or approx. 7/8 inch. I doubt if this will ever make any difference in the performance of the airplane, but for those who are, or trying to be a perfectionist, this is where the difference comes from. One note, the wider the fuselage, the more significant these dimensions become.

### UPCOMING EVENTS:

EAA Chapter 1 is having their open house at Flabob Airport on February 25 and 26. Saturday Feb. 25 is the annual fundraiser dinner in Bill Turner's hangar. The speaker will be Pat Halloran, Maj.Gen.USAF/Ret.. He will speak on the SR-71 Blackbird, and the U-2. Sunday will be the annual get together. Fly or bring your aircraft: Antique, Experimental or Project. There will also be food and hot or cold drinks. There will be no "Air Show. If you fly in, it will be left hand traffic - TPA 1500' - UNICOM 122.8.

GOOD LUCK AND BE WELL.....



First of all I have to apologize for being delinquent in getting out the newsletter. I ran into the problem of too much to do and not enough time.

On April 28 I flew the Charger to Riverside for the Starduster get together, I flew with a friend of mine who has a Starduster. When we left the airport, the temperature was 32 deg. When you fly in that temperature, it will get your attention in a hurry, I think Dave Davidson knows what it is like, although I think that he flew in colder temperatures. Well, we left Belen, flew to Wilcox, AZ; Blyth, CA and then to Riverside. With the larger fuel tank I just installed, I helped my cruising range, but not my bladder range.

As I mentioned earlier, I increased the capacity of my main tank to 24 gal. This still allowed room for the front seat passenger. The real problem with doing something like this, is trying to fit it in after the plane is built.

So, if anyone is considering the possibility of putting in a larger tank or putting flop tubes or in fact, anything, make the decision early in the project. It is easier to take care of any problems that may arise then than later.

Before I go any further, I must say that if you build your Charger by Ed's plans, everything works out very well and you will have no problems. These are some of the best drawings put out for home-built aircraft.

Now, the first problem I ran into in my refurbiration project was that I could not get the main tank out without removing the top wings. The way the plane is put together, the top panel goes on, then the struts and then the wing. It is not a bad idea to make provisions to remove the top panel without removing the wings. It may come in handy if the main tank develops a leak.

NOTE: Don't forget to make provisions for removing the fuel sending unit after the tank is installed.

The next problem was supporting the tank. My tank is not going anywhere, but, if I was making this modification from the beginning, I would have supported it differently.

The last problem was putting in the bolts for the struts. In the drawings, Ed provided space to put the nuts on the bolts. But, when I made my tank, I took up all of this space. This problem would have gone away if I could have been able to put the top panel on after installing the tank.

But, we got it together and it works out very well.

Clair Snyder of Breiningville, PA. got his Charger in the air. It is powered by a Lyc. O-360 with a constant speed prop. Clair said that the plane flies very well.

The Charger Assoc. has gone international. M.L. Martin of Surry England is now a member of the Assoc. He has already built a PL-4 and is now of building a Charger. He has the fuselage space frame built and the tail feathers completed.

He indicated that in England, Lycoming engines are hard to come by, so if anyone knows of an engine in reasonable shape, let me know, or give me a call and I will give you his address.

If anyone is interested, there is a Charger project for sale in Canada. The builder died before being able to complete the project. The fuselage, tail feathers and wings are complete, also a 150 HP engine. For information call Mrs. Mills at (604)464-5590 or (604)591-3390.

On June 2nd and 3rd I am planning to be at Barttlesville for the Biplane fly-in. One of my co-workers is from Barttlesville and he informed me that the real name is E-ville.

John Cloud gave me some information on patches that he thought would be nice to have. So if there are any artists out there, send me some sketches on what you think the Charger Assoc. patch should look like and I will get further information on getting some made.

We need some help on covering the expense of printing and mailing the newsletter. We have been informal about it in the past, but I think that a \$5.00 per year is reasonable. There were a number of members that had paid at Oshkosh.

GOOD LUCK AND BE WELL.....