

CHARGER ASSOCIATION
NEWSLETTER NO.26

28 October 93

Well, I guess for most of us, the open cockpit flying season is coming to an end. As for myself, I did not go to many fly-ins this year. The only one I made was Oshkosh, and that was without my plane.

In spite of all the rain they had in the mid-west, the big show came off without any major hitch. When we arrived at the campground they were being very careful where they parked any of the campers due to soft spots. We managed to find a good place that had ground that was dry and firm.

I did not see many Charger people at Oshkosh this year, although the people I had seen asked about having a Charger forum. I gave some thought to this and I came up with this solution. Instead of having a formal presentation at the forum tents next year, I thought that we could schedule a time at the homebuilders building for an informal get-together.

On the subject of the rain in the mid-west- When we were driving to Oshkosh we went through Des Moines, IA on I-80. On the north side of the interstate there is a grass strip airport that have a number of homebuilts and antiques. It sure was a sad sight to see the hangers with the water half way up the walls. I ran into some flyers at Oshkosh from the area and they said that they were able to get almost all of the planes and equipment out either by flying or by truck. They also indicated that it may be

some time before the runway is in very good shape.

I talked with Mark Gilmore at Oshkosh. He said that he is working on the plane, but not as much as he would like to. He showed me some of his latest pictures of his project and it's looking good.

Harry Bigelow Jr. from Burlington, WI had his Charger at Oshkosh. He had it for sale and I heard last week that he sold it, but I do not know who bought the plane.

I talked with Ed last week and he has heard that there are two or three Chargers that has been the air for the first time. If anyone knows of any Chargers that are flying and are not on the mailing list let me know. I'm trying to get a list of all the flying Chargers.

There is very little gossip among the Charger Association members. I have heard very little from anyone.

I would appreciate it if you would drop me a few lines and let me know about your project. If anyone has any information about your wife, girlfriend, dog, house, etc., I need some material to put into the newsletter.

Enclosed is a list of members that are on the present mailing list. Some I have not heard from in a long time. This may be helpful to you.

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CHARGER ASSOCIATION
NEWSLETTER NO. 29

7 May 94

Well late again as usual. I am working in the old Penna. Dutch saying, "The faster I go, the behinder I get". Too many things to do and not enough time to do them in, although I am probably not the only one in this position. Last week, I went to the airport to see if my plane was still there. That is the first I have seen it in months. There was so much dust on the plane that it is probably over gross.

The weather got a little warmer, so I decided to take a break from my other chores and put the starter back into the plane. I have been having starting problems with my Charger for a long time. So after procrastinating for a while, I took the starter out and had it rebuilt. The wire to one of the fields was broken and I had only one half of the starter working.

So when you get the starter in, you want to see if it works,(it did). So, as long as it is running you may as well fly. I flew for about an hour until the cold sank in and came in for a textbook landing. At this point, I decided to put it back into the hanger, because as you know, you get only one of those landings a year. So why mess up your record at this point.

I received a letter from Gene Bell with the following report on his Charger. The bird is covered-engine mounted, all wiring done (except hooking up the engine). He finished up two fiberglass lay-ups on the lower wing fairings. He

has been working on his spray booth and hopes to have the plane in the air in the spring

As for my Charger project, the fuselage is complete. All the controls are in: column, rudder pedals, seat frames, trim system and floor boards are in place. The tail feathers and turtle deck are also in place

At this point, I am working on the firewall and motor mount so I can start on the formers.

The landing gear legs and shocks are also fabricated. When installing the gear, there are a number of variables that have to be considered. If one could fabricate fixtures that would fix every point as shown on the drawings, everything would fit very well, although this is a luxury I do not have.

The following is how I installed my landing gears. I fabricate the box structure but do not weld the pivot pin tube in place at this time. With the fuselage bottom side up, I install the gear legs. I then remove one of the rubber donuts from the shock assembly and then collapse the shock and tighten the through bolt to hold the shock in this position.

I then installed the shocks on the landing gear leg and the bottom shock bracket, move the gear leg along the pivot tube to

give proper alignment and tack weld the bottom shock bracket in place, but only marked the pivot tube location. If you weld the pivot tube, you may have problem getting the pivot pin out.

Then I supported the axle and vertical tube assembly in place by inserting a 1-1/4" dia. tube through the axles. This will keep the axles aligned. I then check the tail post dimensions and adjusted as necessary. When everything checked out, I welded the vertical tube to the landing gear box assembly.

I then removed the landing gear from the fuselage and finished the welding on the pivot tube and reamed the pivot tube so the pivot pin will run free.

I put the fourth rubber donut into the shock assembly and reinstalled the landing gear legs.

This should give the proper camber on the axles. I had my tires on for 325 hrs before replacing them and had very even wear on the edges of the tires.

Talking about landing gears brought my thoughts back a couple of years when I bent up the gear legs on my Charger.

At the Belen airport where I fly out of, there are some very strange wind currents at the approach end of runway 03. I got caught in them landing and was thrown off the runway. I got away with bent landing gears; but, it was much better than the latest incidents. Within the last year we had a 172 go off the runway and receive minor damage; but we lost a Stinson 108 and a L-19 bird dog. Both planes were completely

destroyed and no one was hurt very seriously

The normal operating procedure used now is to land about a third of the way down the runway

I have called the EAA and reserved time on July 31, 1994 at 10:00 am at the homebuilders building for a back porch get-together.

I have had a number of calls from people who are interested in buying flying Chargers. If you know of anyone interested in selling their Charger, let me know.

In reading the paper, I came across this little poem for those of us who may worry to much.

WHY WORRY?

There are only two things to worry about:

Either you are well or you are sick.

If you are well, there's nothing to worry about.

But if you are sick,

There are only two things to worry about:

Either you get well, or you die.

If you get well, there's nothing to worry about.

But if you die, there are only two things to worry about:

Either you will go to heaven or hell.

If you go to heaven, there's nothing to worry about.

But if you go to hell

You'll be so busy shaking hands with friends

You won't have time to worry

GOOD LUCK AND BE WELL.....

CHARGER ASSOCIATION
NEWSLETTER NO. 30

3 November 94

I better try to get something down or everyone will think that I abandoned them. That is really not the case, just too much going on.

I guess we all survived Oshkosh. There were three Chargers that made it to the show; Jack Fowler, Spokane, WA., James McGinnis, Stanway, WA. and Larry Steentry, Elkhorn, WI.

We talked with a few Charger builders about their projects. Mark Gilmore said that he had slowed on his project for a while, but he is back at it again. We looked at some new pictures of his Charger. If you want to see someone who has documented the project, Mark's is first class.

I had an interesting conversation with Ed. He told Glen and me about a Charger that is being built in England. On the other side of the ocean things are different when trying to get a home built registered. In England, in order to have your plane registered, you have to have a structural analysis of the aircraft. Therefore the Charger had to be analyzed for both normal and inverted flight. The analysis showed that the Charger is an adequately designed aircraft. In fact, it met or exceeded all the requirements that was put on the aircraft. The only area that could be of concern was the attaching of the top wing for inverted flight. After further investigation it was determined to be adequate. To me, this

was very interesting, because I have done some calculations on the Charger and found it to be well designed, although it is good to have someone else collaborate in your findings- "Well done Ed".

Ed also informed me that the prototype Charger is in the process of being restored. The plane had been moved to Ed's hanger at Flabob airport for inspection and seems to be in good shape. The fuselage is in the process of being sandblasted and primed. The plane is going to be fitted with a larger engine (LYC O-320) than the original engine.

I have been asked by some Charger people as to the possibility of having a Charger fly-in. This would be a good idea, but with the difficulty of trying to get information for the newsletter, I can not imagine how difficult it would be to arrange a fly-in. The big question would be "Where" and "When". If anyone has any suggestions about this, let me know.

There is one possibility that I know of, combine the Charger get together with the Biplane Expo in Bartlesville, OK., usually the first weekend in June, although OK can have some interesting weather that time of year. To get to the Charger people who are not on the mailing list, I could put an announcement in SPORT AVIATION.

GOOD LUCK AND BE WELL.....

CHARGER ASSOCIATION
NEWSLETTER NO. 31

17 April 1995

I raised a question in the last newsletter regarding the possibility of having a Charger get together at the Biplane Expo at Bartlesville, OK. I guess this was not a very good idea, because I had absolutely no response.

About a month ago, I got a call from Mert Taylor. He was passing through the area and gave me a call. He was not flying the Charger, he had the 172. At this time of year it could get cold flying from Wisconsin.

We talked mostly about airplanes. At the present time, he is building a Rose Parakeet. We talked about flying the Chargers and in the course of the conversation, I mentioned to him about the possibility of getting together at Bartlesville this year. He thought that it would be a good idea, and he would try to get there. Last year he tried to get there, but the weather would not cooperate, so he ended up in Colorado Springs. He said he had to go somewhere.

With Mert and myself we may have two Chargers at Bartlesville. I will have to work on Glenn Miltenberger to get him to fly south and join us.

Taking about the Biplane Expo., It would be nice if Bill Schadler would fly his newly restored Stearman to the Show. He did a beautiful job on restoring the plane. Bill, I know it is a long way but think about it.

Also Bill, now that the Stearman is flying, are you making any progress on the Charger?

Talking about our members: I received a letter from Gene Bell. He had not been working on his Charger as much as he wanted to do, but he said it was going to change. He is retiring, now he can get it completed.

More on the prototype Charger, I received a letter from John Alling, San Diego, CA, who is now the proud owner of the prototype Charger. He said that the fuselage has been sandblasted, primed and ready to put back together. It will be fitted with a Lyc O-320 with a crossover stainless exhaust. The wood in the wings is generally in shape as they were stored inside. There is some rib repair and a few odds and ends to do in the wings. It will be painted as it was 25 years ago.

John also discussed the possibility of having a Charger reunion at Oshkosh '96. It would be the 25 anniversary of the prototype at Oshkosh. I think it would be a good idea. There could be a possibility of having it as part of the show to recognize Ed in his accomplishment.

Well where am I on my Charger project? I am basically completed from the firewall back with the exception of the plumbing and wiring. It's sitting on the gear with all the metal work completed. One advantage of going through the second plane is that all the things you

wished you had put on the first one, you can put on the second.

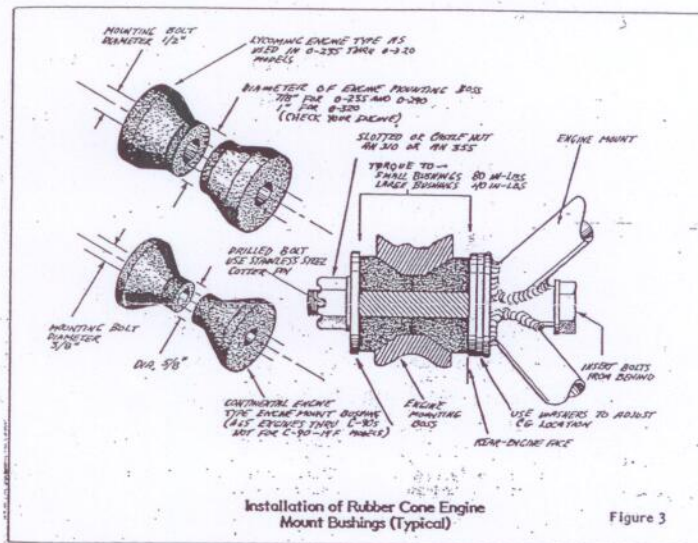
I made a few cosmetic changes. I put the third metal panel along the side of the fuselage to the rear cockpit. All the panels are fitted without any overlapping. I also made this one sort of a convertible. I built-in a front cockpit cover that when installed looks like a single hole biplane because the front windshield is gone. With this and a pull cable that says "HEAT", it should make cool weather flying more comfortable.

I am now in the process of rebuilding my motor mount fixture for an O-290. I am trying to make the plane as light as possible, putting in no frills. With the experience with my O320 powered plane, I feel that it will fly well on an O-290.

While building the motor mount fixture, I came across a potential problem on the fabrication of a conical mount (Straight mount). On the motor mount drawing the spool for the motor side of the mount calls for a 9/16" x 0.065 4130 tube for the engine bolt. The rubber bushings I received for my engine has a 1/2" hole through the rubber bushing. Upon investigating it further, I came across a sketch, Figure 3, from Tony Bingelis' book "Firewall Forward", which shows a 1/2" mounting bolt for the Lycoming engine. To compensate for the 1/2" diameter bolt you have to change the 9/16 x 0.065 tube to a 5/8 x 0.065 tube.

While we are talking about motor mounts, there are things to watch out for on dynafocal mounts. On dynafocal mounts there are two different angles for the dynafocal ring. There are two types,

Type 1 and Type 2. Type 1 is most common used in the majority of AVCO Lycoming engines up to 180 hp. Type 2 are used with the AVCO Lycoming IO-320 and IO-360 engines 150 to 200 hp.



I also came up with a way to eliminate the u-joint for the fuel valve. I cut a 1/4" socket drive extension in half and welded them into a 3/8"x.035 tube as shown in the sketch.

I was asked by Dan Henderson where to get the 11/16 x .035 tubing for the compression struts. I thought Aircraft Steel, Erie, CO. would have it, but he does not carry 11/16 tubing. If anyone has a source for this tubing, let me know and I will pass it on.

Dan also asked where to get the bearing for the trim jack screw. The last flyer I received from Wag-Aero had them listed.

GOOD LUCK AND BE WELL.....