Mr Barrows,

I am writing to seek your approval on a modification and to ask your thoughts on another modification that I haven't started on yet:

1. Extended baggage (Alaska Mods)

You may remember some time ago I asked about cutting out the rear bulk head head and installing an inverted dog leg so that I can put boots, coats,and other light weight gear in the rear of the airplane, as well as sleep in it comfortably. You called and approved the tubing sizes and angles, now I would like you to look over the changes in elevator cable routing.

As you can see in the included pictures I built a bracket that holds 3 MS20220-1 pulleys that attaches to station G that is braced against the lower V. This holds the cable off of the tubing and allows the flap cable routing similar to the plans, only one more station aft. Routing the cable under station G caused the top elevator cable to have a really sharp angle on the elevator bell crank when the elevator is all the way down and even touched the trim bell crank. I had a well respected IA that builds super cubs come and look at it and he said that this needed to be corrected. He suggested building a small single pulley mount up towards station J to route the cable so that it doesn't touch the trim bell crank. Included is a picture of this mount as well.

Both brackets use .100 4130 plate. The single pulley bracket uses 1/2" .035 tubing, has .166" around the 5/16 bolt hole, and is only about 3" wide.

So here is the question: Do these brackets look safe to you? Do you see any issues with these changes?

2. Double door bracing for floats.

I'm not sure if your familiar with the Maule float kit, but have included a picture so that you can see what they do. It's really nothing more than an enormous gusset that goes under the rear door. Another builder in Alaska has done the same thing and says that whatever worked on the Maule will work on the Bearhawk. I've included a picture of his work for your review.

People that have flying bearhawks say that the rear door can bind if the airplane is very heavy which suggests that extra bracing in this area is needed for float operation, but I suspect there is a better way to do this than to simply add a 5lb gusset.

Do you think that the area under the rear door could be made sufficiently strong using additional tubing and boxing it in further instead of using the gusset?

If so, can you suggest where the tubing needs to go and what tubing to use?

If you have questions or need to talk to me about any of the above, please contact me at:

Matthew Schumacher

7362 W Parks Hwy, Box 526, Wasilla, Alaska 99654

schu@schu.net

907-354-7249

If these changes are agreeable, then will you write me a note stating that they are so that I have a record to show the DAR that the designer has reviewed the changes and that I'm not just guessing. I've included a return envelope for your convenience.

Also, if you have time, a quick phone confirmation would be great as I can go ahead and get on with the welding while waiting for the return note in the mail.

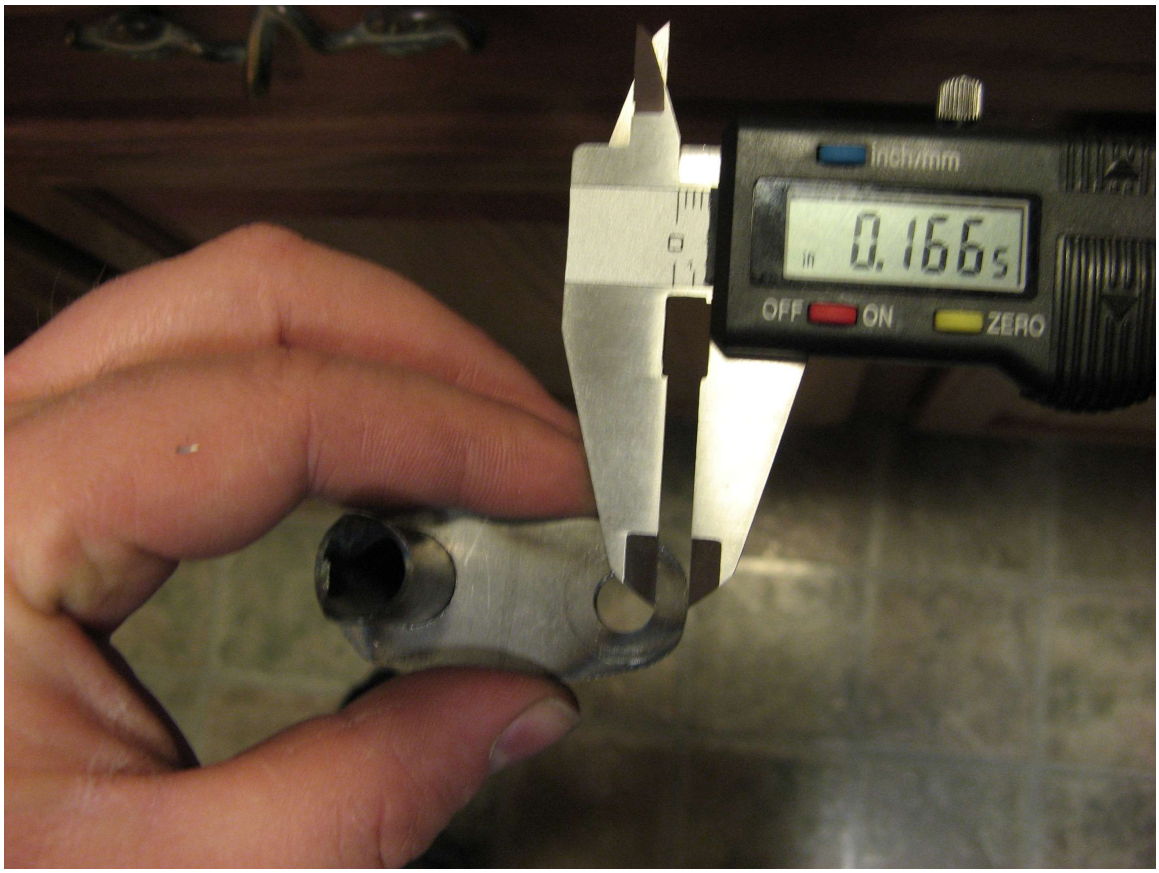
Thanks,

Matthew

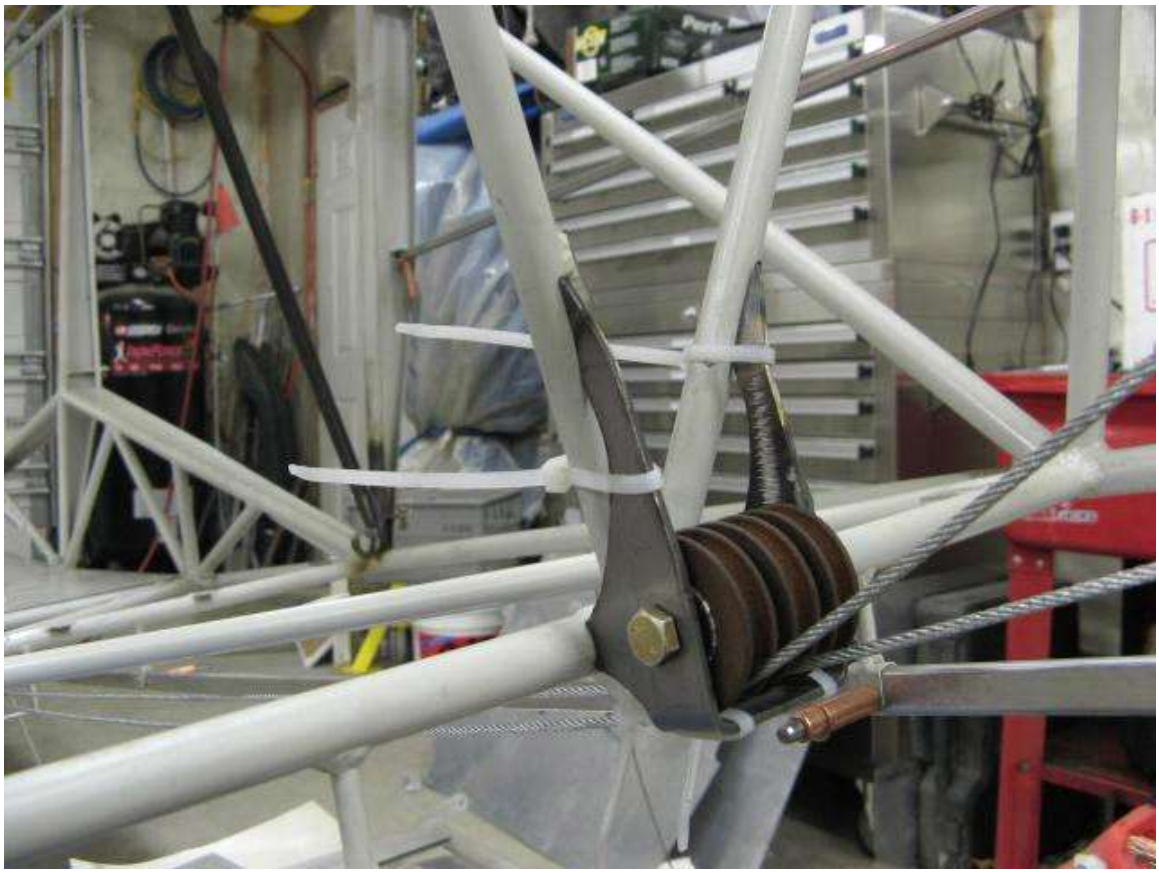
NOTE: All hardware is for mockup purposes only.

Pully at station J.

Side view of pulley proposed for station J.



Thickness around 5/16 bolt.



Pulley at station G.

Pulleys shown on fuse.

Bearhawk float mod.

Maule float mod.