Breakdown of assembly the hinge block on wing tip end of wing!

- This is more to establish a step by step method to install the last few parts of the outer wing aileron hinge block area.
- This is expecting you to be able to fully install the inner parts of the aileron during construction of the wing.
- This is building the complete aileron with the ribs to be cut away after all parts are installed. This greatly helps self align the aileron.
- This is intended to be a supplement to your plans only.
- This not the only way but rather a simple guide that works well with the supplemental plans.

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Thank you, Scott Weinberg
Assumptions

We know this is the max front height
We know this is max rear height
then .250 x .250 notch is cut' all four corners

We know this is concentric to the hole in your fixture according to your drawings

make [2] and make top to fit your rib profile while in jig. Pencil line and sand to shape.

Step 1)

This distance is determined by the hinge hole being concentric to your jig hole. Note: the last vertical would not be in this location because of the wood block.

Fitted to rib with hole still concentric to fixture hole. When you have in place you can glue in.
Step 3) a full face of .125 ply on root side of rib 13 serves as a enormous strength adding piece as it takes all the twisting motion of this rib away.
This is shown different on your plans page 50, but in keeping the leading edge of the aileron pocket neat and compact this is how I have proposed this area. (your choice of course)

Step 3) inside view of rib 13 root side.
Note: all of your aileron work HAS to be done before these steps start.
Step 4) and 5)
Debatable if we need the .8mm ply on wing tip side of 13 on trailing edge, but on front, no question., please do it. These two parts are made easily by measuring the already in place hinge block. Clamp and glue these in place.

Step 6) Rib 14 is fitted into place. A very strong structure is being formed by now. UN-doing of any of this is almost impossible.

This is only a option… the .125 ply on root side is plenty strong for the wing in this area.
Step 7) showing gusset on rib 14 root side. This of course is two pieces. Fore and aft of the hinge block.

Note the last green vertical is shown where it would be only for reference. This of course would not be in this location with hinge block installed.

Wing tip end: (small piece like shown on page 50 of your plans) or full size of your rib. Consider your fabric plans and please observe some of the fence options being tried/tested by other builders. I would leave some options open. Depending on your wing ideas, if your going to just add a flat plate wing tip this portion would be complete till you add your end plate. The aileron bolt head either can be protruding beyond the block above or the hole recessed for the head. Regardless this bolt will always require access.
Step 8) Showing the delrin bushing and head setup. These are made to fit on the head thickness. This creates your spacing between the end of the aileron and rib 13 shown here.

Step 8) a top down view of the above photo. This is showing the delrin faces that you machine to required thickness this creates your space between rib 13 and aileron. Remember to put a stainless shim between the delrin faces. Delrin likes to rotate against steel but not itself.
Hinge block shown in transparent stage. Hinge block also shown on the aileron rib this acts for the guide of delrin in this area.

All the parts coming together.

Balance of the rest of the wing can be built just like the plans describe with the .8mm wrap between ribs 13 and 14. The end, thank you, other parts of the wing may be broken down in other PDF files.
Aileron pocket above done in light alum but completely held on the ends by the K blocks as shown, and over each rib and K block with gussets, also above.

Below is the aileron nose ply in the pocket.
This is a sample drawing of bushing the estimates are just that. An estimate of what you will need to fit your build with the .375 dia. and .250 dia being true call outs the others are easily made to fit your aircraft. If you do not have the ability to measure these lengths, please do not start this project. These will allow you to firmly keep your aileron exactly where you want it between end ribs and #7 rib. Each length may be slightly different. The head thickness should be equal less a stainless shim between them .010 in thickness.
Examples of hinge blocks, your blocks will be close to these on the tri-angle ones and made to fit on the 4-corner notched block. These are not ultimate call outs for measurements.