

Section 75-FWO-1 Folding Wing Option



This manual has been prepared for assembly of the folding wing option. This photo assembly manual is intended as a supplement to the drawings. If there is any discrepancy between this manual and the drawings, the drawings supersede this manual. For more information on building standards and allowable tolerances see "Construction Standards for Zenair Light Aircraft" available from Zenith Aircraft Co.

**STOL
CH750**

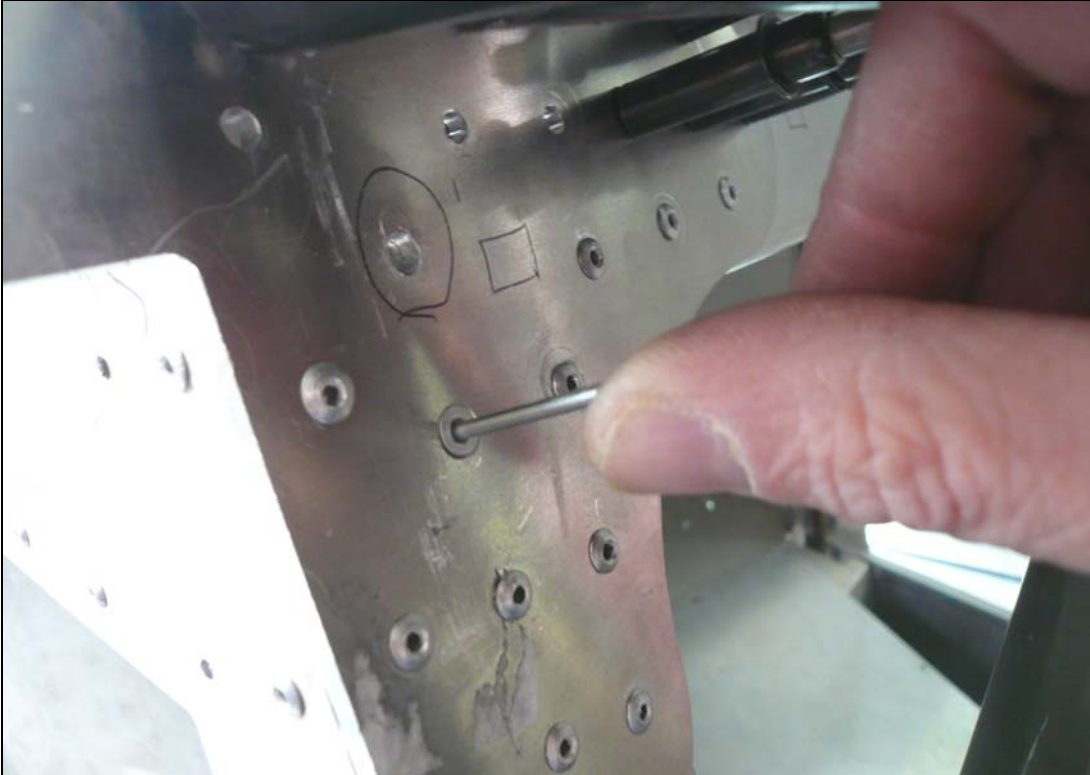
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Revision 1.0 (2/22/10)
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WING SKELETON
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Remove the Door from the Door Sill, 75F12-6, if already installed. Drill out the rivets attaching the Door Sill to the Cabin Frame, 75F15-1. Drill out the rivets in the Side Skin, 75F1-3, into the Side Channel Cover, 75F4-2, and remove. Drill out the rivets on the Rear Wing Attachment, 75F4-4, that will interfere with the Cross Tube and the rivet that will be replaced with an AN3 bolt. Countersink the rivets that will interfere with the Cross Tube.



Flush rivet the rivets that will interfere with the Cross Tube. Make sure to use a **FLAT** nose piece to set these rivets.



P/N: 75FWO1-1
Hinge

P/N: 75FWO1-2
Cross Tube

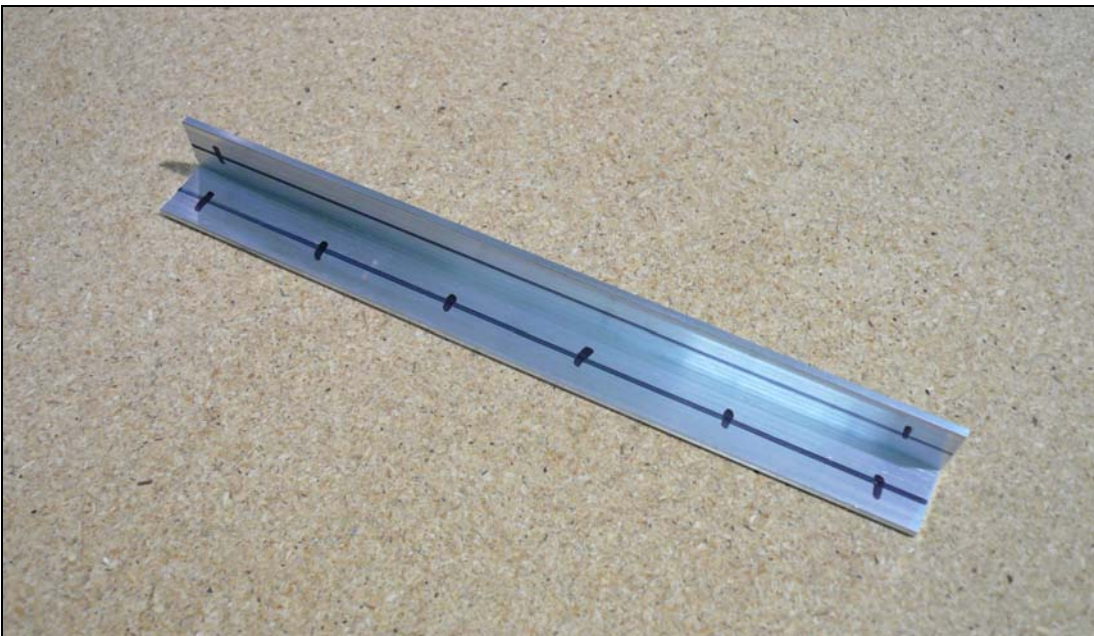
Draw a center line on the aft side of the attachment of the Cross Tube. Bolt the Hinge to the Cross Tube. Drill out any rivets that will be under the Hinge on the Wing. Clamp the Hinge on the Wing in position. The aft edge of the Hinge should be flush with the aft edge of the Bottom Skin, 75W6-1, of the Wing and flush with the cutout for the Rear Channel Attachment bolt. This will position the Cross Tube in the Rear Fuselage. Clamp the Cross Tube in place.



With the center line visible through the old rivet hole in the Side Channel, back drill into the Cross Tube attachment with a #20 drill bit. Expand the hole with a #12 drill bit. Repeat this process on the other side, then deburr the holes and bolt the Cross Tube to the Rear Wing Attachment.



Mark hole locations 10mm from the edges for the two holes on the front of the Hinge. With a #40 drill bit, drill the holes in the Hinge into the Bottom Skin and Cleco. The above photo shows the holes drilled to #20, this is done in a later step. Use a hole finder to back drill the holes for rivets that are under the Hinge. Alternatively, the Root Skin, 75W5-5, can be drilled out and the holes back drilled from the top. Layout a hole 10mm from the aft edge and 10mm from the outboard edge for the last bolt hole. With a #40 drill bit, drill and Cleco the bolt hole.



P/N: 75FWO1-3
Rib Stiffener

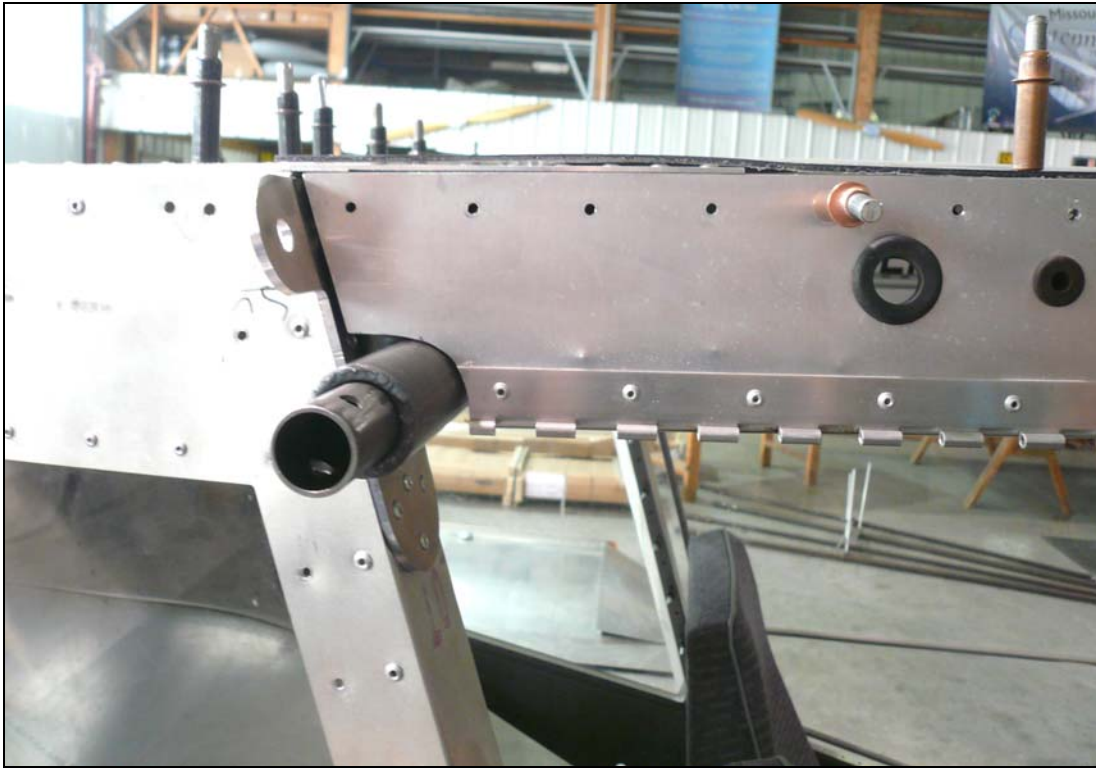
Draw a center line on both flanges of the Rib Stiffener. Mark a rivet location 10mm from each end of the Rib Stiffener and layout an even rivet line 40mm apart. Do this for both flanges.



Set the Rib Stiffener in position in the Wing. The Wing will have to be removed or the Root Skin removed to gain access to the Root Rear Rib, 75W4-2. With a #40 drill bit, drill through the Rib Stiffener in to the Root Rear Rib and Cleco. Then drill the bottom flange of the Rib Stiffener into the Bottom Skin and Cleco. The aft most hole will have to be drill up through the Hinge into the Rib Stiffener.



Expand the holes in the Hinge with a #12 drill for the 3 bolts. Expand the hole for the rivet with a #20 drill bit. With a #20 drill bit, expand the holes in the Rib Stiffener into the Root Rear Rib and Bottom Skin. Dedurr the parts and Bolt and rivet the Hinge and Rib Stiffener in place in the Wing.



Trim the Door Sill to fit around the Cross Tube. The Door will likely need to be trimmed to fit around the Cross Tube as well. With the Door Sill trimmed, Cleco the Door Sill back to the Cabin Frame and rivet the Door Sill to the Cabin Frame. Replace the Side Channel Cover and rivet it back into place.