

Section 75-CA-2 Elevator Controls



This manual has been prepared for assembly of the Elevator Controls. 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.



P/N: 75C2-8
Control Stick Bushing



Slide the end of the Bushing into the Torque Tube. The Bushing's outer surface will turn in the bushing welded inside the Torque Tube. Put grease on the outside of the Bushing before final installation.

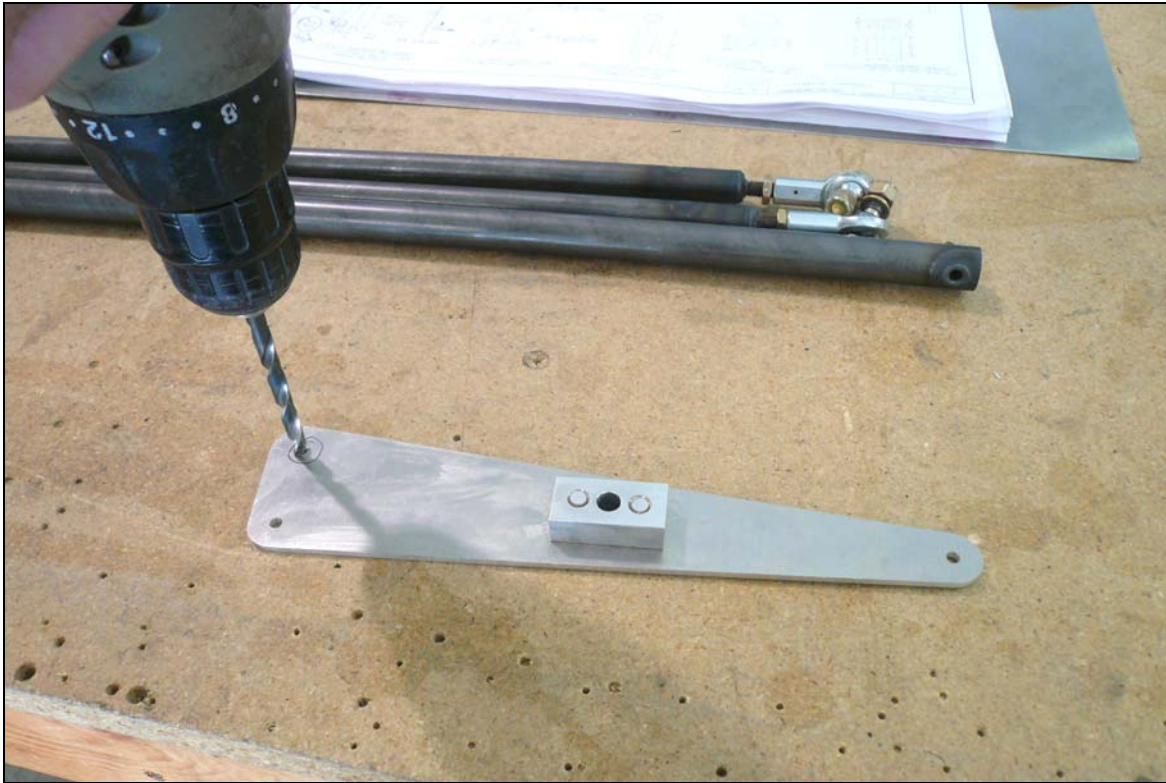


P/N: 75C3-2
Control Stick

Position the Stick on the Torque Tube. The longer leg is installed on the passenger side. Align the hole in the stick with the Bushing and install the bolt through the Stick and Bushing.



P/N: 75C2-6
Elevator Bellcrank



Use a 1/4" drill bit to open the bottom forward hole in the Elevator Bellcrank. The bottom forward hole is located approximately 121mm from the pivot hole in the center of the Bellcrank. See drawing 75-C-2 for specific details.



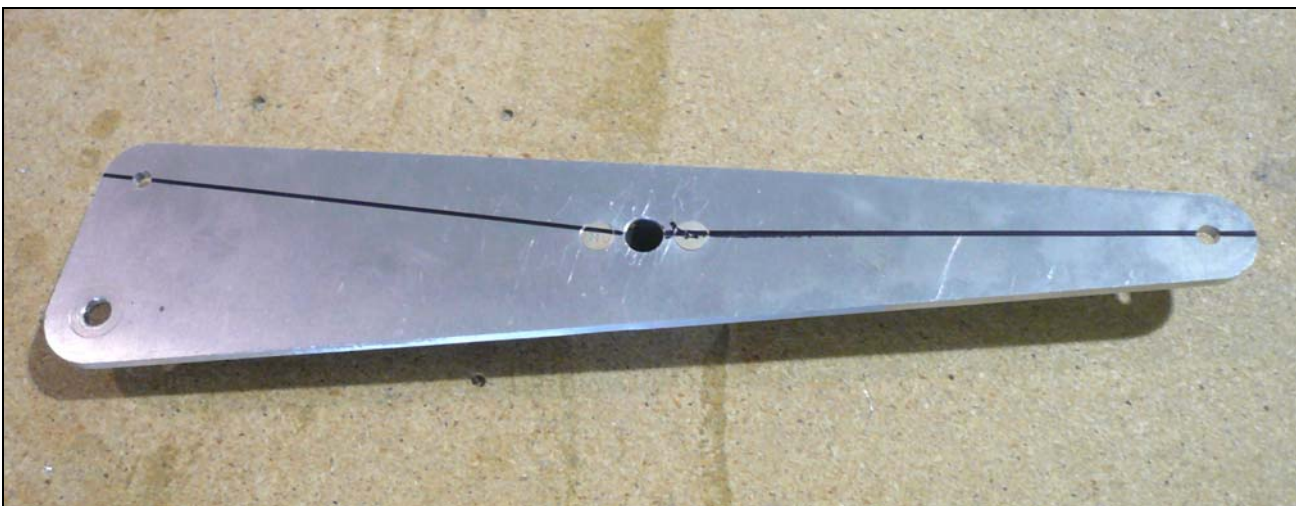
P/N: 75C2-7
Elevator Control
Tube



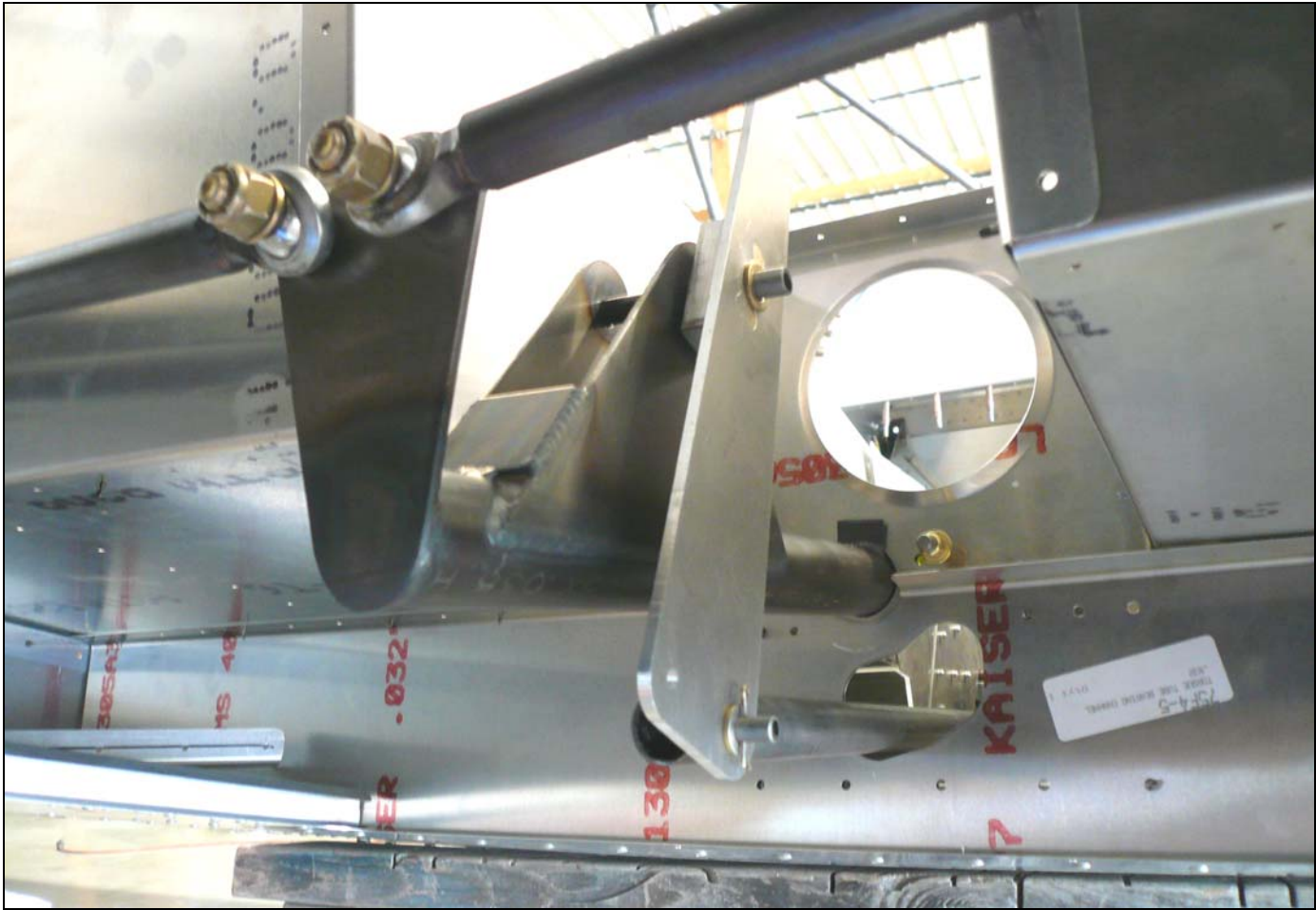
Put a washer on the 1/4" tube welded on the End of the Control Tube, followed by the Bellcrank, and another washer.

Orientation: The block solid riveted to the Bellcrank is positioned on the same side as the Control Rod.

Use a center punch to mark the 1/4" tube for a hole to put a Cotter Pin through to retain the Bellcrank. Use a #40 drill bit to drill a hole for the Cotter Pin. Do not bend the Cotter Pin until the final installation.



Draw a line between the Control Cable attachment holes and the Bellcrank mounting hole.



Slide the Control Tube through the cutout in the Torque Tube Bearing Channel. Put a washer on the ¼" tube welded on the Torque Tube, followed by the Elevator Bellcrank, and another washer.

Note: The ¼" will likely need to be greased before sliding the Bellcrank on to prevent galling. The bearing surface must be greased before final installation.

Use a center punch to mark the hole location for the Cotter Pin to retain the Bellcrank on the Torque Tube. Use a #40 drill bit to drill the hole for the Cotter Pin.

NOTE: THE REMAINDER OF THIS PHOTO GUIDE CAN ONLY BE PERFORMED AFTER THE HORIZONTAL STABILIZER AND ELEVATOR ARE MOUNTED ON THE FUSELAGE.



Attach the control cables to the Control Horns on the Elevator. Set the Elevator in the **Neutral** position (the top of the Elevator should be parallel to the top of the Horizontal Stabilizer). When the Bellcrank is in the Neutral position, the cable will be 90 degrees to the line on the Bellcrank. Adjust the cable length and set the Bellcrank in the neutral position.



Position the Stick in a comfortable location for the neutral position. Mark the bolt hole location on the Elevator Control Rod.



Cut the Control Rod to the required length, make sure there is sufficient edge distance for the hole to mount to the Stick. Make sure the hole will be parallel to the 1/4" tube welded at the opposite end of the Control Rod. Center punch the hole location for the Stick to attach to the Control Rod. Start with a #40 drill bit and slowly step the hole up in size to 1/4". Use an Angle Grinder to notch the Control Rod approximately 30mm. It may require a deeper notch to get full elevator deflection.



P/N: 75C3-3
Elevator Control
Tube Bushing

Position the Control Tube at the Stick. Slide the Control Tube Bushing through the Control Tube and Stick. Install the AN3 bolt through the Bushing. Make sure before the final installation the Bushing is greased.

Note: The bolt should be installed from the opposite side than what the above photo shows.