

The tailcone fairing is made in two operations. First, 5 min/micro dab bond a flat piece of foam to the horizontal stabilizer and elevators which is basically in line with the top surfaces of both elevators. Shape the block so it is basically a flat extension of the elevators across the center of the airplane. Don't forget to add a little bullet shaped piece in the center to cover the base of the rudder trailing edge. Protect the foam and surrounding elevators, and stabilizer with tape followed by wax. Lay up three plies of BID over the top surface. Overlap the stabilizer spar trailing edge 3/4 inch. Knife trim and cure.

After the top has cured, fill in foam scraps around the bottom side to provide a core to lay up over. Carve to a shape similar to that shown in the sketch. Protect the foam and adjacent airplane with tape and wax. Carve away the trailing edge tape and foam to make a floc joint along the sharp cornered rear edge. Use your rotary file to prepare the exposed glass of the upper surface. Lay up two to four plies over the bottom foam plug, again overlapping the rear stabilizer spar and fuselage flange 3/4 inch. Knife trim and cure.

Remove the completed fairing from the airplane, discard all foam and tape, then saw out a hole in the top surface to clear the rear vertical stabilizer spar and rudder belcrank. Fit the fairing into position and drill four mounting screw holes (#21) through the fairing's top forward edges for AN526-832R-6 screws. Add six mounting holes on the bottom, one through the stabilizer spar and two through the fuselage flange on each side. Install 10 K1000-08 nutplates (AN426A-3-4 rivets) to match.

Pitot and Static System Plumbing: Once you have your instruments mounted in the panel, run a length of 3/16 O.D. nylon tubing from the static port (behind the seat bulkhead on the left side) under the side console to the airspeed indicator static port, altimeter, and rate of climb if installed. The order of routing isn't important. Use a 272-P 1/8 NPT to 3/16 O.D. tubing male branch tee in the airspeed indicator port (and R.O.C. if installed). Use 269-P 1/8 NPT to 3/16 O.D. male elbow fittings in the altimeter and in the static port itself.

The pitot line runs from the airspeed indicator, through the fuselage side panel, out along the bottom of the aileron pushrod hole, to the pitot tube. The pitot tube is a piece of 1/4 O.D. x .028 wall soft aluminum tubing bonded to the front wall of the aileron belcrank bay. The pitot tube is bent 90° forward 1.5 inches under the wing and 90° inboard just inside the bottom skin. The 3/16 O.D. plastic tubing will just slip inside the aluminum tube. Roughen the end of the nylon line and bond it into the end of the pitot tube. Slot the aileron belcrank bay cover to clear the tube. The pitot tube is bonded to the belcrank bay wall with 5 min/floc. Install a 1/8 NPT to 3/16 tube male elbow in the airspeed indicator and connect the pitot line to it. The pitot line should be routed through a separate hole through the side panel below and slightly forward of the aileron pushrod hole.

Rudder Cables: Cut two 10 ft lengths of 3/32 diameter 7 x 19 stainless steel control cable. Swage an AN100-3 thimble and AN18-2-G sleeve on one end of each cable. Feed the cable from the closeout bulkhead forward through the nylon conduits. Attach the thimbles to the top side of the rudder belcrank using two AN3-6A bolts, two AN970-3 washers, two 1/4 long pieces of 1/4 O.D. x .028 wall 4130 tubing, and two MS21042-3 nuts. The big washer serves to capture the thimble.

Size the forward ends of the cable to just reach the outboard ends of the rudder bar and attach to it with another set of AN3-6A, AN970-3, spacer, and MS21042-3. Swage AN100-3 thimbles and 18-2-G sleeves on the front ends of the cables. The length should be set to just allow assembly by hand without more than 1/8 inch of slack.