

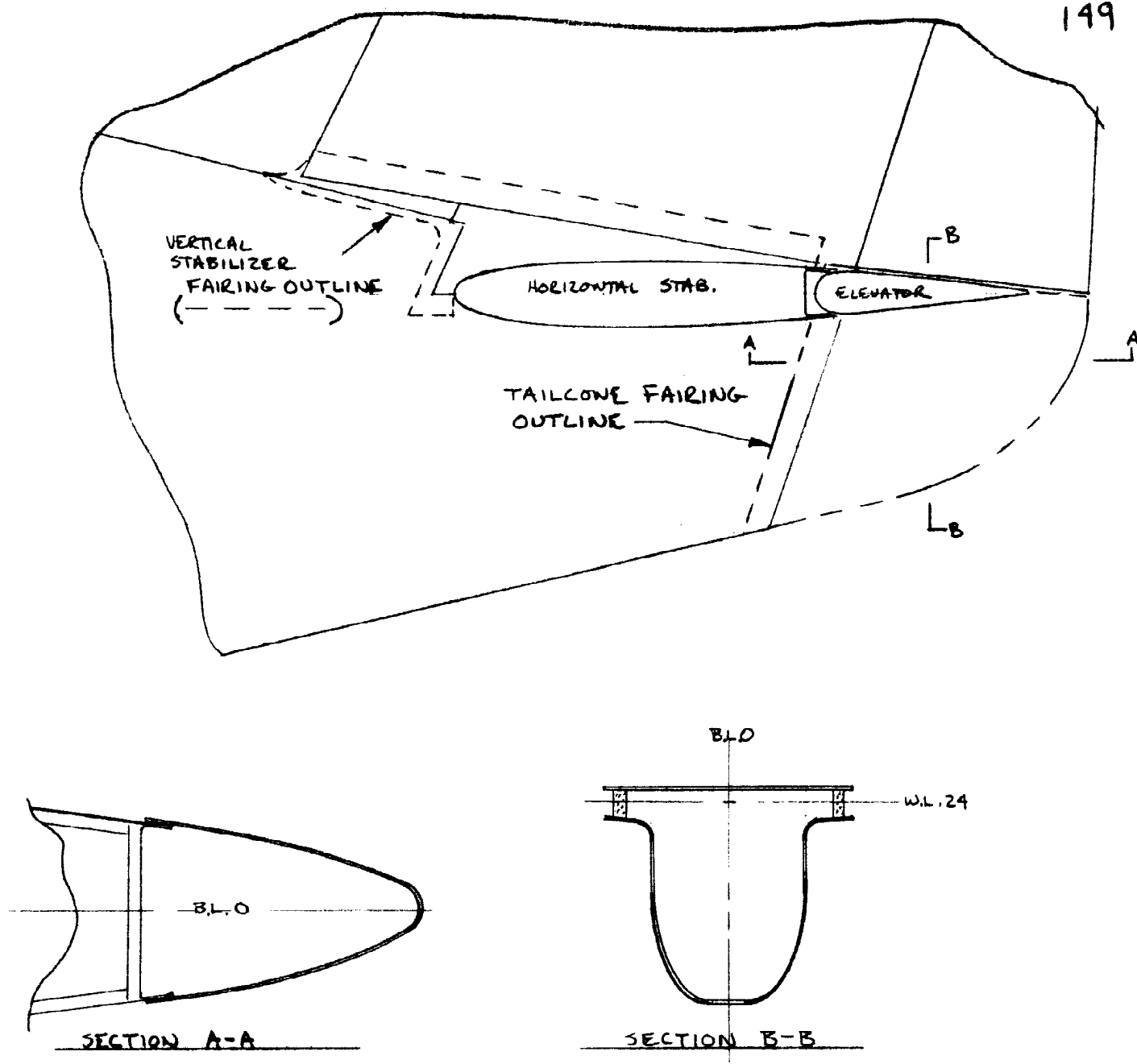
Connect the aft tank drain tube to one barbtite fitting on the drain block behind the seat bulkhead. Connect another length of tygothane from the aft port on the transfer valve to the other side of the drain block. The tubing under the side console should be clamped against the upper inboard corner of the console with a loop of safety wire near the aileron idler belcrank to keep it out of the trim and aileron hardware. Connect a short length of tubing to the aft tank vent tube on one end and to one leg of a 0715-020 3/8 tube "T" fitting. One other leg of the "T" is connected to the vent tube behind the seat bulkhead and the other to a length of tube which runs forward along with the fuel line under the side console. The vent line is continued past the transfer valve, up over the top of the front tank, to the front tank's vent tube. Split the vent tube at its highest point above the front tank and insert another 3/8 tube "T" fitting.

Drill a 1/2 inch hole through the left hand console close to the side wall of the fuselage and at the forward end of the console. Drill another 1/2 inch hole through the instrument panel flange close to the left sidewall about 3 1/2 inches below the top edge of the side panel (W.L. 24). Route a length of tubing from the forward vent "T" through the upper hole then down through the console to make your fuel guage. The guage line is then run forward along the left sidewall and another "T" (0715-020) is used to join it with the fuel outlet of the front tank. Clamp all three sides of the tee. The third side of the "T" is connected to the inlet (aft side) of the super valve assembly. The outlet (forward) end of the super valve gets a length of tubing which makes a gentle quarter circle forward to penetrate the firewall bulkhead and continue forward to connect with another 10006B-104 1/4 NPT to 3/8 tube barbtite fitting in the carburator. Split the tube forward of the firewall and install one Alondra VA-6 fuel filter (inline type). Since your engine hasn't been installed yet, finding the carb may be a bit difficult, so run the line forward of the firewall, install a filter and then add a 20 inch length of tubing.

The super valve is actuated by a panel mounted push-pull control. The cable assembly is a Bowden type spiral wire casing with a solid wire core and a plain push button on the operator end. Drill a mounting hole in the center of your panel along the bottom. Mount the cable in that hole, then run the housing through the cable clamp on the intercostal. The cable housing should be cut off about one inch short of the super valve's stop pin. Connect the wire to the valve's eye bolt with a bolt and checknut type connector that looks a lot like an AN3 bolt with extra threads and a cotter pin hole. One checknut is used to clamp the bolt to the valve arm and then the second nut sandwiches the cable through the cotter pin hole.

Shut the fuel valves off, add about 3 1/2 gallons to a tank, then turn the fuel on and record the time it takes to flow a quart or half gallon. Punch your calculator to come up with gallons per hour for each tank. 10 GPH is minimum and 15 to 20 is more reasonable.

Tail Fairings: Two fairings are required to finish out the Adventure's tail end. A removable tailcone fairing is used to cover the control system and fair in the fuselage with the elevator and ruddres. A permanent fairing is bonded to the base of the vertical stabilizer which fairs the gaps between both the vertical and horizontal stabilizers and the fuselage. Use the following sketch as a guide when shaping your fairings but the ultimate in precision is not required here. Anything that looks good will be fine.



Start by making the root fairing for the vertical stabilizer. Prepare the bottom 1 1/2 inches of the stabilizer skin for bonding. Protect the adjacent fuselage and horizontal stabilizer surfaces with masking tape then wax the tape thoroughly with auto paste wax. Fill the gaps at the stabilizer to fuselage and stab to stab junctures with scrap foam blocks. Bond the foam in place with 5 min/micro dabs. Shape the foam blocks to a pleasing contour. The stabilizer root fairing should be stopped about 3/4 inch forward of the horizontal stab's rear spar edge. Lay up a two to three ply BID fairing which overlaps the fuselage and horizontal tail (beyond your foam fairing blocks) about 1/2 inch. Knife trim any excess and cure. The fairing is removed with the vertical stabilizer. Lay up a 1 ply BID root rib over the base of the stabilizer foam only with floc corner joints to the stab skins. The foam fairing material can be discarded.

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.