

Rudder Hinge Installation

1. Locate the Rudder, upper rudder hinge, lower rudder hinge, and the 5/8" radial bearings.

Install the bearings into the upper and lower hinges, these will not be a press fit, they must be peened once in the bracket.

2. To locate the hinge positions on the vertical stab, the upper bracket must be mounted to the rudder temporarily.

3. Tape a 1/8" spacer to the top of the vertical, this insures that there is no binding.

4. Hold the rudder up in place and mark the brackets place on the tail.

5. Now with the rudder off hold the upper rudder hinge in place and drill the holes to 3/16".

6. Mark where the bottom of the hinge is, now Drill a 1 1/8" hole below it so that the edge of the hole is not under the hinge.

7. This hole is for installing the nyloc nuts on the backside of the hinge.

Mount the upper rudder hinge using AN3-?, large area washers, and nyloc nuts.

Hint: spray a small amount of 3M-77 on your finger, this helps for installing the washers and nuts.

Temporarily install the lower rudder hinge, and hang the rudder in place insuring 1/8" gap on top.

8. Mark and install the lower rudder hinge in the same manner as the upper rudder hinge.



Rudder final Installation

Required Items: Rudder, Rudder cables short, turn-buckles, AN3 bolts, short piece of 1/4 fuel line, AN5 bolts and hardware, safety wire, jamnuts.

1. Bend 2 more u brackets from the “pulley tangs” in the kit.
2. Install these brackets with 10-32 screw and some loctite into the nut plate in the rudder.
3. Install the rudder cable to the bracket with the correct AN3 bolt, use a short piece of 1/4 fuel line top and bottom to cushion the cable in the bracket.
4. Install the rudder and slide the cables thru the holes in the aft vertical spar.
5. Bolt in place with AN5 bolts and nylocs, you may use castle nuts and cotter keys if you like.
6. Repeat for the lower bracket.
7. Use a piece of scrap wood to block both pedals straight, or in the neutral position.
8. Also tape the rudder in the neutral position.
9. Locate the turnbuckles.
10. These are a stock item from aircraft spruce, and must be modified slightly to the correct length.
11. Cut 1/2” of both ends of each part.
12. Thread the cables into the turnbuckles , one end is a left threaded cable to match the turnbuckles.
13. Tighten down, when you pull up on them they should feel the same.
14. Tighten the jamnuts once satisfied.
15. Use the aircraft spruce book for the proper safety wire technique for these turnbuckles.

