

## Rudder Pedal Supports

Rudder pedal supports will be fabricated from raw aluminum angle and channel stock.

1. Locate the piece of 2" wide aluminum channel from the kit parts. A piece of this channel will form the main pedal support beam.
2. Measure the distance from the aft side of the fuselage firewall flange to the forward side of the pedal support bulkhead. Make the measurement at a point 12" from the center line). Note the measurement for the left and the right side.
3. Cut a piece of 2" channel to the length of the left side measurement less 1/8 of an inch.
4. Repeat for the right side again cutting a piece of channel 1/8 inch shorter than the right side measurement.
5. Locate the 1" x 1" aluminum angle stock from the kit supplies.
6. Cut four pieces of angle 1.75 inches long. De-burr your cut edges.



7. Mark a center line on one side of each of the four angle pieces.
8. Drill a 3/16 hole on the center line 3/8 inch in from each edge. Drill these holes ( 8 in all) on all four of the pieces you fabricated.
9. Mark a center line on the other side of each of the aluminum angles.
10. On two of the four angles drill two 3/16 holes on the center line again 3/8 inch in from the end. On the remaining two angles drill one 3/16 hole on the center line in

## 26. Rudder Pedal Support Beam



the middle of the angle face.

11. Drill Support tube hole: Mark a center line on the wide side of the Aluminum channel from one end to the other. Measure in 10.5 inches from one end and make a mark on the center line. At this mark drill a 1.25 inch diameter hole thru the web of the channel.

12. Drill optional lightening holes—starting 1.375 inches from the edge of the support tube hole mark on the center line for optional lightening holes at 1.5 inch intervals. Keep the lightening holes at least 1.5 inch away from the end of the channel.

13. Place one of the angles with the three holes in it in the end of the channel farthest from the 1.25 inch support tube hole. See photo on previous page. Hold the angle flush with the end of the channel with the side with the two holes against the flat of the channel.

14. Drill through the two 3/16 holes and through the channel. De-bur the holes and secure the angles to the channel with AN3-4 bolts and AN365-10 nylock nuts. No washers needed. Refer to photo for position.

15. Repeat for the other support beam.

16. Position one of the channels in the fuselage with the completed end forward with the legs of the channel toward the center of the plane. The channel needs to be 12 inches outboard from the center line of the fuselage and held parallel to the center line.

17. Position one of the angles with 4 holes inside the channel and up against the bulkhead. Clamp in place. Remove the channel and backdrill through the 3/16 holes and through the channel. De-bur the holes and secure the angles to the channel with AN3-4 bolts and AN365-10 nylock nuts. No washers needed. Refer to photo for position.

18. Repeat for the other support channel.

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19. Locate the 1.25 inch plastic bushing from the kit components. Rough up the area near the base of the bushing with coarse sandpaper to prepare it for bonding. Rough up the area around the 1.25 inch hole in the channel as well.

20. Trial fit the bushings into the channels with the long part of the bushing to the inside and the wide flange to the outside .

21. Mix a small amount of 5 minute epoxy with some cotton flock added to make a slurry the consistency of mayonnaise. Place a small amount of the flock mixture at the flange of the bushing. Insert the bushing into the channel all the way. Add a filet of epoxy on the inside on the bushing as well. Allow to cure and repeat for the other channel.





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