

8. Seat Installation



Section Objective: Fabrication and installation of the Center console, side support rails, and seat pans.

Required Parts: Central console PN104-100, Side support rail left PN104-102, side support right PN104-103, seat pans 2 parts PN 104-101.

Required Hardware: 3/16 Wide head aluminum rivet grip length 1/4", 6" long 1" by 1" angle aluminum 0.0625" thick.

Required Tools: Dremel tool or equivalent and assorted attachments, sanding blocks, west systems G/5 5 minute epoxy parts A and B, Aeropoxy PR2032 resin, Aeropoxy PH3660 hardener, cotton floc, mixing cups, stir sticks, rivet puller, 2" wide 10oz fiberglass tape, 3" wide 10oz fiberglass tape.

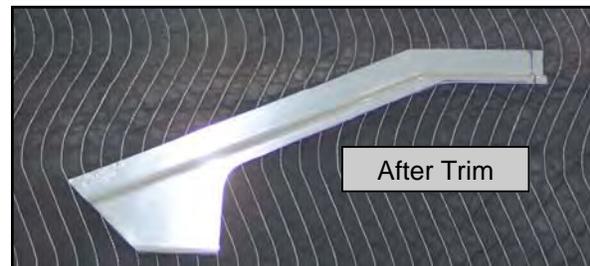
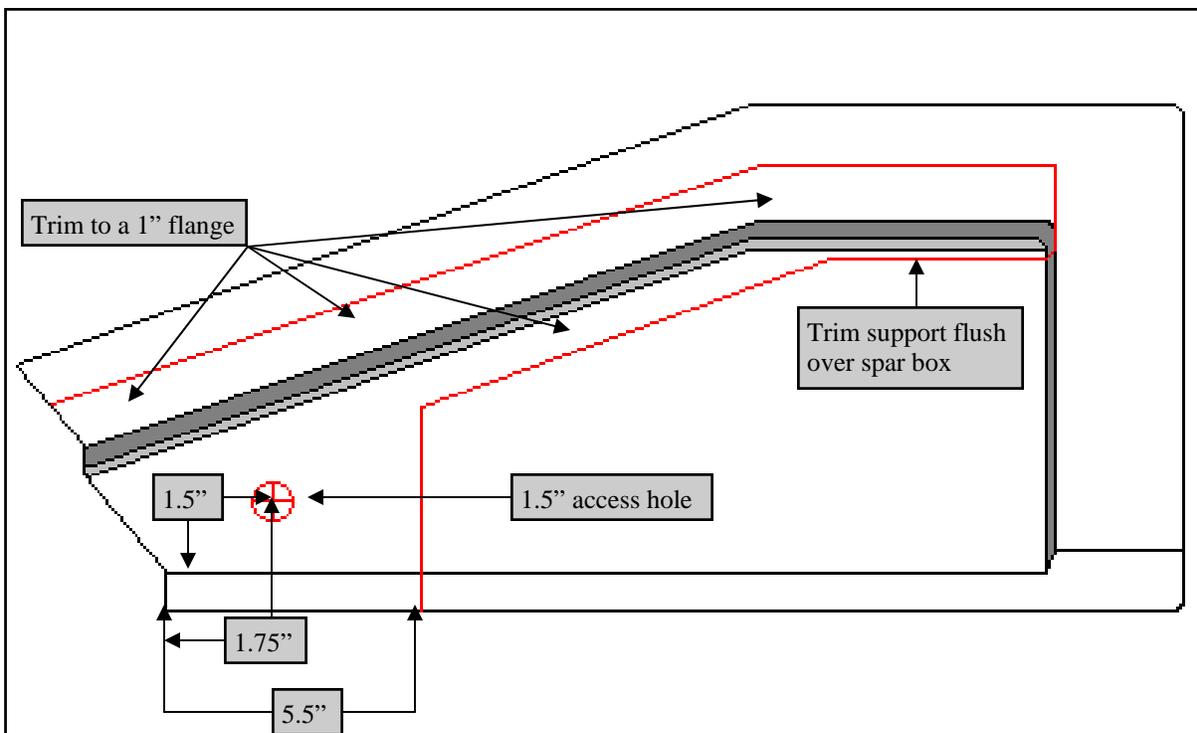
Required Conditions: OAT of at least 60F or better for 24 hours

Required Skills or Training: Simple knowledge of hand tools and use, ability to interpret drawings, ability to properly mix epoxy resin, epoxy and floc mix, lay up fiber glass, and general epoxy-glass working methods.

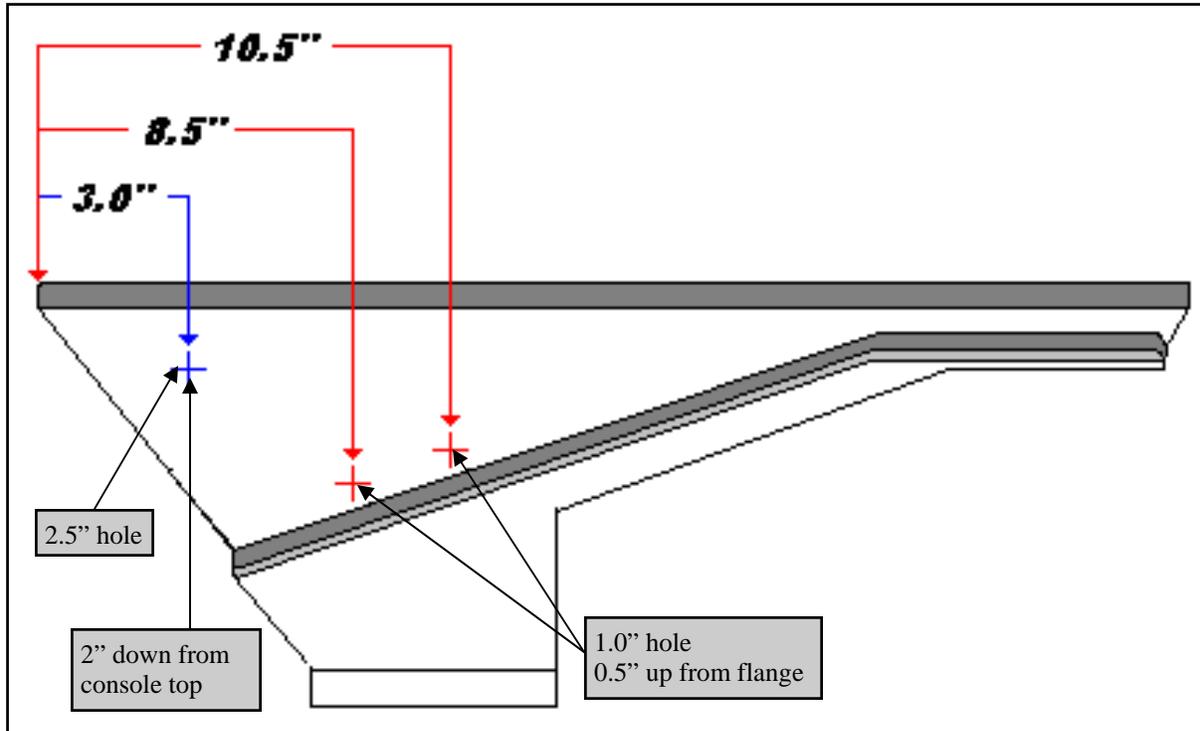
Note: The seat components are the last items to go into the plane after final assembly and almost ready to fly. The seat belts, wings, flap push rods, flap motor, elevator push rod, must be installed first.

Date Completed:

1. Locate the side seat supports rail PN104-102 and PN104-103.
2. Follow the dimensions on the drawing below to cut the seat rail out of the formed part. Do not discard the left over fiberglass as it will be useful on other projects later on.
3. Use the picture to clarify the drawing.
4. Repeat for the other side.

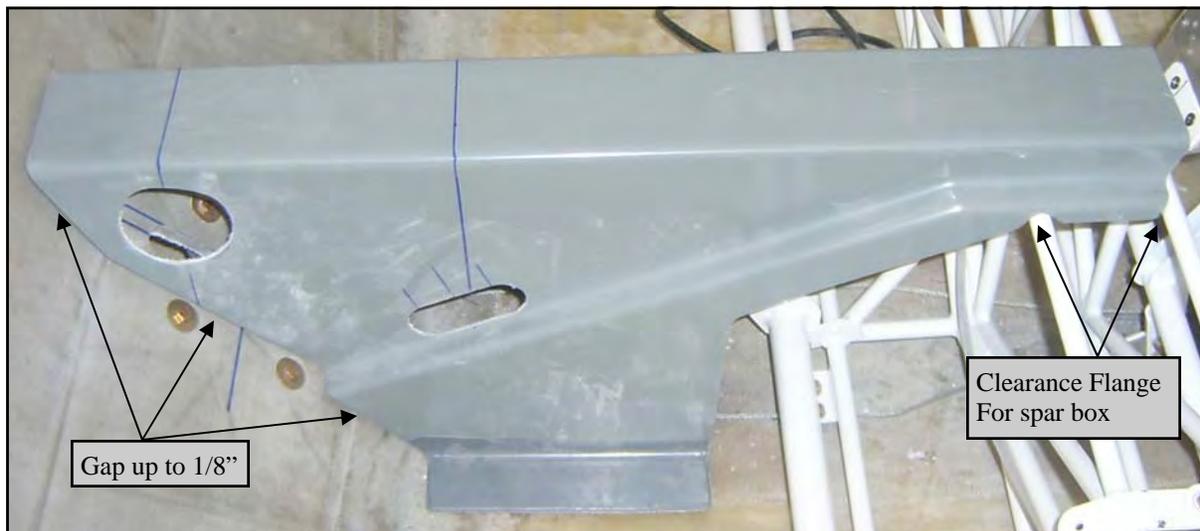


8. Seat Installation



Date Completed:

5. Use the drawing above as a reference to trim the center console as explained in the following steps
6. Measure forward from the top rear of the console 3", Measure down 2" at that point, this is where a 2.5" hole must be drilled to inspect the mid bell-crank.
7. Measure forward from the same point 8.5" and 10.5". Draw a line down to the seat support flange perpendicular to the top of the part.
8. Measure up on these lines 0.5" and drill a 1" hole at each point.
9. Connect the holes at the tops and bottoms to form a oval shape hole.
10. Repeat for the other side of the console.
11. With the holes cut in the center console trim the console to fit on the center line of the airframe. Use the picture below for a guide.
12. The gap between the bulk head and the console can be up to 1/8" wide.

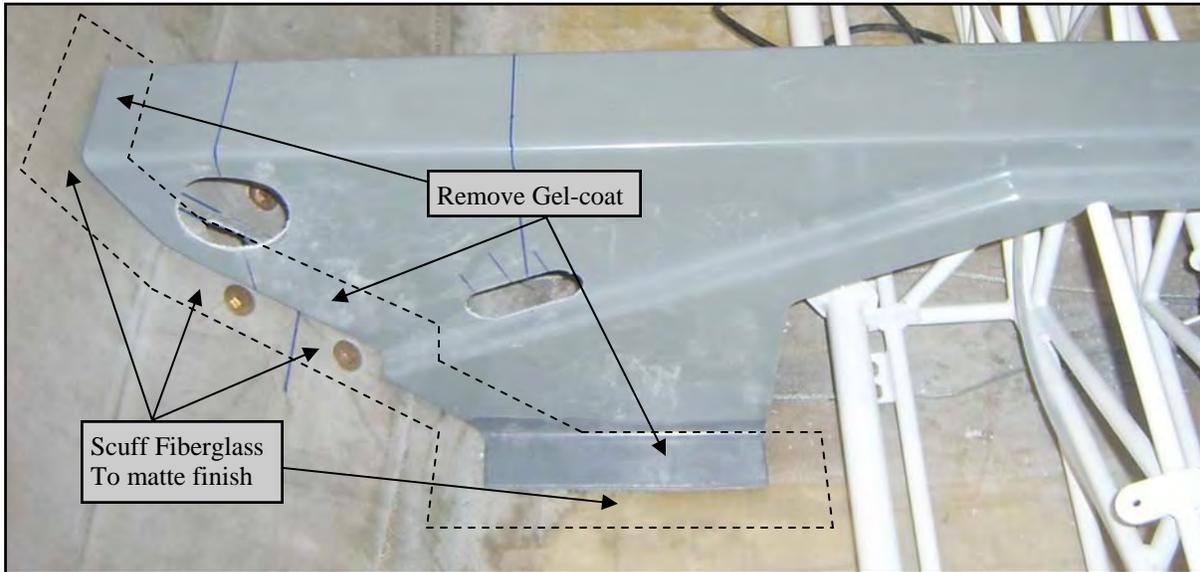


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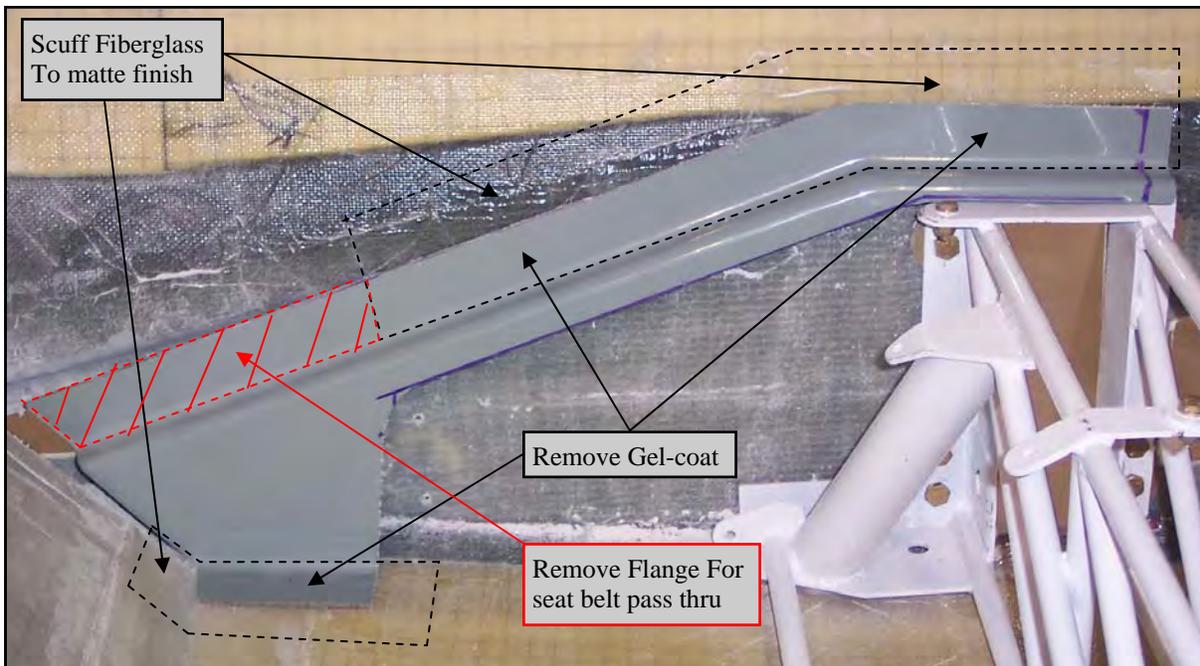
8. Seat Installation



13. When satisfied with the fit of the center console you can start prepping for installation.
14. Put the console in place. Trace the shape of it on the floor and bulk head.
15. Scuff the area with in 2" of the traced line. Only scuff outward around the line as this is were the fiberglass will contact and bond the parts together.
16. Remove the gel-coat with in 1.5" of the edge of the console where it contacts the aircraft.
17. The picture only shows one side, both side must be done.



18. Complete a similar task on the side rails that were fitted earlier.
19. Use the picture below as a guide for completing this task.



20. With all the parts sanded, clean them off with some acetone and a oil free rag.
21. Note the Red shaded area on the support. Remove this area up to where the support matches the fuselage.

Date Completed:

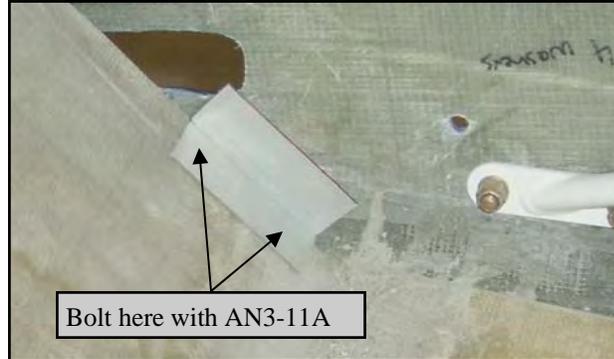
8. Seat Installation



22. To prevent the side rails from pushing outward a retaining flange must be made from scrap aluminum angle.

23. Bolt a 2-3" long piece to the bulk head just above the floor and flush with the edge of the bulk-head where the flap push rod will go.

24. After the side rail is bonded in place a 3/16" wide head rivet will go thru this flange.



25. Cut up the specified amount of fiberglass listed in the box at the right this should give enough to put to layers or plies for both the center console and the side supports.

2" wide material for All parts

- 10 of 4" long
- 4 of 6" long

26. Mix together 1oz of aeropoxy hardener with 4oz of aeropoxy resin. This will give you the required 4 to 1 mix ratio for this glue.

3" wide material for All parts

- 4 of 10" long
- 4 of 7" long
- 4 of 8" Long

27. Wet-out (paint) the areas of the fuselage and the console that you sanded earlier.

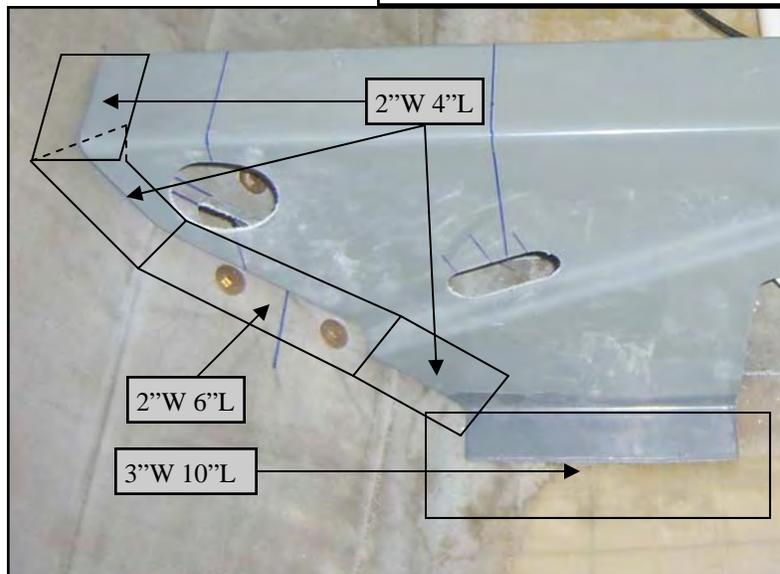
28. Mix about a 1/4 of the total mix with flox, should be about like mashed potatoes.

29. Pile about a 1/2" thick layer on the bottom of the flanges that meet the floor of the fuselage.

30. Set the console in place on the center line of the aircraft.

31. It may be needed to stuff more flox under the flanges to fill up the gap.

32. Use the photo as a reference for placing the fiberglass tape, you should have enough for 2 plies.



33. Use the same method for the side rails.

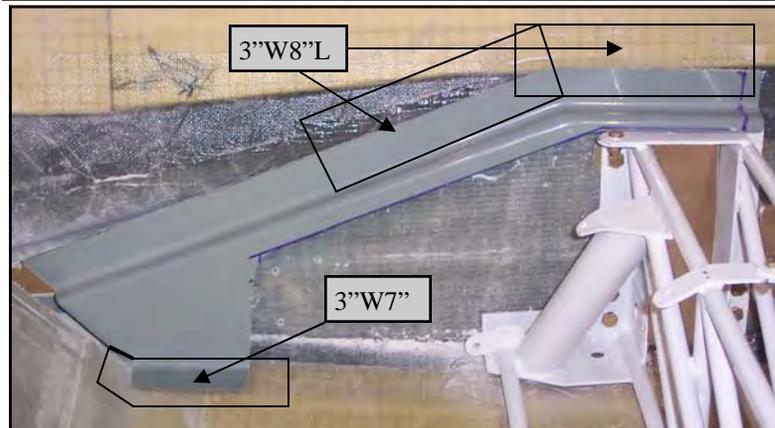
34. A 1/2" thick bed of flox mix under the floor foot will be needed.

35. Lay 2 layers of glass over the foot and floor.

36. Lay 2 layers up the side of the rail to the fuselage side.

37. The glass on the fuse side should stop where the rail stops contacting the fuselage.

38. Use the photo for a reference.



8. Seat Installation



Date Completed:

39. Once the side rails are cured the 3/16" wide head rivet can be installed.

40. Drill a 3/16" hole about 1/2" away from the seat bulkhead and centered in the aluminum angle.

41. Install a 3/16" wide head rivet to secure the rail to the angle.

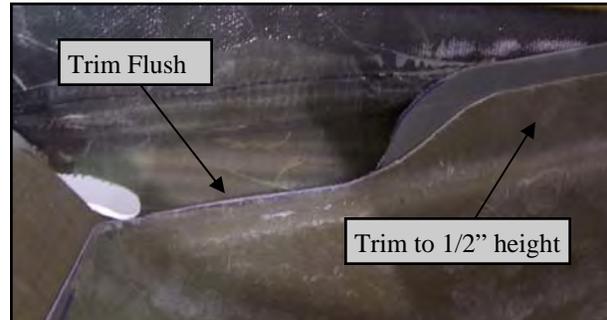


42. Set the seat pans in place.

43. Trim the outboard side of the seat pans as shown in the photo.

44. The vertical flange can be trimmed to 1/2" tall, and should be to save weight.

45. At the point where the side rail no longer contacts the fuselage the seat pan vertical can be trimmed flush to match.



46. The vertical portion of the inboard side of the seat pan must be cleared for the seat belt hole in the center console.

47. That vertical wall should be trimmed to 1/2" tall as with the outboard side of the pan.



48. The portion of the inboard seat pan which comes over the spar box must be trimmed below the center console, this may be lower than 1/2".

49. With the seat pan in place trace the spar box front onto the bottom of the seat pan to determine how far back to trim the pan.

50. This must be done to have good clearance for the stick.

