

Stabilizers

- Trial fit the steel tube inserts into the carbon spar tubes. The steel tubes are held in place with epoxy. Rotate the steel tube while inserting to distribute the glue until the inboard ends are flush.



Photo 55 Steel tube into the CF spar

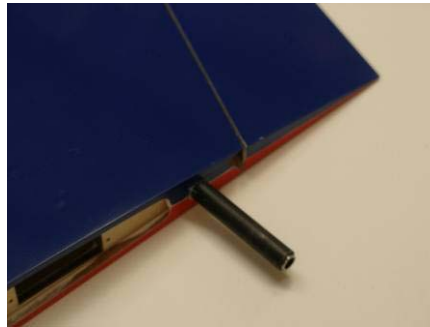


Photo 56 Steel tube flush with carbon spar



Photo 57 Epoxy applied to the steel tube

Discussion: There have been a few occurrences of the gauling of the Carbon Fiber tube in the aluminum stab mount. The problem occurs if the set screw (in the alum stab mt. bracket) is not backed out sufficiently, or there is a raised burr around the set screw threaded hole.

How to prevent this

NOTE: The steel rod insert in the CF tube should be glued in place prior to this procedure. Note that one end of the steel rod is flush with the inboard end of the CF tube.

- Back the set screw out a few turns and visually check that it is not protruding into the stab tube receiving hole.
- Make a hone from a 1/4" dowel and bandsaw a 2" slot in one end, then wrap it with #600 or #800 grit.
- Burnish the hole in the aluminum brackets, especially in the area of the set screw. Blow out any aluminum dust.
- Use the same grit sandpaper to deburr the end of the Carbon tube.



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Assembly & Operation Manual

- Apply Vaseline to the hole and the Carbon tube with a cotton Q-tip.
- Carefully insert stab mount tube into the aluminum bracket allowing for the designed-in stab anhedral.
- During final assembly, snug the set screws to retain the stabs.



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Assembly & Operation Manual

- Bevel one end and round the other of the CF anti-rotation pin.

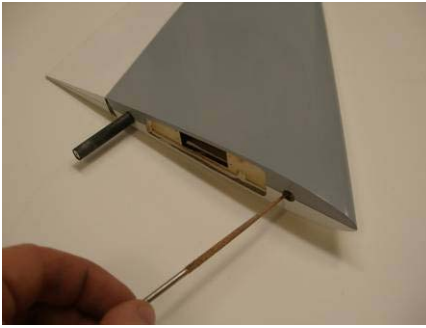


Photo 58 Fine tune the front hole



Photo 59 Bevel and round the CF pin

- Trial fit the front pin in place using the ¼" ply alignment fixture.



Photo 60 Test fit the front pin using alignment fixture

- Tape the CF pin to the ¼" ply fixture after setting the depth that the pin must be inserted.

Hint: Scrap ply wood can be glued in place of the masking tape to the fixture to align rods.

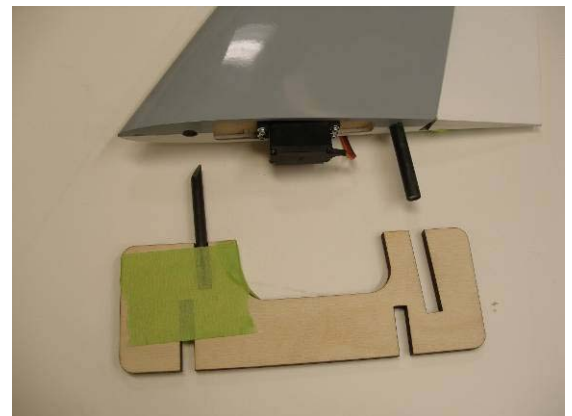


Photo 62 Set the front pin depth

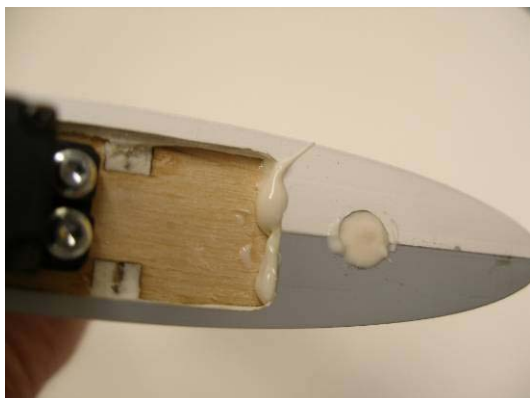


Photo 61 Apply Aeropoxy

- Apply Aeropoxy into the front hole allowing glue to flow on to the leading edge of the stab. Also, fill the hole and area between the root rib and fiberglass skin for increased bonding strength. Wipe excess glue.

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Assembly & Operation Manual

- Insert the taped CF pin into the front hole. Tape the rear spar to hold in position, and allow Aeropoxy to cure.



Photo 64 Molded CF front pin receptacle

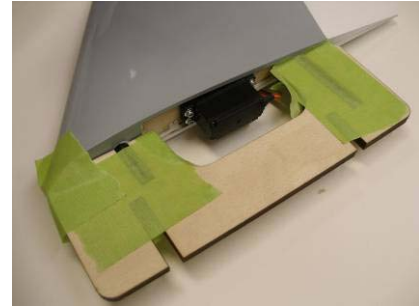


Photo 63 Tape in place until cure

- Use Aeropoxy to glue the molded CF anti rotation pin receptacle to the inside of the fuse. Align the stabilizers such that the leading edges are in line with the dots on the fuselage. A 6-32 bolt is used to secure the front pin.

Note: This procedure is repeated for both stabs and the vertical fin.

- Set screws tightened through holes in bottom of the fuse.

