

# 2010

## Landing Skeg Installation



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### **What is a Landing Skeg:**

- A landing Skeg is a plastic 'cleat' installed into the bottom-side at the frontend of a sailplane fuselage to provide the ability to stop a sailplane from sliding along the ground upon landing.



**Installed Landing Skeg**

### **What the Landing Skeg Installation Kit includes:**

- Skeg mounting bracket.
- Removable Skeg 'cleat'
- Mounting bracket installation tool
- Installation instructions (This document)



**Contents of Landing Skeg Kit**

### **Tools and materials required for installation:**

- Dremel style tool with cutting wheel bit - to cut slot in the bottom of the fuselage for the skeg
- 15-minute 2-part epoxy - for gluing the skeg mount inside the fuselage
- Colloidal Silica or Micro-Ballons - epoxy thickening agent
- Popsicle stick or scrap piece of wood - for positioning the skeg mount inside the fuselage

## Installation Procedure

**Overview:** The skeg mounting bracket is installed inside the front of the fuselage. A slot is cut in the outside of the fuselage to allow the skeg to be inserted into the mounting bracket.

1. In order to determine the exact location of where to cut the slot in the fuselage, temporarily position the mounting bracket inside the front of the fuselage and mark the location of the slot on the outside of the fuselage.
  - a. To position the mounting bracket inside the fuselage temporarily glue the white tubing, included in the skeg kit, to the hole in the skeg body with CA as shown in figure 1.

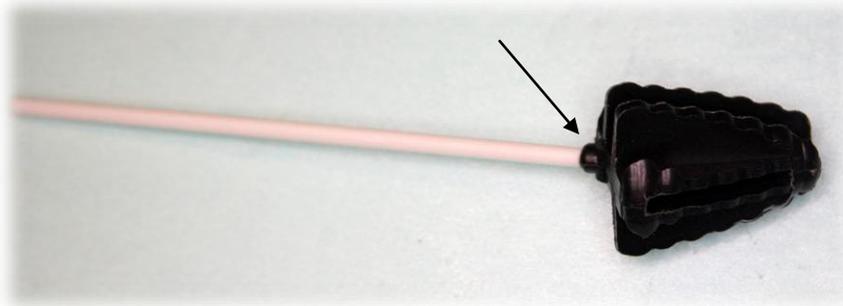


Figure 1: Tubing glued to the end of the mounting bracket

- b. Hold the end of the white tube and insert the mounting bracket inside the front of the fuselage.
2. Mark the location of where to cut the slot on the outside of the fuselage, paying careful attention to where the slot is located on the mounting bracket.
  3. Using your Dremel tool with cutting wheel carefully cut the slot in the fuselage as shown in figure 2. Test fit the mounting bracket in the front of the fuselage. Adjust the size of the slot if required.
    - a. The slot in the fuselage measures approximately 3mm wide by 25mm long and is positioned in the fuselage as shown. (Location of slot shown is approximate).



Figure 2: Slot cut in the fuselage

4. The skeg mounting bracket is ready to be epoxied inside the front of the fuselage.
  - a. *Sand the inside of the fuselage where the mounting bracket will contact the fuselage in order to achieve the best bond possible with the epoxy.*
  - b. *In order to ensure a solid bond with the epoxy between the fuselage and the mounting bracket, wipe the area that has been sanded with a solvent such as denatured alcohol to remove all dust.*
5. Once the area has been sanded and wiped clean, mix ¼ ounce of 15-minute 2-part epoxy to cement the mounting bracket to the inside of the fuselage. Mix Cabosil thickener or micro-balloons with the epoxy to create a “putty like” consistency. You must coat all areas of the mounting bracket with epoxy putty that will come in contact with the inside of the fuselage.
  - a. *Keep in mind that you have only a few minutes to mix the epoxy with micro-balloons, apply the epoxy, and position the mounting bracket inside the fuselage before the epoxy hardens. This is why 15-minute epoxy is recommended.*
6. Apply the epoxy putty to the mounting bracket as shown in figure 3. Ensure that all surfaces of the mounting bracket that will contact the fuselage have plenty of putty applied.



**Figure 3: Epoxy putty applied to the mounting bracket**

7. Immediately insert the mounting bracket into the fuselage by guiding it into position with the white plastic tubing that is still attached to the mounting bracket as shown in figure 4.



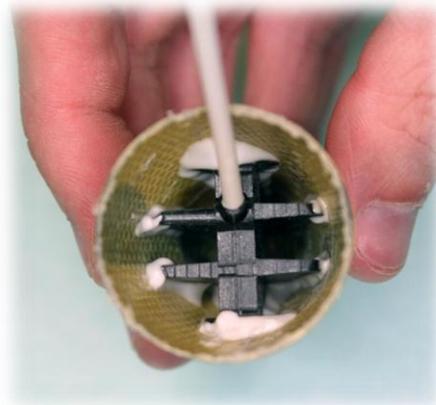
**Figure 4: Mounting bracket being positioned inside the fuselage**

8. While holding onto the white plastic tubing to keep the mounting bracket in place, turn the fuselage over and position the mounting bracket to align with the slot cut in the fuselage. Use the popsicle stick to move and position the mounting bracket as needed. See figure 5.



**Figure 5: Adjusting the mounting bracket through the slot cut in the fuselage**

9. Once the mounting bracket is in place and aligned with the slot in the fuselage add more putty to ensure a secure bond between the mounting bracket and the fuselage as shown in figure 6.



**Figure 6: Mounting bracket cemented in place in the fuselage.**

10. Once the epoxy has hardened and the mounting bracket is secured in place, remove the white tubing.
11. If needed, adjust the size of the slot cut in the fuselage to align with the slot in the mounting bracket.
12. Test fit the skleg by snapping it into position in the mounting bracket through the outside of the fuselage.
13. The skleg can be removed by pressing a metal wire, or equivalent, into the hole in the end of the mounting bracket inside the fuselage.

14. When the skeg has been installed correctly your fuselage will look like figure 7.



**Figure 7: Installed Landing Skeg**

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