

Installation Guidance PH Aviation RV Max Flap Actuator New Retro Installation Kit

The new retro kit is designed to assist in the installation of the RV Max Flap Actuator in the single-digit RVs: the RV-6, -7, and -9. All of these aircraft have similar flap channels that mount the flap actuator. This is an RV-6 channel, but they're all very similar.

Legacy Motor – Remove the flap channel from the airplane and place it on the work bench.



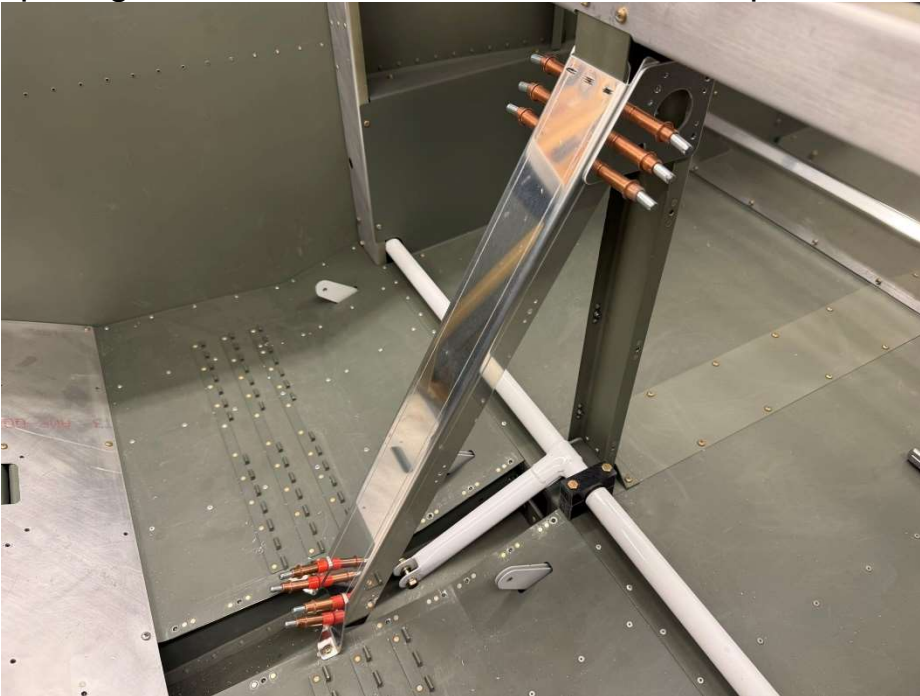
Remove the Motor – Remove the 1/4" bolt, castle nut, and cotter key.



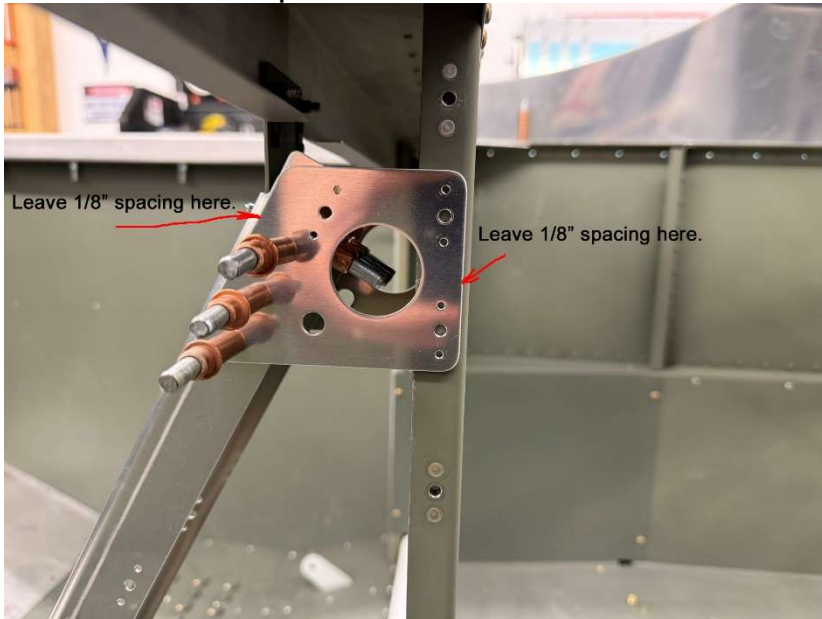
Drill Out Old Brackets – Remove the old bracket, shim, and doubler on the side of the channel. Remove the two nutplates shown on the sides of the flap channel. You will reuse the attach angle shown cleoed below. You can also reuse the nutplates but now they will be attached to new brackets (see below).



Reinstall the Flap Channel – temporarily mount the flap channel in the airplane (RV-7 in this example). Position the new brackets as shown below leaving about 1/8” spacing around the brackets as shown in the photos.



Position New Brackets – Leave about 1/8” space between the brackets and the outside of the flap channel as shown.



Drill New Brackets – Drill the three #30 holes through the brackets and the flap channel as shown taking care not to interfere with the old holes, and cleco the brackets into position (for alignment purposes, slide the AN5-25 bolt through the holes in the brackets before this step). Drill the holes for the two new #8 screws through the brackets and the vertical backrest brace as shown. You will later mount two new #8 nutplates on the back of each bracket for these attach screws. Mark the two original nutplate holes using a Sharpie pen through the channel onto the new brackets from the inside. In a later step, you will reinstall these original nutplates onto the back of the new brackets thus replacing the original two nutplates that attach the side panels. So, you will mount a total of three #8 nutplates on the back of each new bracket: the two new nutplates and the original nutplate for the side panel cover. The 1.25” diameter lightening hole is optional.



Assemble New Brackets to Flap Channel – After installing three nutplates to each bracket, rivet the brackets to the inside of the flap channel as shown (use flush rivets). Attach the flap actuator to the new brackets using the supplied bolt, bushings and castle nut. Use the thin washers as necessary to take out any play between the bushings. Caution: do not tighten castle nut such that actuator cannot rotate. Now you can assemble the flap channel to the vertical backbrace as shown by attaching the new brackets to the backbrace with #8 screws. Dimple flange for screws as shown (countersink brackets for dimples).



Reattach the Side Panels – Final step is to locate two new holes in the side panels where the head of the bolt and castle nut protrude slightly through the panels.

Contents of the Bracket Kit –

