

## **FRAME INSTALLATION**

The installation of the Modular Panel Frame in a RV-6 will be almost identical to the installation of the stock RV-6 panel from Van's. The only difference will be the fabrication and installation of the PA-2 and PA-1 reinforcing angles as shown in the enclosed drawings. If you are installing our "XL" model, you will be fabricating the F-793M angle in lieu of the PA-2.

The installation of the frame will be slightly different for those builders retrofitting a standard panel vs. those just beginning their panel installation.

## **NEW PANEL INSTALLATION**

If you are just starting your panel installation, and you have not drilled your top skins to the forward ribs, you can begin your installation by fitting the frame to the fuselage for a trial fit. If the frame bows out toward the cabin, file the bottom corners of the frame until you achieve the desired fit.

Fabricate the PA-1, PA-2 or F-793M if installing the "XL", as shown on the installation drawings.

To transfer the screw holes from the frame to the PA-1, Clamp the PA-1 to the frame as shown on view A-A of the installation drawings and drill. Drill the additional holes as shown on the drawings for the rivets which will hold the PA-1 to the frame when all the screws and plates have been removed. Some builders have opted not to rivet the PA-1 and frame together but instead, use AN509-8R8 (countersunk) to allow the PA\_1 to be removable at anytime in the future. This is perfectly O.K., but it is not likely that most builders will have to remove the frame from the airplane, once it has been placed into service. After all, the plates are removable and that allows for all the room necessary to service the necessary equipment.

Make sure you DO NOT RIVET THE PA-1 REINFORCEMENT ANGLE TO THE FRAME UNTIL ABSOLUTELY SURE THAT THE FRAME DOES NOT HAVE TO COME OUT OF THE FUSELAGE. The Frame must remain flexible during installation.

Since the top skins have not been drilled to the supporting ribs, there should be no need to contour the outline of the Panel Frame to fit the fuselage. VERY GENTLY, bow the frame as needed and place inside the fuselage. Cleco the PA-1 angle and Frame together for some additional stiffness. Match drill the frame to the supporting ribs first and cleco. Place the PA-2 (or F-793M) angle behind the frame and match drill to the frame only. Do not drill the PA-2 to the fuselage side skins yet.

This will be a good time to begin the installation of the frame to the fuselage just as Van's recommends. In other words, install the frame just as if it was the stock panel. However, keep in mind that the frame will receive nutplates behind it as shown on the installation drawings. These nutplates will receive the screws that will attach the panel plates to the frame. Also, identify and mark the locations along the frame which will receive countersunk screws.

Once you have completed installing the frame to the fuselage, backdrill the PA-2 (or F-793M) angle to the fuselage side skins. Use the recommended spacing shown on the installation drawings.

Remove the frame from the fuselage.

Using the matching holes provided with the Modular Panel, cleco the Panel Plates to the Frame. Make sure you have a cleco in every hole. Place the entire assembly on a flat table with front side

(plates) down. In other words, the rear of the frame should be facing up. Allow the cleco side of the assembly to overhang the table, so that the assembly rests completely flat.

Mark the desired spacing for the screw holes that will attach the plates to the frame. We recommend a minimum spacing of 3 inches, and a maximum of 6 inches. After all holes have been drilled, remove the plates from the frame and deburr all the holes. Install all of the necessary nutplates to the frame using the recommended nutplate shown on the installation drawing. The drawing is only a guideline. Use your own judgment to determine the correct type of nutplate needed.

Machine countersink and prime the PA-2 (or F-793M). If installing the PA-2, install the two K-1000-08 nutplates called out on the drawings. Dimple the fuselage side skins at the locations where the angles will attach and rivet the angles to the fuselage.

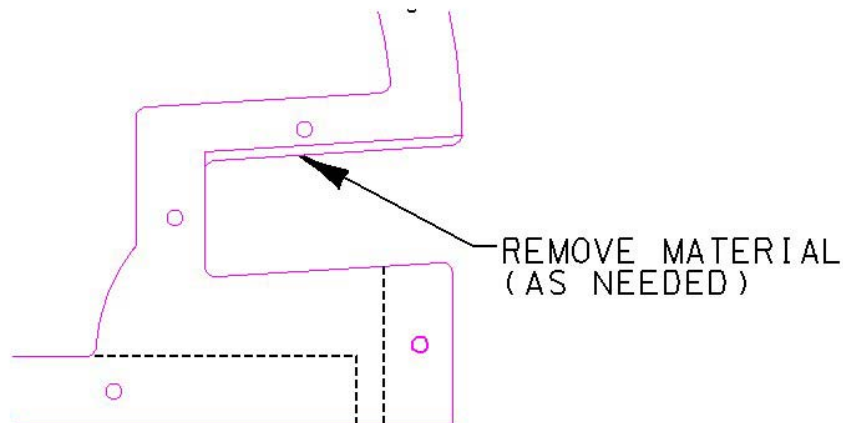
You are done with the Frame.

### **RETROFITTING AN EXISTING PANEL**

If you are replacing your existing panel for a Modular Panel, you will have to slightly contour the Modular Panel so that the shape of the pieces matches the old panel. We are providing some guidelines below, but feel free to use any method necessary to achieve a perfect fit.

To check if any contouring of the Modular Panel is required, place the modular frame face down. Place the old panel on top of the frame, using the top of the forward canopy deck as alignment; trace the outline of the old panel onto the back side of the modular frame.

If the maximum amount of contouring required does not exceed 1/8<sup>th</sup> of an inch, then we recommend you clamp the frame to a sturdy table and contour the frame using a handheld belt sander to remove the excess material. If the amount of contouring exceeds 1/8<sup>th</sup> on an inch, we recommend you lower the top of the frame first before contouring by reducing the frame width at the forward canopy decks location. See the sketch below:



Once the necessary material has been removed, check it against the old panel and with the use of a handheld belt sander, spot remove material in the necessary locations. Take your time in contouring the panel frame. After the frame has been fitted, cleco the panel plates to the frame and contour the plates to match the frame.

Read the New Panel Installation notes above to complete the retrofit of the Modular Panel.