

Toward Seamless

It seems like every fly-in I get questions about how I get my hatch seams so tight. So after receiving threats from our new newsletter editor to provide an article or else, I thought I would try to show how I do it.

Over the year the manufacturers have gotten better and better at making the hatches fit right. However even the best made kit is faced with some limitations on just how tight the hatches can be fitted right out of the box. So, if the modeler wants a near invisible seam it takes a little effort.

After installing the hatch the next step is to make sure that it and the fuselage are “locked” together. On some kits this is assured by the attachment on some of the hatches, but you need to make sure that all of the hatches cannot slide side to side. This can be achieved by adding small tabs to the hatch that will key into the fuselage. The tab is made of 1/8” ply sealed with CA, which is anchored into the hatch. A slot is then cut in the fuselage flange that the tab can fit into. Make sure that the slot is large enough that the tab does not touch it, this needs to be a loose fit at this point. Now wax the tab and the hatch area around it with a good parting wax and put the hatch in place, then pour 30-minute epoxy and micro-balloons over the tabs on the backside of the fuselage flange to form sockets. Obviously this step is much easier if done before installing the ducting.

Now you need to determine how bad of a gap you have. If you cannot slip about two sheets of paper through the gap you can probably skip this step, if, however, you have what my wife calls “gaposous” you will need to continue on. Use a small sanding block and make sure that the fuselage flange is smooth, then wax this area, apply a bead of putty to the hatch flange and then put it in place. I use either 30-minute epoxy with micro-balloons or light weight auto-body putty for this. After the putty is hard sand away anything that squeezed out.

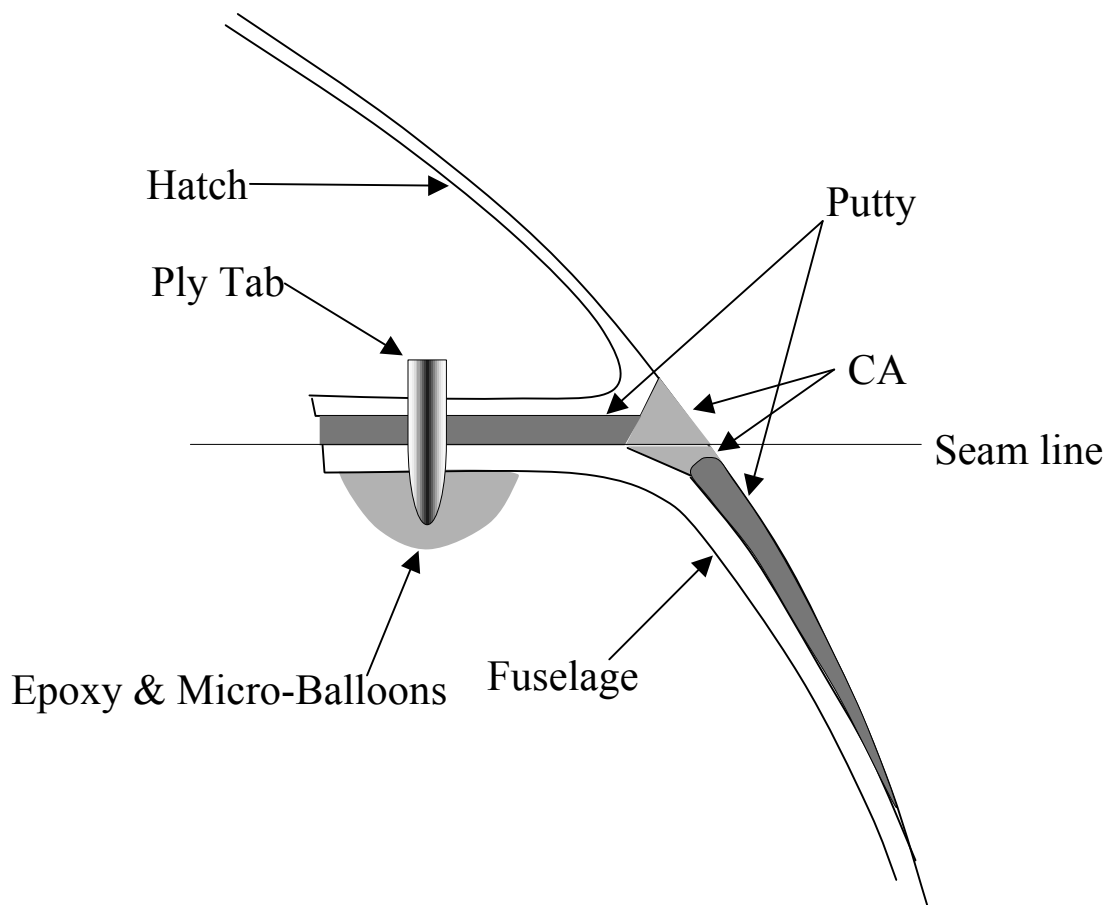
Now this is the part that will probably make you squirm the first time you try it. Using a sanding block, bevel the entire edge of the hatch back at least 1/16”. Make sure you get the entire perimeter of the hatch and don’t be shy with the sanding block. Place a piece of cellophane tape on the fuselage flange so that about 1/4” of it is sticking over the edge. You do not have to do the entire seam at once, just work on what can be done with a single piece of tape. Wax the tape and put the hatch in place. Now apply a very small bead of medium CA to the edge of the hatch. At this point the tape is providing a shelf for the CA that is matched to the fuselage while you build up the hatch’s edge. Apply very thin layers and use a light dusting of kicker every few coats. If you put on too much CA in one pass only the outer surface will cure and when you remove the hatch you will have a small mess to deal with. Only use medium CA, thin will wick all over the place and sometimes will penetrate the parting wax, thus gluing the hatch in place, and the thick will not work into the groove well enough. Also do not try adding filler to the CA; this will turn into something like wrought iron. Make sure that you build the edge out past the edge of the fuselage. Once you have gone all the way around the seam you need to repeat the procedure for the fuselage side of the seam. Sand its edge back, place the

tape on the hatch flange and go for it. Once you have finished you will have an invisible seam, but a razor sharp edge sticking out. Now with the hatch in place sand the CA smooth. Use a small block to work the fore and aft seams. Use a block to get the sides close, then use a 8" X 2" piece of 400 grit paper like a shoe shine rag to finish up.

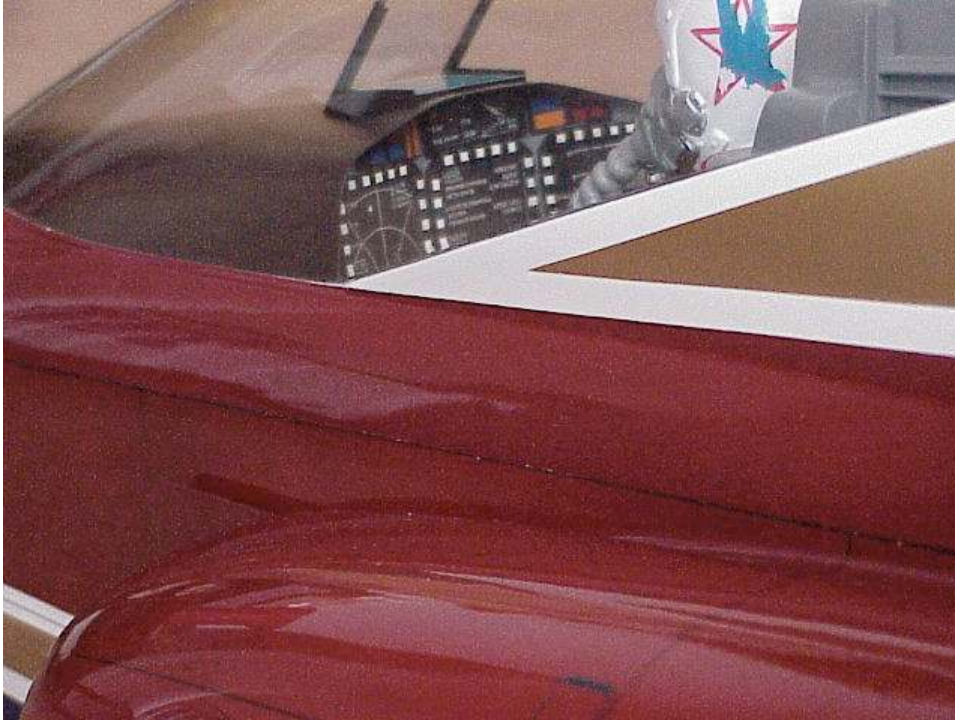
At this point the seam should be invisible, but you probably will notice a few areas where you have a step off to the side of the seam. These steps are created by miss matches between the hatch and the fuselage, which are not noticeable until you demand a near perfect seam. With the hatch in place fill these areas with putty and sand smooth.

From this point on any time you work on the finish in the area of the seam have the hatch in place. You will also want the hatch in place during priming, painting, clear coating, and, if you do it, wet sanding.

The final step in making the seam disappear is best called camouflage. Patterns that change color across a seam work very well. Panel lines that run along the seam will also hide what ever is left of the seam. Apply panel lines with the hatch off and where the line is on the seam try to put about $\frac{3}{4}$ of it on the fuselage, and do not put any on the hatch along the seam.



Cross Section of Seam Build Up



So, where is the seam?



A few details