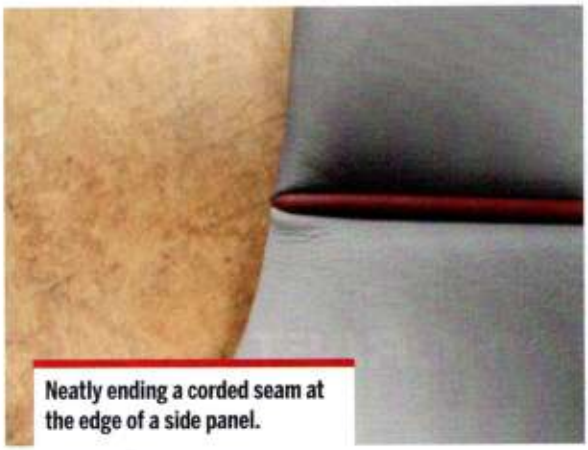
# MOUNTING SIDE PANELS

This month, **Dennis Wolter** walks us through wrapping and mounting Cessna side panels.

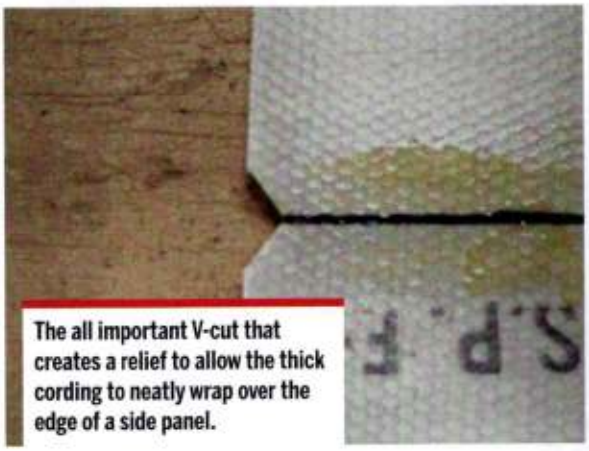
Last month's article on side panels ended with the completion of the sewing process. Now we're ready to trim, mount, and wrap the finish covers on the repaired or new metal side panels.

The first step in this process is to apply a coat of brush-on or spray-on upholstery contact cement to the back of the seams and pleat lines of the upholstery, and along the marker lines on the metal side panel. After allowing the adhesive to partially dry for 10 to 15 minutes, carefully bond the finish material to the backing panel. Be sure to locate the seams and pleats accurately over the marker lines drawn on the backing panel.

Pay particular attention to the tapered ends of the cording, making sure that they end neatly at the edge of the backing panel. Don't forget to accurately make a neat V-cut at the edge of the backing panel so that the extra thickness of the cording lays flat at the panel's edge when the cover material is wrapped over the end



Neatly ending a corded seam at the edge of a side panel.



The all important V-cut that creates a relief to allow the thick cording to neatly wrap over the edge of a side panel.

Applying glue to the seam lines on both the back of the finish cover and the side panel.

## Carefully pulling the material as you go will result in a wrinkle-free and snugly-stretched side panel.

of the backing panel.

Now, we begin the edge wrapping of surplus finish material around the perimeter. Start by separating about 2 inches of the lightly glued foam and cambric backing from the finish material. Next, neatly trim away the foam and cambric backing to the edge of the metal side panel. Apply a coat of adhesive to the perimeter of the back of the side panel as well as to the back surface of the exposed finish material.

Start at the center of the side panel and, with a light pulling motion, neatly wrap and bond the approximately 2 inches of finish material down onto the side panel. The idea is to ensure none of the foam wraps over onto the side panel. Repeat this step at the center area of all four edges of the panel. With the finish material glued at the centers, continue wrapping the edge of the panel by lightly pulling the material toward the corners as you bond it to the metal panel.

Cutting the finish material to accommodate a slightly rounded outside corner. Note that the cuts are set back about 1/8 inch from the corner of the side panel.

Wrapped, slightly rounded, inside corner.

Using sharp scissors to precisely cut the surplus foam and backing material along the edge of a side panel.

## The tighter the radius of the curve, the closer the cuts should be to one another.

Moving evenly from the center to the edge will allow you to work any potential wrinkles out toward the corners of the panel. Carefully pulling the material as you go will result in a wrinkle-free and snugly-stretched side panel.

The final step in wrapping side panels is neatly trimming and wrapping the finish material at the corners. It's a good idea to avoid sharp corners. At Air Mod, we create a small radius at each corner of the backing material. Then we make small pie cuts, as shown in the photo on Page 24. Wrap the center pie cut over the edge with a light pulling motion as you press the material down and move outward to the others. Using this process allows the corners to be nicely wrapped, with no surplus material overlapping that would create a bulky mess at outer corners.

Now, let's talk about inside corners. When cutting the material for an inside corner, we like to allow for a 1/8-inch

Finished side of a slightly rounded outside corner.

Finish material, cut and ready to be wrapped at a rounded inside corner.

Nicely wrapped rounded inside corner.

V-cuts ready to be wrapped over the edge of an outside curved panel.

V-cut finish material wrapped over the outside curved edge of a panel.

Wrinkle-free edge of an outside curved side panel.

**One important edge cutting detail: do not cut the finish material all the way up to the edge of the backing panel.**

inside radius. Wrapping this slightly radiused corner involves two cuts in the finish material approximately 1/8 of an inch apart and ending just short of the edge of the backing panel. Again, wrap the thin center strip first and then the two ends of the adjoining material. This will create a neat, wrinkle-free inside corner.

Move on to wrapping long curved edges. Wrapping an outside curved edge of a side panel involves small V-cuts along the edge. The tighter the radius of the curve, the closer the cuts should be to one another. Wrap the material over the edge with a light even pulling motion. For an inside curved edge, you need to make multiple straight cuts in the finish material along the curved edge of the panel. Pull the material outward as it is being pressed down along the curved edge of the side panel.

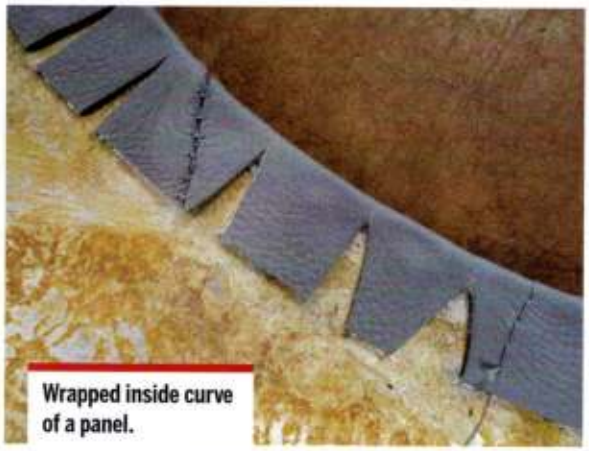
One important edge cutting detail: do not cut the finish material all the way up to the edge of the backing panel. Stop the cuts short of the panel edge by about 1/16 to 1/8 inch. This small amount of material will create a neat finish as you wrap the material around the edge of the metal backing panel.

As with so many technical things we attempt, practice makes perfect. Make up little test samples that replicate the geometry and materials of the process at hand. You will be glad you did.

Next month, it's on to those dreaded headliners. But, with only a few exceptions, they aren't the monsters some think them to be. Until then, fly safe!

Industrial designer and aviation enthusiast **DENNIS WOLTER** is well-known for giving countless seminars and contributing his expertise about all phases of aircraft renovation in various publications. Wolter founded Air Mod in 1973 in order to offer private aircraft owners the same professional, high-quality work then only offered to corporate jet operators. Send questions or comments to editor@cessnaflyer.org.

Straight-cut finish material ready to be wrapped over the edge of an inside curve of a side panel.



Wrapped inside curve of a panel.

Smoothly wrapped finish side of the same inside curve.