

# INTERIOR RENOVATIONS - PART 2

by Dennis Wolter, Founder and Owner, Air Mod, Inc.

After thinking about it for perhaps quite a while, it's finally time to renovate your interior and your research has led you to a company like ours. The day arrives when when you drop off your airplane at our shop. Plan to spend three to four hours for a review of all the details involved in renovating the interior. Due to the fact that there is a Beech/Cessna service center on the field, as well as a full-service avionics facility, representatives from those businesses will also be present at this initial meeting to coordinate any avionics upgrades, annual inspection, or other outside work you may want to take care of while we're doing our interior renovation.

This process actually begins long before drop-off day. Over the years as I have presented seminars, written articles and communicated with aircraft owners, I have stressed how important it is for an owner to keep a notebook in the airplane. As you cruise along, take notes on items you or your passengers feel need to be improved, modified, or added to the cabin. Think of such things as better ventilation, lower cabin sound levels, uncomfortable seat issues, air leaks, deficient cabin heating, cumbersome or inadequate passenger restraints, tedious door latches, better cabin and instrument lighting, storage issues, defective seat latches and reclining mechanisms, nonfunctioning components, etc. Pilots and passengers relate to the airplane by the condition, comfort, safety, and design of the cabin. Taking notes of these cabin conditions will help to ensure that important improvements will not be overlooked when the interior is renovated.



Computer images of previously completed projects organized by aircraft make and model.

Forty-seven years of working on customers' airplanes has proven to me that renovating a new-to-you airplane shortly after being purchased can be a big mistake. It's amazing how extensive and detailed some of the wish lists are that our customers put together as they fly the airplane for a year or two.

Here's another good reason to fly your newly acquired airplane before jumping into making changes and improvements: A good renovation plan is one where cosmetic projects such as interior and paint are normally best done last. It seems that owning and flying a new-old airplane almost always leads to some potentially invasive maintenance and upgrade projects that could compromise new paint and interior. Avoid the unnecessary wear and tear, fly the airplane, get systems repairs and upgrades out of the way, then make the airplane beautiful.

*"...renovating a new-to-you airplane shortly after being purchased can be a big mistake."*

That said, there are some tasks that can be more conveniently undertaken when combined with another project. Installing avionics and autopilots while the interior is removed and the cabin is cleaned and corrosion-proofed allows avionics technicians to have total access to the cabin for removal of old wiring and neat installation of the new stuff. Keep in mind that new windows should be installed before new exterior paint. Actually, an ideal time to install windows is when the interior is removed.

A great source of information in the planning of projects and improvements can be talking to seasoned type club members who have been through this process a time or two. They can also help steer you to quality shops who have provided good results. If applicable, ask about how a shop handled a problem that may have arisen. You want folks



Customer material choices with a hand-drawn design sketch created by me with input from the customer.

who are as enthusiastic about solving an unforeseen post-delivery issue as they were to sell you the job in the beginning. Other owners are the best source for this information. Passion is the main reason most people buy an airplane, and the good technicians out there share that passion. I can honestly say that there are many, many aircraft technicians who love this work and truly support general aviation. It is important to find and support these shops.

OK, it's time to get off my soap box and get down to the business of renovating airplanes. When the airplane arrives at our shop, we begin by taking the owner's previously generated wish list, inspecting the airplane, and going

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One of several mock ups we have in our front office.





*Custom fitting in a seating station to ensure correct ergonomic geometry that accommodates the physical dimensions of the pilot.*

over every item on the list. We discuss how best to incorporate those items in the renovation, as well as to discuss any issues we observe that need to be addressed. This meeting will generate an all-inclusive in-house detailed list that we will follow as we progress through the project. We then go into the office, where pictures of previous projects, sketches, and material samples help us design a custom interior. Next, the customer sits in one of several display seats and cabin mockups as we do a complete ergonomic study,



*Typical tear-down report and supporting photos.*

ensuring that the lumbar, thigh, and cervical (neck) shapes on the seat are carefully dimensioned to comfortably accommodate the person sitting in that seat. The other seating stations will be ergonomically dimensioned to accommodate what the physical design world considers to be the current 'standard measure of man.' Building a seat to these dimensions will comfortably accommodate 90% of adults. It is not uncommon for us to custom fit a favorite seating station for a spouse or other frequent flyer.

We also evaluate such things as armrest height, clearance above the person's head, and glareshield height, again following specific dimensions and measurements according to the customer's need. Going through this process ensures that the new interior will greatly increase comfort and reduce fatigue on long flights.

At this point, we usually take the customer to the Cincinnati airport for a commercial flight home (unless they were lucky enough to have a friend follow them in another airplane).

It's time to get to work! The first thing we do is to fire up the airplane and ground check as many of the systems as possible as we taxi the airplane over to the radio shop for a complete avionics and auto pilot pre-project ground check. Should an existing problem be discovered, the avionics shop will email the owner to see how or if they would like to resolve the issue. At the end of the project with our work completed, we repeat the taxi run-up and avionics check before returning the airplane to the customer. The benefit of all this testing is that we avoid the possibility of returning an airplane to a customer with a problem we may have created during the renovation.

With the airplane back in our hangar after the avionics check, we begin the eye-opening process of disassembling and inspecting the entire cabin, components and systems, and documenting our findings, enabling us to create an itemized "tear-down report" complete with photographs and cost estimates of repairs needed. This information is emailed to the customer within ten days of project start-up. And the pictures don't end here. As we progress through all stages of the project, we send the customer updated images of repairs being made and work being completed. A phone call accompanying the emailed pictures keeps everyone up to date as we progress. Stay tuned next month as we continue to walk through every revealing step in this process. Until then, fly safely!

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