

PFA Restoration Rules of Thumb
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1. Define the goals of your project. Try to be honest about your technical abilities and how much you have to spend. If you've never done this before, you'll want to keep your project size manageable and be frugal. If you have difficulties you could have your plane down for weeks or months while you get help. If you have difficulty after you start your project, see your A&P for advice or access the forums online in the www.PiperOwners.org/www.CessnaOwners.org website.
2. Purchase the parts catalog for your airplane. This is a key item in making your project easier, accurate, safe and legal. If you don't already have a parts manual, checkout www.eflightmanuals.com and look up your aircraft. This company has them all very economically priced at less than \$50. In this manual you will find drawings of every part of your airplane with each part identified in a sidebar parts list. Here's a hint: Some part specifications have changed over the last few decades. Piper from time to time improves certain parts and they have a new part number. The parts manual that you purchase will be dated when your airplane was manufactured and won't have updated parts numbers. If you have trouble finding a part number be on the lookout for a new part number.
3. Sourcing of parts. The companies listed in the sidebars of restoration articles in *Pipers* magazine are quality companies that supply great products. However, if you get the part number wrong and have to return one of their products you'll run the risk of paying a sizable restocking fee in addition to shipping, as high as 25% of the purchase price. Like carpentry where you measure twice and cut once, for restoration projects double check and confirm your part numbers before placing an order. If you run into confusion call or email the supplier, check with your mechanic or other competent pilot/plane owner or use the PFA online forums. PFA recommends relying on the PFA online forums for all kinds of aviation-related information and help.
4. Order your parts. They may show up in less than a week via the lowest cost and slowest method of shipping. It frequently happens that the vendor who said that a product was in stock actually doesn't have it at the time your order it and that part(s) becomes back-ordered. A back-ordered part can take from a few days to a few months to arrive. It has also happened that the part specified in the parts manual is incorrect and the vendor ships the wrong part. By the time you get the right part two weeks could go by. Check each part upon arrival for part number accuracy, airplane accuracy and that the part will actually work.
5. Starting your project. Don't start your project until all of the parts have arrived and they pass the accuracy test in number four above. If you start your project before all of the parts arrive you can be down for weeks or months. And if it's possible, check each device for quality. Heed our advice as this happens to our members frequently.
6. Go slow. Better yet, *go slower*. Most of the errors that occur in restoration projects are due to owner fatigue and impatience. If you are getting frustrated or the project isn't going as well as you'd like, take a break for a few hours or overnight. It's better to go slow and have an end result that you're proud of.

7. Consult with experienced restorers. Whether your A&P, best friend, neighbor in the hangar next to you, fellow member or vendor; ask for help! Let's say that again, *Ask for help!*

8. Do not throw any old parts away. No matter how big, small or seemingly inconsequential, do not throw anything away. You'll probably need to look at it later. If you don't have a workbench near your plane then set up a table to stage everything on. Parts that come out and parts that go in can be put on the table. If it's a big project, get two tables; one for parts out and one for parts in. Get a box of plastic bags and store everything in these bags. Use individual bags for small areas of the project, stick a piece of masking tape on the bag and label it. Keep all pieces of a small area of the project together on a table near your airplane. When it's time to reassemble it, you'll have everything you need for that area including all of the old items that you removed. If the reassembly isn't smooth you can reference everything on the table to assist you in the reinstall.

8. If one of your projects has to do with replacing plastic, Plexiglas or fiberglass always trim very carefully using vendor-recommended tools and procedures. Belts sander or sandpaper, a file, a drill with the correct bit and a Dremel(tm) help greatly. And remember this: Always trim and fit perfectly *before* painting.

9. If one of your projects has to do with anything electrical, disconnect your battery before you start. Failure to do so could result in an entire airplane of non-functional electric and electronic devices. In some airplanes this would be over \$100,000 dollars in damage. If in doubt, see your A&P or avionics repairman.

10. When your project is done, admire your handiwork and call all of your hangar buddies over to see the finished product. This will give you something to squawk about next time you're hangar flying and perhaps encourage you to try another project.

11. And don't forget to take a picture and post it on our online forum. It'll make all of the other members jealous!

12. Don't expect perfection. There will always be little places in your project with tiny errors. These don't cause problems except with your expectations. Your project will look orders of magnitude better than it did before you started. Be proud of your work and if there's a little goof, don't get frustrated. On the next project you'll do even better; this is why we have rule number 1!