10 Best Fixes for Finishing Mistakes

Cures for common problems, and how to prevent them in the first place

BY TERI MASASCHI

Hobbyists and professionals alike make mistakes in the shop. When you're building a piece, fixing an error is fairly straightforward: Back up and start again by milling a new piece, recutting a joint, or fitting in a patch. But finishing mistakes can be harder to overcome—hence the dread many woodworkers feel.

Problems can pop up at any one of three points in the finishing process—surface preparation (and assembly), staining and coloring, and applying the topcoat. I'll show you some of the methods I use as a professional to back out of a mistake and to try to keep it from happening in the first place.

The best way to avoid mistakes altogether is to practice on a sample board. Testing the colors and materials you want to use will alert you to problems before you risk ruining an expensive project. Also, resist the urge to rush through the finishing process. You can nearly always tell when someone has taken a shortcut.

And finally, even if you make mistakes you can't fix, after suffering through them you probably won't repeat the same ones again.

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Surface flaws

The most common pitfalls are sanding swirls and tearout, sanding through the veneer of hardwood plywood, and glue squeeze-out. Many of these maladies can occur even if you're trying to be meticulous. And you might not see the problem until it glares at you through a freshly applied coat of oil or stain.

1 SCRATCHES AND TEAROUT

Problem: A random-orbit sander left its signature pigtail marks, or you didn't use the right paper to eliminate scratches left by coarser grits. Or, cutting or planing tore out some wood fibers, leaving a divot in the surface. If the first swipe of stain shows vivid swirls or scratches all over the work, stop.

Solution: Sand the piece again, this time changing paper frequently and working your way systematically through the grits. If you've oiled or stained the piece and find that swirls show up in only one or two spots, sand those areas by hand with P220-grit wet-or-dry paper, wetting it with some of the same finish you used. This method works well with most oil finishes or oil-based pigment stains. If you used stain, reapply it carefully to match the surrounding stained areas.

If you used a dye, resand a stand-alone area, such as an entire stile. If it is a large surface, sand the damaged area, feathering the edge between sanded and unsanded parts. Then apply more dye.

To eliminate tearout, sand, plane, or scrape the surface. Wipe the surface with mineral spirits to check the smoothness. If the imperfections are small enough (generally no larger than a pinhead), you can fill them after you've stained and sealed the piece, using fill sticks, the wax crayons sold for touching up scratches.

If you aren't coloring the wood, small amounts of tearout can be OK in some places (legs, frames, etc.). But stain makes them pop.

Not smooth enough. *Swirl marks tell you that you haven't done enough sanding to eliminate scratches.*

Smoothing slurry. *Wet-sanding with the oil or stain you used helps eliminate swirls more rapidly without ruining the color.*

2 GLUE RESIDUE

Problem: You used too much glue, leaving squeeze-out around the joint. Or you got sloppy and left a gluey fingerprint on the workpiece. Oil or stain won't penetrate the glue residue, leaving an unsightly light spot.

Uneven oiling. *Glue residue on this mortise-and-tenon joint prevents the wood from absorbing oil evenly.*

Solution: You can get rid of some fingerprints by wet-sanding with the stain you used, or by lightly sanding and reapplying the stain.

Use a sharp chisel to eliminate dried glue from around a joint. Use sandpaper to clear up areas where you didn't completely wipe away squeeze-out. Wrap P220-grit paper around a hard block and sand with the grain, using firm pressure. To avoid scratching adjacent surfaces, use a 6-in. flexible drywall knife as a shield.

Touch-up. *When removing glue squeeze-out, sand with the grain using P220-grit sandpaper. Keep the block flat against the work to avoid rounding over an edge. Shield adjacent surfaces with a wide drywall knife.*

Photos, except where noted: David Heim; this page (top left): Kelly J. Dunton

3 SAND-THROUGH

Problem: You sanded away some face veneer on a large, expensive piece of plywood after you had glued up everything.

Overdone. *It doesn't take much to sand through the face veneer on hardwood plywood.*

Solution: Use a scrap of the same plywood to duplicate the mistake and serve as a sample board for the remedy. Apply the same finish you plan to use on the piece, then sand through a portion of the face veneer to give yourself a place to experiment with a repair.

Mix thin shellac with a touch-up powder such as Behlen Master Furniture Powder (www.woodworker.com) or Mohawk Blendal Powder Stain (www.mohawk-finishing.com). Put a piece of glass next to the sand-through on the practice board and begin developing your color. Quickly dip the brush into the shellac, then into one of the touch-up powders. Swirl the brush around on the glass to incorporate the powder and shellac. Dab on more shellac and a different powder to blend the color you need. Work in thin layers, sneaking up on the color rather than painting it in. If you aren't happy with the results, wipe away the color and start over.

When you've done a reasonable job of covering the sand-through on the scrap, take a deep breath and do the same thing on the real project. A glaze—a type of stain used on a semisealed surface—brushed on and then lightly wiped off will help blend in the patch.

Practice patch. *Make a similar burn-through on a scrap of the same plywood. Mix touch-up powders with thinned shellac to match the color of the face veneer and hide the sanded-through spot.*

Faux finish. *Carefully paint the tinted shellac over the sand-through. Apply a glaze to help blend the patch into the surrounding wood.*

How to prevent surface flaws

Sand with progressively finer grits, ending with P220. Finish by hand-sanding with the grain with P180- or P220-grit paper. Vacuum or blow off the dust. Wet the surface with mineral spirits or shine a bright light across it to reveal flaws. If you're working with hardwood-veneer plywood, sand with a very light touch and check your progress often. Use glue sparingly and remove squeeze-out carefully.

Sand by hand. *To eliminate cross-grain scratches, finish sanding by hand, always moving with the grain.*

Check your work. *Wipe on mineral spirits before applying the finish. This will reveal any lingering scratches or patches of tearout.*

Color mistakes

By far the biggest finishing problems can occur when you apply dye or stain. A color you thought would look great comes up garish. Or the first coat of color takes unevenly, leaving blotches or streaks. Here's how to get around drawbacks like these.

4 UNEVEN DYE STAIN

Problem: A dye-based stain looks stronger or more intense in some areas than in others. Consequently, you have an unevenly colored surface or lap marks where you wanted uniformity.

Solution: Pull a damp rag over the surface. That will lift the dye, so you can "move" or remove it to make the color even. Work the rag around to blend the color evenly. Then apply a washcoat of shellac and the stain you want to use.

Easy fix. *This maple door didn't take dye well, leaving lap marks on the frame. A wet rag rubbed over the dye will even out the color, minimizing blotchiness.*

5 WRONG STAIN COLOR

Problem: The stain you applied threw the wood color way off. Generally, a stain will appear either too red or not red enough. Either way, it spoils the appearance of the piece.

Tone it down. *A contrasting glaze usually will correct a color that's wrong. Here, black glaze will tame a too-red stain on this oak door. Wipe off the excess glaze almost immediately, revealing a better color.*

Solution: Correct the color with a glaze. I've had good results with Behlen or Mohawk glazing stains. Apply a washcoat of shellac over the stain, then gently scuff-sand with P320-grit paper when it's dry. Use a glaze that contrasts with the stain to bring the color back into line.

For example, if the stain looks too red, tone it down with a raw umber glaze, which is greenish in tone. Alternatively, you can use a black glaze to change the color's tone.

If the stain doesn't have enough red, warm up the color with burnt umber or burnt sienna, which is predominantly reddish.

Brush on the glaze liberally, let it sit for a minute or so, then lightly remove most of it with a clean rag, leaving a thin film of color. Once you've corrected the color to your liking, protect the glaze with another washcoat of shellac before you apply the topcoat.

Photos, facing page (top left and bottom right): Kelly J. Dunton

6 BLOTCHY STAIN

Problem: You chose a pigmented stain that didn't take evenly on the wood. Pine, cherry, maple, birch, and alder are the most likely to blotch.

Solution: If the surface is very blotchy, you'll have to remove the stain by stripping, sanding, or both, and start over. This time, apply a washcoat of shellac and then the stain.

If the blotching isn't too severe, try using a glaze to soften the contrast between the deeply colored and lighter areas. Once the initial stain is dry, apply a washcoat of shellac. Let it dry, then gently scuff with P320-grit paper. Brush on a burnt umber or other brownish glaze; wipe gently to remove most of the excess.

Sand lightly. *Pine is one of several woods that blotch easily. To even things out, begin by scuff-sanding.*

Apply a glaze and wipe it off. *Brush on a glaze to help cover up the blotches. Once the excess glaze has been wiped away, the door's color is much more uniform.*

How to prevent color mistakes

To avoid problems with stain or water-based dye in the first place, use a sample board to test the finish you want to use. You'll greatly increase the odds of having the color go on evenly if you apply a washcoat of thinned shellac beforehand. That will help ensure that subsequent coats of color take uniformly. A good washcoat is a 1-lb. cut: Combine premixed shellac (which is a 3-lb. cut) and denatured alcohol in a 3:2 ratio.

Control penetration. *A light coat of shellac thinned to a 1-lb. cut creates a good foundation before coloring the wood.*

No blotching. *Stain over a shellac washcoat has much less tendency to blotch.*

Sample board. *Test the finish you want to use on a scrap of the same wood used in the workpiece.*

Topcoat trouble

Problems can occur in laying down the final coats, whether you brush, wipe, or spray. Apply multiple light layers of the topcoat rather than one or two thick ones. Sand carefully, wiping away the sanding dust to check surfaces frequently. Rubbing out, the last step, is incredibly important because it "finishes" the finish. However, the idea of abrading a carefully applied topcoat scares many people, and rightly so. You don't want to have problems so close to the finale. Use a light touch.

7 DRIPS AND SAGS

Problem: You used too heavy a hand in applying the topcoat, so the coating drools down the side of your beautiful project.

Solution: Wait until the sag is totally dried. It should feel hard, not resilient, when you push on it. Wrap a cork or hardwood sanding block with P320-grit paper and lightly sand to level the mess. If you start sanding while the sag is still gummy, you'll just make the mess worse. Check your work frequently and change the paper often. You want to flatten the lumps without going through the stain color or down to the bare wood.

Or, if you only have one or two drips, you can use a fresh single-edge razor blade to scrape them off. Be sure to scrape carefully to avoid cutting through the finish.

Scrape or sand. *Once a drip has dried completely, scrape it off with a razor blade (above) or sand it flush (right).*

8 CONTAMINATED FINISH

Problem: Flat surfaces are pockmarked with small craters. Often from the first brushful, the coating literally "crawls" into an odd formation that resembles a crater or fisheye. You can't do anything ahead of time to prevent this contamination. It may come from lubricants used on a tablesaw or jointer bed. It can also occur if you put a water-based finish over an oil-based stain.

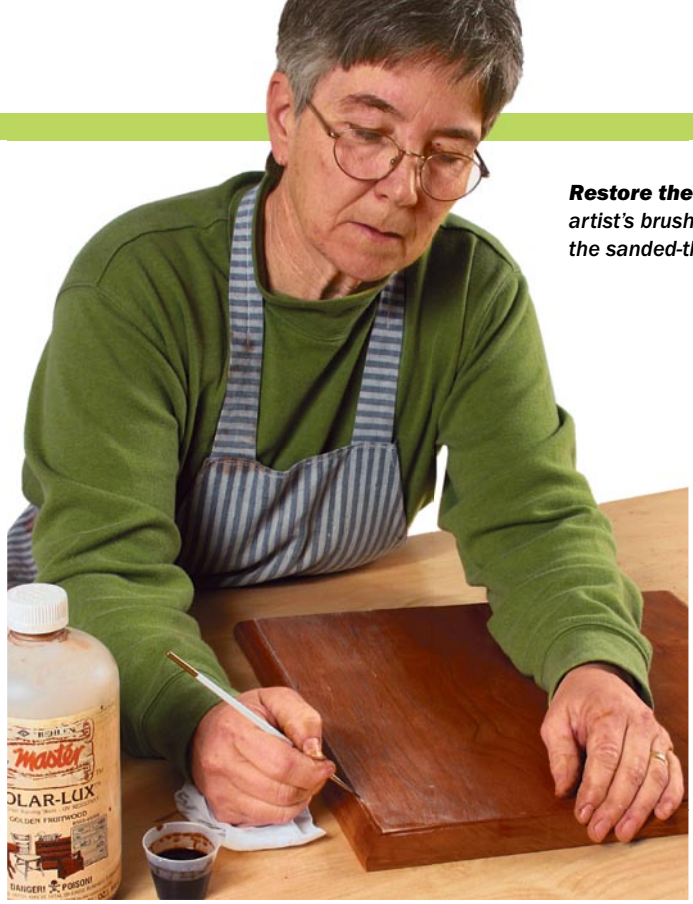
Solution: Stop. Don't even begin to think you can keep brushing to eliminate the problem. Wipe off all the coating, then brush or spray on a light coat of shellac. If spraying, use a very fine, almost dry spray. The shellac forms a barrier to keep the contaminant from coming up through subsequent layers of finish. When the shellac dries, continue applying the topcoat you want.

Attack immediately. *Wipe off all the contaminated topcoat as soon as you see it crawl. A light spray of shellac will isolate the contamination, so you can reapply the topcoat.*

Photo, this page (top left): Kelly J. Dunton

9 BURN-THROUGH

Burned up. *If you sand the topcoat too aggressively or don't keep the sanding block level, you risk removing some of the finish.*



Restore the color. *Use a small artist's brush to reapply stain to the sanded-through area (left).*

Seal the color. *Brush a light coat of shellac over the stain touch-up.*

Problem: You have either sanded through the finish (a frequent occurrence on edges, moldings, and carvings) or burned through the color (removing both the topcoats and the stain).

Solution: If you've burned through the color, carefully apply more stain, protect it with a light coat of shellac, and then replace the topcoats. If you've only burned through the finish, delicately reapply it. When the repairs are thoroughly dry, rub out those areas to blend them in with the rest of the surface.

10 WITNESS LINES

Problem: When rubbing out a film finish like varnish, you cut through the layers of finish. Witness lines are shadowy craters of this cut-through. Witness lines seldom occur with shellac or lacquer because new coats of those finishes dissolve into the old ones.

Solution: Keep leveling the finish, then apply at least two more fresh coats of finish.

Witnesses. *Sanding too much can produce witness lines, whitish areas exposing earlier coats of finish.*

Keep sanding. *Using fine sandpaper and a light touch, sand the surface to level it as much as possible before applying more topcoat.*

Add another topcoat. *Apply more of the topcoat to the entire surface, not just where the witness lines had been.*