

Small Shop - Big Results



Application of a Beautiful Brushed-On Finish

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This segment of the series on refinishing has been tough for me to sit down and write. Applying finish to a piano with a brush is about finesse, touch and control. If painting a house or a room were chopping up a side of beef with a cleaver, varnishing an heirloom piano (Photo 1) would be performing a delicate operation on a living being with a scalpel. Well, close to that, anyway. Putting what you do when you varnish down in words is tough. How do you describe a finesse skill without actually showing someone? I'll try.

It's on too the task at hand, starting first with a description of what you want to end up with when you're done with the project. I think it's important to clearly see the prize at the end of the process. At the completion of you project, you want a finish that is: (1) glassy smooth to the touch, (2) lustrous, without haziness and (3) free from drips, sags and blemishes of any kind (Photo 1). The type of finish that you notice the owner of the piano repeatedly running her hand over as she's smiling happily at the sight of her "new" piano.



Photo 1: Your goal – a piano with a happy home.

With that goal in mind, we'll begin the day-by-day process.

Day 1: Apply the first coat of gloss.

Set your first piece to varnish (or apply similar finish – see article on test results) on the newspapers on your bench. (Since the body of the piano is generally in the immediate area of the bench, I save that for last to avoid bumping into the finish as I

work on the individual pieces.) If it's a larger piece, such as the knee board, support each corner of the piece with blocks, so that as you varnish the edges, you're not applying finish to the newspapers. Using a tack rag, clean the surface of the piece completely.

When you open the can of polyurethane finish for the first time, use a wooden stirring stick to gently stir the thick material that collects at the bottom of the can into the liquid. If you fail to do this, the finish will take a long time to set up, as the hardeners are what collect at the bottom of the can. Never shake the can! You don't want bubbles.

If your experience with a brush has been limited to painting walls and siding, you will find that the process here is more delicate. Instead of loading up your brush with paint, dip the brush only 1/2" or less into the varnish (Photo 2), and drag the excess off one side on the inside rim of the can to prevent dripping.



Photo 2: Easy does it.

What you want is a manageable amount of finish on your brush at all times, enough to spread, but not so much that you end up with runs and sags in your finish. Begin with an easy, flat piece, such as the music desk, or the lid. Run a brush-width of varnish cross grain along the left edge of the piece, then begin brushing with the grain, using a back and forth stroke. Work rather quickly, always moving from the wet area to the dry. As you approach the right hand side of the piece, run another brush-width of finish cross grain along the right hand edge (refer back to Photo 1 of the April, '09 article) to avoid missing coverage along the edge. As you work, use the reflection of light to ascertain where you have been. This is quite easy on the first coat, but becomes a bit trickier on subsequent coats, where you are putting finish over finish.

Once you have covered the entire surface with finish, go over the entire piece with a "feather stroke." Holding the brush lightly in your hand, go across the back and forth over the piece from side to side to even out brush strokes, using only the weight of the brush to make contact with the finish on this final stroke. Using reflected light, quickly ascertain if coverage is complete. Missed spots may be brushed in with finish, if done quickly enough. Otherwise, leave well enough alone.

With the top of the piece completed, brush varnish on the sides, being careful to avoid letting the bristles touch the top surface. Before putting the piece on the parts trolley or other storage area to dry, carefully run a paper towel lightly dampened with thinner along the edge of the underside, to remove any drips that have formed.

Continue on and finish all the parts in this manner, ending with the body of the piano. (Two-sided parts, such as the fallboard and the lid, will need to dry at least a day before the back side may be coated.) On multi-surfaced parts, such as the bench, or the body of the piano itself, work from the inside out, and the top down (Photo 3).



Photo 3: Inside out, top down.

Once everything (except the back sides) has a coat of finish, clean up your tools. Use your brush to clean out excess varnish from around the rim of the can. Then clean the brush itself, pouring a bit of thinner over it several times and shaking the finish out of it. Once clean, dry with a paper towel and wrap in foil for the next day's work.

Make sure that you check all the surfaces that you have applied finish to off on your checklist. Get into the habit of doing this as you work, and you will avoid situations where you truly don't know if you are on the second or third coat on a piece.

That done, take a break for the rest of the day to avoid stirring up dust in your shop. Get out of the shop to tune a piano or two or, better yet, take your spouse on a date.

Day 2: Finish the backsides of two-side pieces.

Assuming the coat you put on the previous day is dry to the point where it isn't tacky, flip the pieces over that need a coat on the back side to apply finish to. Some parts, such as the lid, obviously need to be coated on both sides. Others, such as the kneeboard, music desk, etc., should be, but are often ignored by refinishers. We make it a practice to coat both sides of such pieces, the outer surface with three coats and the inner surface with two, to provide protection against excessive humidity.

Day 3: Buff first coat.

Before you begin to buff the first coat, make sure the varnish is sufficiently dry. As you run your hand over each piece there should be no drag or tackiness. If there is, wait an additional day (or until the surfaces all feel dry) before you begin buffing. Length

of drying time is affected by both humidity and temperature, so don't assume 24 hours is sufficient. You will notice that the finish after the first coat is rough to the touch. This is the result of the finish raising the grain of the wood and is normal. The next coat will dry much smoother. To buff the first coat, use 400 grit wet/dry paper using it dry. I would recommend that you **not** use a power sander or even a sanding block, as the amount of sanding that will be doing is minimal, and overly aggressive sanding will result in going down to bare wood, putting you back on square one. Tear a piece of sandpaper in half, fold the resulting half sheet either in half or in thirds, and simply hold it in your right hand, lightly going over every surface enough to knock off the roughness. Do not overdo it buffing in between coats, as you want the surface to provide adhesion for the next coat.

Once the piece is buffed, vacuum it with the hose and brush attachment on your vacuum, then clean with a tack rag. This first coat, once buffed and cleaned, will obviously need more coats to be satisfactory. The finish at this point will appear somewhat hazy and not at all deep (Photo 4).



Photo 4: One coat down, two to go.

Day 4: Apply second coat of gloss.

If you are satisfied with the shade of all the pieces of the piano, you are ready to second coat everything. Follow the same procedures as you did for the day 1 instructions. The only difference in the procedure is that with the second (and third) coats, you must be very cautious about going back to touch up a spot you're not happy with. Within a very short time of application, you will find that touching up a spot will usually make the problem worse, as the brush will remove some of the finish just applied. After the feather stroke, really try to avoid the temptation to go back and "fix" a flaw. The next coat will usually solve the problem.

If there are surfaces which did not take the stain as well as the rest of the piano (usually a result of a different species of wood being used on solid pieces, such as the legs), this is the time to remedy the situation. What we like to use are shaded polyurethane products (PolyShades- available from Minwax). The two shades we use the most often are Antique Walnut and Bombay Mahogany. Oftentimes, we mix the two,

with a small portion of Bombay Mahogany (which is very reddish) to a larger portion of Antique Walnut. If the first coat of shaded varnish doesn't result in a match, additional coats may be applied. We've found that it works best to apply this shaded finish in between the first and second clear coats (Photo 5). Use a separate brush for this step, as you don't want the pigmented PolyShades to mix in with the clear finish.



Photo 5: A change of tone.

Using these products, portions of the piano which stand out as different in tone may be brought in line with the rest of the piano. It works great!

Day 5: Apply second coat to back sides of pieces.

Day 6: Buff second coat. Apply decal to fallboard and underside of lid (if needed).

Follow same directions as for buffing coat one, except change to 500 grit sandpaper. Vac and clean each piece with your tack cloth as you go.

To apply the fallboard decal, measure to find the center of the fallboard which should be lined up with the center of the decal (Photo 6).



Photo 6: Measure twice.

Position the decal to be centered from top to bottom as well, and tape the decal in place, using blue, easy release masking tape, on the left and right hand sides of the plastic carrier. Double check with your tape measure to make sure the position is exact and then remove the white tissue paper underneath the clear plastic, so that you are burnishing the decal to the fallboard, and not the tissue paper.



Photo 7: Applying the decal to the fallboard.

Work from left to right as you burnish the decal to the wood (Photo 7). As the decal adheres to the finish, you'll notice that it becomes hazier in appearance. Finish each letter before moving on to the next, and carefully peel up the clear plastic when you're finished.

Usually for this step I save the fallboard for last piece of the day, so that I can put a coat of finish over the surface with the decal. Brush carefully over the decal with finish, so as to not lift up any of the letters.

Day 7: Apply third coat of finish.

The majority of our customers prefer a satin finish to a glossy one. Coat three, therefore, is ordinarily satin polyurethane. If a customer desired a glossier finish, use gloss on the final coat. The final buffing will also differ in the case of a glossy finish.

Day 8+: Finish back sides of pieces / optional extra coats.

Apply the third coat of finish to the backs of the pieces which are occasionally exposed, such as the underside of the lid.

In addition to the three coats of finish we give all exposed surfaces, we usually put on a couple extra coats on the fallboard, plus on the lid and keyblocks, to provide extra protection. Doing so sets back the schedule several days, but is worth the extra time.

Day 9: Final buffing and polishing.

Lightly sand the last coat with 600 wet/dry paper. Once this is done, buff the glare off of the finish with 0000 steel wool. This is the most work of the entire process. You'll see the satin sheen come out as you rub the piano down with the steel wool, but it takes a

lot of rubbing to really even out the finish and eliminate haziness. For a gloss finish, we sand the final coat out with 600 wet/dry paper, then wet sand (using mineral spirits) up through the grits of paper, ending with 2500 grit.

For a polish, we finish up by applying Old English furniture polish. As I've said before, opinions as to products vary, but this is what I've used for the last 25 years. The reason for that is the result that I get – a beautiful sheen.

Day 10: Reassembly.

With the polish completely dry, reassemble all the case parts of the piano. Wire brush all the screw heads and brass work. Replace all rubber bumpers with new.

When everything is back together, stand back and admire your work. What you've accomplished is a job to be proud of (Photo 8).



Photo 8: The job is done.

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