

Small Shop - Big Results



Preparation for a Beautiful Brushed-On Varnish Finish—part 1

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Photo 1: Schaaf Bros. upright with brushed-on varnish finish

An article on the topic of how to apply a proper brushed-on varnish finish to a piano begs the question: Why bother? After all, hasn't it been long ago decided that applying a sprayed-on lacquer finish is the superior method?

This set of Small-Shop series articles deals with the applying of a varnish finish using the techniques we use in our shop, and I am directing my comments to the technician who wants to try refinishing a piano for the first time. Without spending a fortune on an elaborate setup for spraying on a finish, such a person can get his feet wet in the restoration business using our straightforward methods and inexpensive supplies and tools. He or she can always, of course, move on to a bigger and better approach, if so desired. Or, as we have in our shop, he might decide that the simple approach, for him anyway, is the best.

On that note, then, here is my initial advice to the novice wishing to refinish a piano for the first time. Do not, under any circumstances, make it the piano of a customer unless you are perfectly frank about your lack of experience. At least, if it's someone else's piano, let the customer know that you are just learning the ropes of the refinishing process and offer a substantial discount for the work, possibly even no charge for your labor, just the cost of supplies. This first customer is doing you a favor in trusting you with his piano. Pay back that trust by doing your absolute best, and charging your

absolute minimum. If you prove to have a flair for the work, and you enjoy it, the bookings and the money will come in time.

Much better though, in my opinion, is to acquire a piano of your own to work on. Since in many areas of the country old uprights are often available (many of these free for the hauling, at least in my region), this is what I would encourage you to look for as a project piano. Assuming that this is in fact what you acquire (look for one with an eye for what it looked like in the showroom), the remaining segments of this series will be written assuming a vintage upright is what you have to work on. Keep in mind that if you follow through with all the steps I will outline for you, you will end up with a beautiful instrument. Hopefully, with your other technical skills, you can bring the performance and sound of the piano up to match its appearance.

For those technicians who wish to give this a try for the first time, the next set of articles in this series will focus on the step-by-step procedures that we employ.

I. Teardown: Once a project piano has been acquired, a complete disassembly of the case will allow for you to proceed with the refinishing on a much more professional basis. The time spent taking things apart will, you will discover, pay off in spades.

Following are the steps I would recommend you follow in disassembling your upright for refinishing. The only tools you will need at this point are a digital camera, a muffin tin, a legal pad and pencil, a pair of pliers, and an assortment of screwdrivers.

Before you do a single thing to the piano, take a number of pictures from various angles to provide “before” shots. Get in the habit of doing this with every restoration project you tackle in your shop and soon you’ll have a portfolio you can use in keeping your shop busy with work. Pictures, I have found, are a rebuilder’s greatest sales tool, second only to that of satisfied customers.

Begin the actual disassembly of the piano by taking off the usual case parts, and put the screws for each piece in one of the muffin tin cups (Photo 2), along with a slip of paper listing where the screws go.



Photo 2: Good for more than just baking muffins

Disassemble each part as you go into as many component parts as possible. The fallboard, for example, will almost always break down into a front and a back piece connected together with a piano hinge. Remove brass knobs, rubber buttons, etc. as you go and put those in the muffin tin as well, with appropriate labels as to where they go.

If this is your first total disassembly of a piano, I would suggest using a legal pad to record your steps so that you can reverse the order later in reassembling the instrument. I would also continue to take pictures as you go, especially if there is any unusual hardware or configuration of pieces. Far better to have more pictures than you need, than to be wishing you had taken a shot of some unusual assembly that you were sure you would remember, but two months later are scratching your head in frustration about.

Once the normal case parts have been removed, I would then suggest taking out the action, keys and key frame for storage during refinishing, as has been done in Photo 3. Not only will the inside of the cabinet be easier to work on, but you will eliminate the chance of getting stripper, stain or varnish on any place where it doesn't belong. (Compare this shot to the same piano in Photo 1 to see what a difference a new finish can make.)



Photo 3: Parts removed for easy access to inside of cabinet

To remove the key frame, first take out the keys and set them aside in order, then remove the four screws each from the front and middle of the frame that are driven into the keybed, and put each set in a separate cup in your muffin tin. The back screws usually are found under the back of the backrail cloth. Ordinarily, this strip of felt will be glued on the front, and loose on the back. Lifting up the back of the cloth, you will find a half dozen or more somewhat smaller screws holding the back of the key frame down. Remove and store them as well. Then, lift the keyframe out of the piano (if it doesn't want to move, you probably missed a screw. Return the keys to the frame and store it away. If you have a parts trolley, the perfect spot is over the bottom removable shelf.

At this point, I would put the piano on its back using a piano tilter. In that configuration one can remove the legs, the floor of the piano with attached pedal mechanisms, and the toe (or pedal) rail.

Remove the legs first. Begin by levering out the front caster with a large screwdriver, then unscrewing and removing the caster socket. Next, locate the long screw driven through the toe block up into the leg. Usually this screw is centered in the hole where the caster socket came out of. You'll need a medium size, flat-bladed screwdriver to remove it. The top of the leg might be secured by screws driven down through the keybed at an angle, or in some cases there will be a metal bracket on the inside of the leg which needs to be removed. Other means of attachment exist as well, so be patient if it isn't something obvious. Once you have freed the legs, slide them forward or gently tap them out to the side and put them aside for stripping.

With the legs off turn your attention to the floor of the piano. Many times the easiest (and sometimes the only) way to remove the pedals is by loosening the screws holding the floor of the piano to the body, prying the front edge (or the top, when the piano is on its back) loose, and pulling the pedals free (after unscrewing whatever pivot point system is used). I like to carry that process one step further, and simply take the floor of the piano off altogether (Photo 4). The floor, along with attached pedals and trapwork can then be serviced properly on a benchtop.



Photo 4: Removing the floor of the piano

To remove the entire floor / pedal / trapwork assembly, slide the piano forwards several inches along the piano tilter away from the protruding fingers of the tilter. Take out all the screws that are driven through the floor up into the body, back and toe rail. Separate and label these screws if any are of different sizes, otherwise put them all in the same cup in the muffin tin and label accordingly. With all the screws out, pull the floor of the piano off with attached pedal mechanisms, and set aside to work on later. Take out the dowels for the pedal work, label them, and put them in a safe place as well.

With the floor removed, the pedal rail should come off as well. Usually it is not glued in place, but is mortised into the side of the toeblocks. Loosen screws, if present, and try tapping it towards you with a mallet to see if it doesn't just slide off. If there are wedges present, as in Photo 5, save those in your muffin tin along with the corresponding screws.



Photo 5: Tapping out the pedal rail

Ordinarily, the toe blocks are glued to the side of the piano, but if the glue joints are loose, you might want to take a rubber mallet and putty knife and remove them altogether. If they are loose, you'll need to glue and clamp them in place later anyway, and removing them now will make your stripping job that much easier.

Taking off the keybed is easily accomplished as well, once the legs have been removed. Usually, there are two screws driven up through the bottom of the keybed into the arms of the piano, and one more screw at the back of the keybed attaching it to the frame or plate. Remove those and you should be able to lift the keybed out of the piano.

Why go to all of this bother? First of all, stripping, sanding, staining and varnishing are made simpler if you have smaller pieces to work with. If you don't have to go into corners, but just have flat surfaces to work on, you'll be amazed at how much easier the job becomes. More importantly, however, is that you can do better work this way. Think back to the do-it-yourselfer trying to strip that devil of a corner where the keyblock, fallboard and the arm of the piano all come together. Even worse, imagine trying to sand and do a good job, if everything were together. If instead you are working on the keyblock, the fallboard and the arms of the piano as separate pieces, you can do a proper job of stripping and sanding with much less effort expended.

Hopefully this amount of work will be enough to keep you busy until next time. Remember to take plenty of pictures as you go.

If you're a seasoned veteran of the finishing process, whether using my old-fashioned methods, or a more up-to-date approach, give a helping hand to a technician who you know who wants to give the process (whether mine, or yours, or something in between) a try. Remember back to when you were just beginning, and someone lent you a hand. Return the favor by helping someone else get a start.



Photo 6: No runs, no drips, no errors

Finally, take a moment to consider the instrument in Photo 6. In your mind, feel the velvet, glass-like smoothness of the sides or top. With the finish complete, and a new set of keytops, hammers, pins and strings, the piano is ready to be tuned, voiced and regulated. With this done, the instrument will be ready to return to the owner in near factory condition, a far cry from how it came to us.

In the hushed peacefulness of the early morning shop, with the summer sun slanting in through the windows onto the bench top where I'm brushing varnish onto a beautifully veneered piece, there are moments that I feel a communion with the instrument makers of a past age. I hope that some of you who haven't found that inner peace that comes with such work will do so. The value of a journey is not measured merely by the speed of its completion.

If this all sounds like a venture you'd like to try, I would encourage you not to sit on your hands, but find a project piano to work on, clear out some space in the garage and have at it. If you find yourself traveling through our neck of the woods, stop in and have a look at some of the projects we have going on. We'll have the coffee pot on.