



## **Small Shop - Big Results** **In-House Keytop Replacement** **(With that Outsourced Look) – part 3**

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The difference between a mediocre set of replacement keytops, and one that is truly well done, lies in the final fit and finish that is given by the technician. Although the piano supply catalogue claims that, “It will be possible for you to cover many sets of keys with little or no final shaping,” this is only if you are willing to settle for a less than perfect look.

In this article, I will explain the procedure used to hand file keytops to perfection (Photo 1). While one may use a router with a laminate cutter a similar device to finish one’s keytop, hand filing gives the technician a control over the finish of the keytop which one does not have when using a high-speed cutter.



*Photo 1: Hand filing keytops*

As with so many jobs completed in the shop, hand filing keytops may be broken down in to a step-by-step procedure which is easy to follow. What differentiates the quality of the job are one’s skill with the file, the sharpness of one’s eye, and the determination to do the best possible work. With the experience that comes with practice, it is possible to turn out a product that is very professional in appearance.

The list of tools needed for this work is not a lengthy one. Besides a good quality woodworkers vise (Photo 2), you will need a coarse and fine file, plus a smaller file for touch ups. Rounding out the list would be a sheet of 400-grit sandpaper, and a pad of 0000 steel wool.



*Photo 2: Tools of the trade.*

Also needed, but not pictured, are a 48" straight-edge, several 5" C-clamps, and a sharpened awl for marking the notches around the sharps. With those tools gathered, you're ready for the work at hand.

The initial step is to scribe the line for notching the sharps (Photo 3). To complete this step, first use your awl to make a chit in line with the end of the wood at the notch for a key at the beginning, middle and end of the scale, such as A0, D4 and A7.



*Photo 3: Making a scratch line*

Now, extend the keyframe with just the naturals so that it hangs over the front edge of the bench far enough that c-clamps may be used to clamp down a straight edge. Use three clamps, with the top of the clamps over the straightedge, and the bottom of each clamp under the keyframe. Line up the back edge of the straightedge with the three chits and tighten the clamps down.

With a sharpened awl, carefully scribe each key (Photo 3), being careful to mark only the notch, and not the entire width of the key. As you work from one side of the keyframe to the other, hold each key up tight to the straightedge with your left hand, and scribe the line with your right. You should feel the point of the awl cutting into the keytop material. Make sure that during the entire procedure, you keep the awl at the same exact angle in relationship to the straightedge – angling it slightly outward so that the tip of the awl is exactly in line with the chit marks used to position the straightedge.

With the lines marked for the notches, remove the clamps and straightedge from the keyframe and place your first key to work on in your vise, as shown in Photo 4. (Having the faces of the vise lined with either cork leather will prevent marring of the surface of the keytop during the procedures to follow). Use your coarse file first to remove the excess keytop material from the sides. Apply downward pressure on the forward stroke, and drag the file back lightly on the backward stroke. Always have the keytop placed with the key cover facing you to prevent chipping.



*Photo 4: Filing the sides.*

Be careful to file the entire length of the keytop evenly, using strokes that cut on a diagonal from side to side at the same time that the file is moving forwards and backwards. As you file the edges down flush to the wood, remove any excess glue or discoloration from the sides of the keys as well, giving a fresh, new appearance to the wood. Work cautiously up to the notch, avoiding cutting into the excess material at the notch at this step.

Finish the sides with a fine file. Remove the cut marks from the coarse file and smooth the wood to give a truly finished look to the sides. When done with one side, flip the key so that the end is pointing in the opposite direction, and finish the other side.

With both the left and right side of the keytop filed, put the key in the vise vertically to cut out the excess material around the notch for the sharp. Again with this step, start with the coarse and finish with the fine file. Use your left hand to steady the top of the key, and file upwards with the edge of the file using your right hand. Be extremely careful not to exert any side pressure on the file, or you will end up with an imperfection in the side of the key where the file bit into the keytop material.





*Photo 5: Cutting out the notch.*

Once a file's width of the keytop material is removed flush with the line, finish the job by turning your file on its side, and carefully finish removing the remaining material.



*Photo 6: Finishing the notch.*

Use your left hand to not only steady the top of the key, but to also prevent the side of the file from making contact with the finished edge of the keytop. File flush with the line. Remove any glue from the notch with a small, flat carving chisel. Check the pair of keys for each sharp by placing them in the keyframe to double check the adjoining notches. Make sure they are square, and that they line up with each other. Use your small touch-up file to make any final corrections to the notch.



*Photo 7: Rounding the edges.*

Now, remove the key from the vise, and slightly round the edges with the fine file, drawing it down and towards you. The side of each key should be rounded identically to all the others. Also use your fine file to round the front corner of each key evenly. Holding the key vertically, begin with the file parallel to the side of the key, and lightly curve the file around the edge. One or two light strokes is usually all this takes.



*Photo 8: Finishing the bottom of the keyfront.*

Turn the key over and butt it up against the raised dog in your vise to file the bottom edge of the keyfront (Photo 8). Again, start with the coarse file, if needed, and finish with the fine. Work the file back to remove any excess glue from the underside of the key.

The final step with the file is to file off the letter of the note at the back of the key (if present). Although this is ordinarily hidden by the upstop rail, removing it with the fine file just takes a few moments, and looks more professional. Buff the filing marks on the back of the key out with 400-grit paper.

With the filing of the keytop material completed, the final steps to follow are determined by whether a gloss or satin finish is desired by the owner of the piano. I offer

both finishes, and find that the majority of customers prefer the satin finish. To complete the keytop with a satin look, buff the gloss off of the plastic keytop material using a pad of 0000 steel wool.



*Photo 9: Buffing to a satin finish.*

For a gloss finish, buff out any filing marks (especially at the back of the key) with increasingly fine grits up to 2500-grit paper, then carefully buff out on a buffing wheel set on the lowest speed setting using polish intended for plastic keytops (Schaff #426 / Nu-White). Be very careful at the notch, not to apply too much pressure, or the buffing wheel will mar the edge of the notch and round it from the heat generated.

With either finish, the end product of this product is a very professionally looking keytop (Photo 10), adding both beauty and playability to the piano.



*Photo 10: The finished product.*

Since keytop replacement is a job which may be easily outsourced, I recommended doing it only if the satisfaction of doing one's own work, and doing it well, is of importance to you. To me, that's one of the most important considerations in owning

and operating a shop to begin with. The feeling of pride that one has at the end of a day when one can step back and contemplate with satisfaction the fruits of one's labor is truly priceless. If it's all about money, simply stick to those jobs which produce the most revenue per hour, and let it go at that.

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