

Voicing Grand Hammers

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3/19/2008

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As hammers are filed, the felt gets increasingly closer to the hard center core.

Tips

- Tricks for removing cheek blocks, key slip, fall board, & music rack.
- Make sure the hammers are filed in a plane.
- Press the damper pedal when inserting string mutes and wedges.
- If a customer says, "The piano needs voicing," ask "What dynamic level?" and "In the shift position or the rest position?"

Listen

Play all the notes chromatically, listening for volume, brightness, similarities, and tapering. Play just a few notes that may be similar, and distinguish which has more attack. Then cover two of the three strings and listen to each string, isolating the others with the fingers for speed. Even three strings on the same note can sound different. Play these strings again while pressing down on the damper pedal. This italicizes the differences. Pluck the three strings. Examine if the strings are level and fitted to the hammer. Nasal, short sounds might occur if the seating is not snug.

When about two thirds done with voicing, put the damper pedal down and play a chromatic scale. Certain notes will stand out. Go to those notes and listen to individual strings. Pressing the pedal down not only brings out the differences, but is also the way that people play the piano. Keep in mind the whole picture.

Listen in different dynamics. What can sound uneven in one dynamic can sound wonderful in another dynamic.

Be careful not to voice too much in the string marks in pianissimo so that too much isn't taken out of the mezzo.

Add the shift pedal. Get where you can in the normal way, then go to the

Pyramid of piano work -- hierarchy of difficulty:

Tone regulating (most difficult)

Judgment, experience, which and how many of the thousand pieces can I do?

Dampers

Tuning

Regulation (easiest)

With voicing hammers, like painting with watercolor, the crispness and definition can be lost if worked too much.

Lacquer

Find the notes with the least attack.

Select one hammer to be a reference hammer that you do not change.

Some notes cannot be played as quietly or as round: the tamper and dynamics are limited.

Play the note at different volumes, then pluck the note and strings.

If the bass won't come up, the treble will have to come down. However, usually if you have a rich treble, the bass is brought up to match the treble.

Choose the notes that are least bright.

Shake the bottle of lacquer and look at it. Is it a little watery or too thick. Use 5 or 6 to 1. Since it's always in suspense it can always be mixed up. Be careful with applicators that are airtight, or they will squirt when the cap is removed, potentially damaging whatever is squirted on. Aim it at the cat. If the nozzle is blocked or plugged, remove it and dip the tip into the acetone and the plug will dissolve.

Pratt Read key top and acetone (basically acrylic) is faster than lacquer, but lacquer is usually preferred. There are two main things that are different in technique between a tension hammer and a lacquer hammer.

- When voicing, don't put anything on the keyboard. The chances are that these tools or parts are going to be forgotten and left there, especially when in a high-pressure concert situation.
- Apply the lacquer. Place a few drops right on the strike point. It will be damp and will need to dry.
- Tension hammers can be needled, and the effects spread out a long way. The deeper you go, the more it will effect the tone across the hammer. Lacquered hammers do not have much room for needling. There are as many places to get a different response in a tension hammer. With a tension hammer you can lacquer too far. Aggressive needling in the crown can wreck the hammer.
- Lacquered hammers have a very narrow shoulder area, closer to the strike point. If you don't get it in the right spot on a lacquered hammer, nothing might happen at all.
- Place carbon paper on the top of the hammer to get a reference where the hammer actually hits the string. This enables you to get close to the right place once rather than using up the hammer with numerous needle piercings. A bright light will cast a shadow and you can see where the string marks are in the piano. Marking the transfer marks show what happens in the shift position.
- The shift pedal is a tamber pedal rather than a soft pedal. It can shift gradual increments to affect change from mezzo piano down.
- In the hammer, put the hammer in check and position the needle on the hammer. Let up on the key slowly and let the hammer go down as you push down on the needle stick. Since the back check is holding the hammer, the needle can be easily removed.
- Slightly sand the top to break the top edge with 180 grit paddle. Give a slight sanding on each side as well. Break the crusty edge.

How to regulate the pedals and the damper up-stop rail

Under-lever lift from depressed sharp key will be a tiny bit higher than the pedal. Adjust sustain pedal accordingly. Adjust the tray so it doesn't scarf the felt. If the boards are hard, the cut-off will be too efficient. The damper should lift when the hammer is one third to one half of its blow distance.

To adjust

1. Press down the damper pedal.
2. Touch a sharp
3. If the damper pedal is stopped on its stopped block, it will lift the under-lever a tiny bit lower than the sharp will
4. You can feel it winking on the sharp. Set the up-stop rail so it is just touching. With the pedal down, it will stop just right, so the key doesn't bind on the up-stop rail.
5. Now set the pedal to that point. Instead of going back and forth, use the pedal as a jig. Put your knee on the pedal. Turn the up-stop screws so it is just touching the under-lever. If the end is already anchored, you can't move it. Go down the line of screws.
6. Take an over thick piece of felt that is oriented flat so that it won't crush, slide it under the damper levers, make a black mark and cut it to fit.
7. The sostenuto pedal must be adjusted to raise the dampers a little higher than the sustain pedal.

The tuning hammer is actually a key in disguise. It will let you into amazing places.