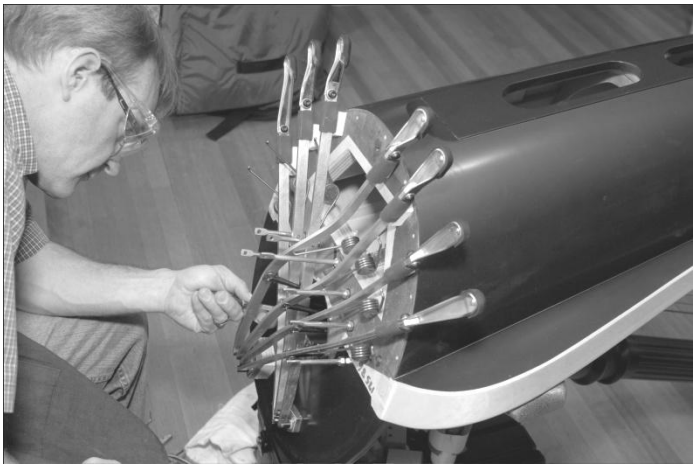
What *is* a Harp Regulation Anyway?

By Steve Moss

A lot of my customers ask me this when I meet them for the first time. Often, they are new harp owners who have been told they were entitled to a free regulation after a year. Other times, they bring their harps to me because their teacher told them it was time for a regulation. After dutifully unloading and wheeling their harps to my workspace, they stand around, hem and haw a little bit, then finally say, "um, what exactly are you doing with my harp anyway?" Good question! Let me start by giving you a brief introduction to the process, then I'll tell you exactly what I do, step by step, during a pedal harp regulation.



In a nutshell, a harp regulation is a periodic maintenance service designed to keep your harp playing and sounding its best. It includes a complete inspection of your harp's condition, replacement of short-lived parts such as pedal felts, adjustments to compensate for the changes a harp undergoes over time, noise elimination, and adjustment of action parts to improve intonation. Let's look at the whole process, step by step.

Step 1. **Receive the harp.** When a customer arrives in her vehicle, I'm available to help unload the harp and bring it to the workspace. Bring your harp dolly – I haven't figured out how to fit one in my suitcase yet! Once the harp is inside, I'll uncover it and give it a quick visual inspection. If I notice any obvious issues, such as missing strings, I'll mention them to the customer . I'll also ask the customer if she has any questions or is experiencing any particular problems with the instrument.

Step 2. **Replace strings as needed**. If I have identified any missing or badly damaged strings, I'll replace them now. The sooner they are installed, the more time I'll have to tune them so that they'll hold their pitch as I move through the regulation process. If I have been asked to install new bass wires, I'll install these first as well.

Step 3. **Replace pedal and slot felts**. As soon as I get the harp on my work stand, I'll remove the base and cut off the old pedal and slot felts. Even if they aren't visibly worn, pedal felts become compacted as they age, and this throws the travel of the action discs off, which can cause buzzing and compromised intonation, so I always replace the pedal felts. I always replace the slot felts, which also become compacted over time. Some harps have rubber cushions underneath the pedal felts. I inspect these and replace them as necessary. I use hot melt glue to hold the new pedal felts in place. While this glue is drying, I inspect the base for damage, tighten screws, and make minor repairs as necessary.

Step 4. **Adjust the pedal rods.** The pedal rods run the length of the harp's column, connecting the pedals down at the base to the action up on the neck. Their length is adjusted so that the action parts move just the right distance to properly engage the strings. Over time, under the constant 2,400 lb. pressure of the strings, the harp's wooden structure will warp and bend, just slightly. As the harp's dimensions slowly change, the pedal rods must be shortened periodically to compensate. I do this just after replacing the felts.

Step 5. **Check pedal action.** After the new felts are installed and the pedal rods adjusted, I check the motion of each pedal. Do they move smoothly? Do they stay where I put them? Do they spring back quickly when disengaged? I make adjustments as needed, and also check for any loose connections, which can cause the pedals to click or knock when moved.

Step 6. **Stand her up**! When Steps 1-45 are completed, it's time to stand the harp back up again. I tend to think of what I've described so far as "bottom work," and the steps that come next as "top work," since I'm moving from the bottom of the instrument, the base and pedals, to the top, where the tuning pins, action, and discs are. As soon as I stand the harp up, I check to make sure that the neck studs, which hold the action to the neck, are tight. Then I check for loose or slipping tuning pins, and tighten them as needed.

Step 7. **Tune.** Now I'll tune the harp up, giving extra attention to any new strings. I'll often start out with my electronic tuner, then finish up by ear. I'm not going for a fine tuning here. I just need to get into the ballpark.

Step 8. **Check disc and string alignment**. With the pedals in the flat position, I'll look closely at the position of each string as it passes between the pins of the natural and sharp discs. Ideally, each will follow a "best line," passing close to or through the center line of each disc, minimizing the chance that the string will hit a disc when played. In the natural and sharp positions, I look for an optimal amount of "grip." This is "technician speak" for how much the disc twists the string when engaged. It must be enough so that the strings sounds cleanly, but not so much that the string is damaged or the pitch is forced to play too sharp.

Step 9. **Play every string.** Now, I'll play every string in each of the three pedal positions, listening for any buzzes, sympathetic vibrations, or rattles. If I come across one of these noises, I'll try to track it down and fix it before going on. Some noises are easy as can be to eliminate. Some are nearly impossible to pinpoint and can drive me crazy for hours!

Step 10. Check Intonation. Once I've cleared up any noise I can, it's time to check the intonation. In contrast with the ballpark tuning I did in Step 7, now I'll be tuning very carefully and precisely, using the electronic tuner. I will tune each string in the flat position, then pedal into natural, and check my pitch with the tuner. Ideally, if the flat pitch is in tune, the natural pitch should be as well. If it isn't, I'll make some adjustments to the string nut or disc to improve it. That done, I'll double check the flat pitch with the tuner again, then pedal into sharp, check the sharp pitch against the tuner, and adjust as necessary. Once I'm satisfied that I've adjusted the intonation to be perfect – or as perfect as possible – I'm nearly done.

Step 11. **Return the harp to the customer.** Once my customer comes back to pick up the harp, I'll give her a report on the instrument's structural condition. I'll point out things I've repaired, and mention any more major repairs that may be on the horizon. If she brought any particular issues to my attention before the regulation, I'll let her know what I did to address them, and how things came out. Then I'll answer any other questions, settle up financially, and help her load if she needs an extra hand. So there you have it, one complete regulation. I hope the next time you drop your harp off you'll have a better idea what is going one while you're at the mall waiting for me to complete its regulation. If you have any questions I haven't answered, feel free to ask, either at your next appointment, or reach me via email. I'll be happy to tell you more.

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