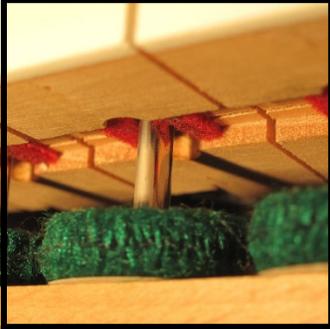


**Rebushing Keys**  
**Promo Set Preview**



# The Piano Owner's Heads-Up Guide to Important Piano Maintenance

## Focus On: Rebushing Keys



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serves as the fulcrum. Two polished "keypins" (front rail pin and balance rail pin) keep the key tracking in a straight line. Felt punchings (the green and white felts in the photos above) cushion the keys from underneath, and felt bushings (the red felts in both photos) help to make sure that each key has a snug fit and is silent in its operation.

For piano keys to have that "new piano" feel a quality set of key bushings is essential. Felt bushings are to piano keys as piston rings are to the pistons of an automobile engine. Without rings, pistons would clatter loosely and ineffectually inside their cylinders. Likewise, without key bushings, the wooden keysticks would rattle against the keypins which serve to keep the keys on track. When bushings are hardened with age or have loosened and dropped out of place altogether, keys become wobbly, giving the piano a distinctive "old piano" feel. **The key bushings of your piano have reached the stage of wear and tear where it would make an appreciable difference in the feel of your piano to have them professionally replaced.** This job is ordinarily done in the workshop. It involves careful removal of the old bushings, precise measurements of felts to be used and expert reinstallation and fitting of the new bushing cloth.



*A key which has been professionally rebushed.*

With your keys rebushed your piano will be a big step closer to being as responsive to your touch as the day it left the factory and should be much more of a pleasure to play.

**Heads-Up Preview**

# About This Preview Packet

The 24 main topics available for your free personalized promo or newsletter set all come in 2 versions—heads-up and full-length, both of which are shown in this preview packet.

**Heads-up versions** (see example on previous page) are always 1 page in length and as such are very direct and to the point. These shorter versions work especially well for pianos which have a number of repair issues in that a packet of them can be included with an estimate without creating a perceived overload of information for the owner. For my own business, I print multiple copies of heads-up for every topic covered thus far and carry several of each with me in my briefcase on tuning rounds in case I need to put a packet together. I spend a little more on printing expenses to have them produced on heavy-weight card stock, but the extra expense is well worth it, at least in my opinion—the promos have a very substantial 'feel' about them on the heavier-weight paper.

With a written estimate accompanied by relevant heads-up promos, a well-informed decision can be made more easily at the owner's leisure. This is especially helpful when the decision (to repair or not to repair) involves a discussion between joint owners of the piano—a husband and wife for example. The couple can sit down at the kitchen table together and go over the materials in an informed manner. Also, heads-up promos are great for any situation involving committees. If a half dozen repair topics are involved in a proposed restoration of a church piano, for example, the heads-ups can be passed around among committee members for everyone to become involved in the discussion and decision making.

**Full-length versions** (see example on following pages) go into enough detail that even your most discriminating customer will be satisfied. For my own use, I've printed off a single copy of each full-length version that I have in a binder which I also carry in my briefcase. Occasionally, I get my binder out if the customer wants more information on the spot. More frequently, however, are situations in which I ask my customer if they would like me to send the full-length copies of the topics concerned via email for further reading and consideration. Quite often customers do opt to see the in-depth materials.

Whichever version of the promos are put to use, the fact is that they work! In my own business, since I have begun giving out promos with estimates, the percentage of clients having recommended repairs done has increased steadily. In 2011, over 90% of the estimates which I gave were followed through with. Before promos, those types of numbers were way beyond what I ever saw. Other users of promos (see testimonials) have experienced similar results. Technicians have reported back that because of the promos, their businesses are doing better than ever before.

But enough about my own experiences and those of other technicians. Try a promo set out for yourself! Pick out a topic for your free promo set, and let us help you start building upon your own success story! Best wishes to your future!

# **Full-Length Preview**

## **The Owner's Guide to Piano Repair**



### **Focus On: Rebushing Keys**

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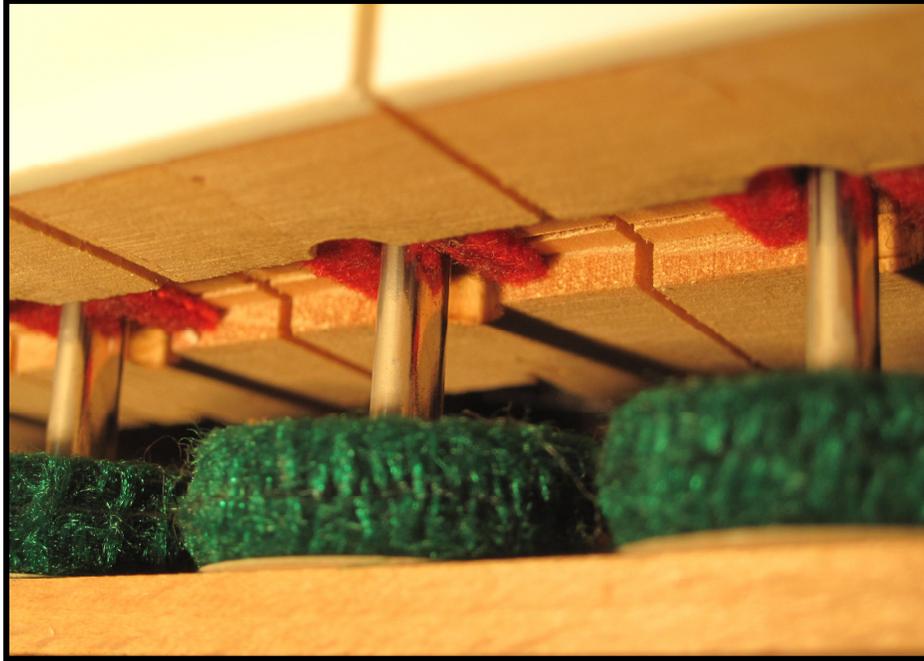


**The following commonly asked questions have been answered to give you the information you need in order to decide whether or not to have the keys of your piano rebushed.**

**Could you explain more about the function of the keys and how the bushings contribute to their operation?**

The wooden portion of the key (the "keystick") operates much like a child's teeter-totter. The middle of the key rests on the balance rail which acts as the fulcrum for the key. When the front of the keystick is pushed down, the back of the keystick lifts up one note of the action which in turn strikes the strings.

As shown in the above photo, the balance rail punchings (white felts), the balance rail pins and the key bushings (red felts) all work together to keep each key tracking smoothly and silently back and forth as the piano is played.



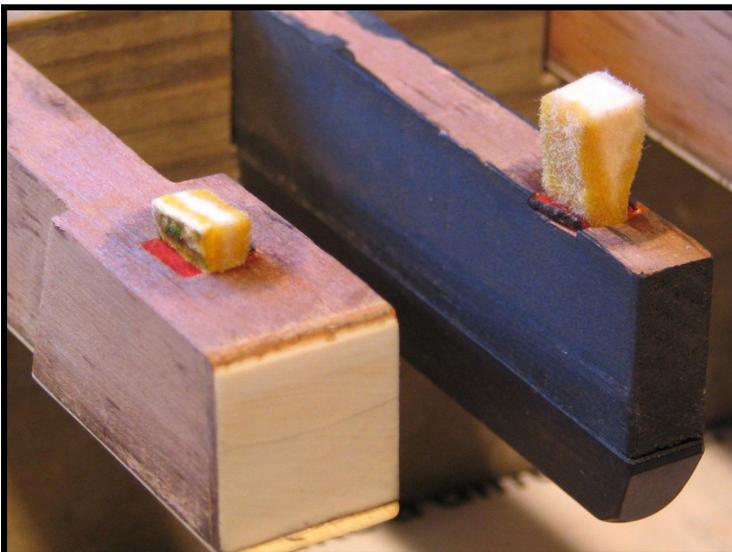
Are the

No. (piano) side to

all the way through the keys, but fit into a specially cut mortise. The bushings lining those mortises keep the keys snugly in place.

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### **How difficult is it to remove the old sets of key bushings?**

Sometimes a little steam is all that it takes to remove the old bushings—in fact bushings occasionally just drop out on their own. More often, however, the bushings need to be gently moistened over time before they may be safely removed without damaging wood.

In the above photo, dampened wedges of hammer felt are inserted to keep the old bushings moist while the glue gradually loosens. After this treatment, a technician may safely remove most bushings by the careful use of a set of needle nose pliers, or with a specialty tool—the electric bushing remover.

## How exacting of a job is it to replace key bushings?

First, careful measurements are taken to determine both the size of the keypins which have been used in your piano, and the thickness of the original felt which is being removed.



The original thickness of felt is used as a starting point in choosing a felt which will provide a snug fit for the keys without being so tight as to cause binding.

Finding the exact size of felt to best fit your piano is an important part of the job. This felt is of the highest quality and will match or surpass the quality of felt that was used at the factory.

High quality key bushing felt is available to technicians in thicknesses ranging from .043" to .067". Precise measurements are important!

## How is the new bushing cloth installed?

The exact tools and adhesives used may vary depending on what works best for your specific piano, but in general the correct length of felt is inserted and glued into place (using hot animal hide glue or an equivalent).

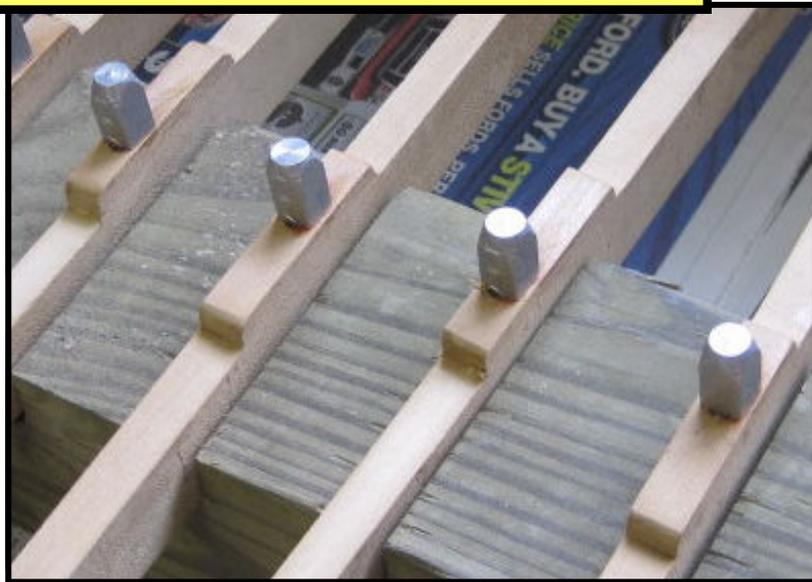


After the felt is inserted into the key, a sizing caul (a precision fitting device) is used to hold the felt in place while a razor is used to slice it precisely to the correct length.

The caul will then remain in place in the key until the glue is dry.

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Here, a set of keys that have been re-bushed are allowed to remain overnight in a drying rack with sizing cauls in place. When the keys are returned to the piano the next day the felts will have set at the exact thickness needed to provide a snug (but not tight) fit on the keypins.



After the keys have been returned to the piano they will be given a final test for fit and will be eased (adjusted) if necessary for an absolute consistent feel from one note to the next. If your piano action is in good regulation and the hammers are in good shape, your piano should be as responsive to your touch as the day it left the factory and will be a pleasure to play once again.



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**"In business to bring your piano to its full potential."**

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