

**Keypin Replacement
Promo Set Preview**



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

Focus On: Keypin Replacement



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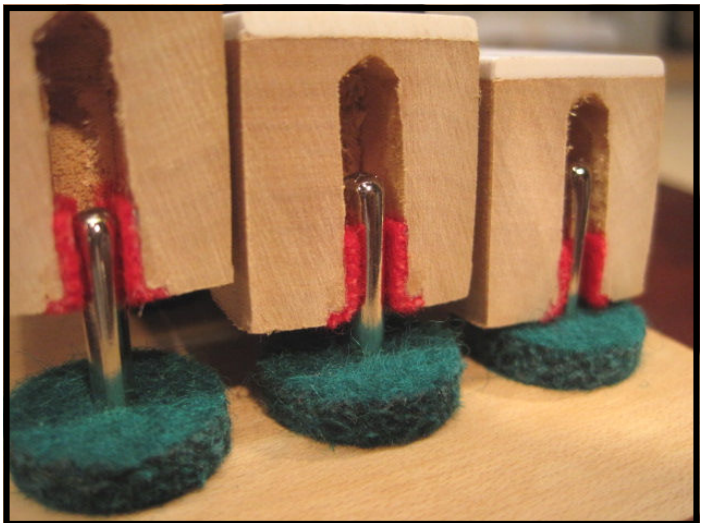
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One essential element for the effective operation of the keys in a piano is that the keypins must be smooth to the point of being slippery. Each note has two of these keypins, the front rail pin and the balance rail pin, that keep the key aligned in its proper position. When a note is played and the key rocks forward, the felt bushings of the key make positive contact with the keypins to prevent any wobbly side-to-side movement. Any corrosion on the surface of either keypin will result in unwanted resistance, and will produce excessive wear and tear on the bushings.

The original keypins in your piano have become corroded to the point where replacement is now highly recommended.

If a piano technician were to simply grind off the corrosion, the slippery nickel plating would be gone, and the dimensions of the keypins would be changed. Replacement therefore is the only practical option.

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the piano is used, leaving keys which have discernable wobble. With the replacement keypins on the right, there is a nearly imperceptible resistance on the keys but an absolutely smooth movement up and down with no wiggle perceived to the right or left.



Smooth, polished keypins and good quality bushing felt (the red felts on the insides of the mortises, shown in the above cut-away photo) are essential for this system to work efficiently. By carefully removing the old pins and replace them with a new set of high-quality keypins, the touch of your piano will be improved.

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: Keypin Replacement

Information provided courtesy of:

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One essential element for the effective operation of the keys in a piano is that the keypins must be smooth to the point of being slippery. Each note has two of these keypins, the front rail pin and the balance rail pin, that keep the key aligned in its proper position. When a note is played and the key rocks forward, the felt bushings of the key make positive contact with the keypins to prevent any wobbly side-to-side movement. Any corrosion on the surface of either keypin will result in unwanted resistance, and will produce excessive wear and tear on the bushings. **The original keypins in your piano have become corroded to the point where replacement is now recommended.**

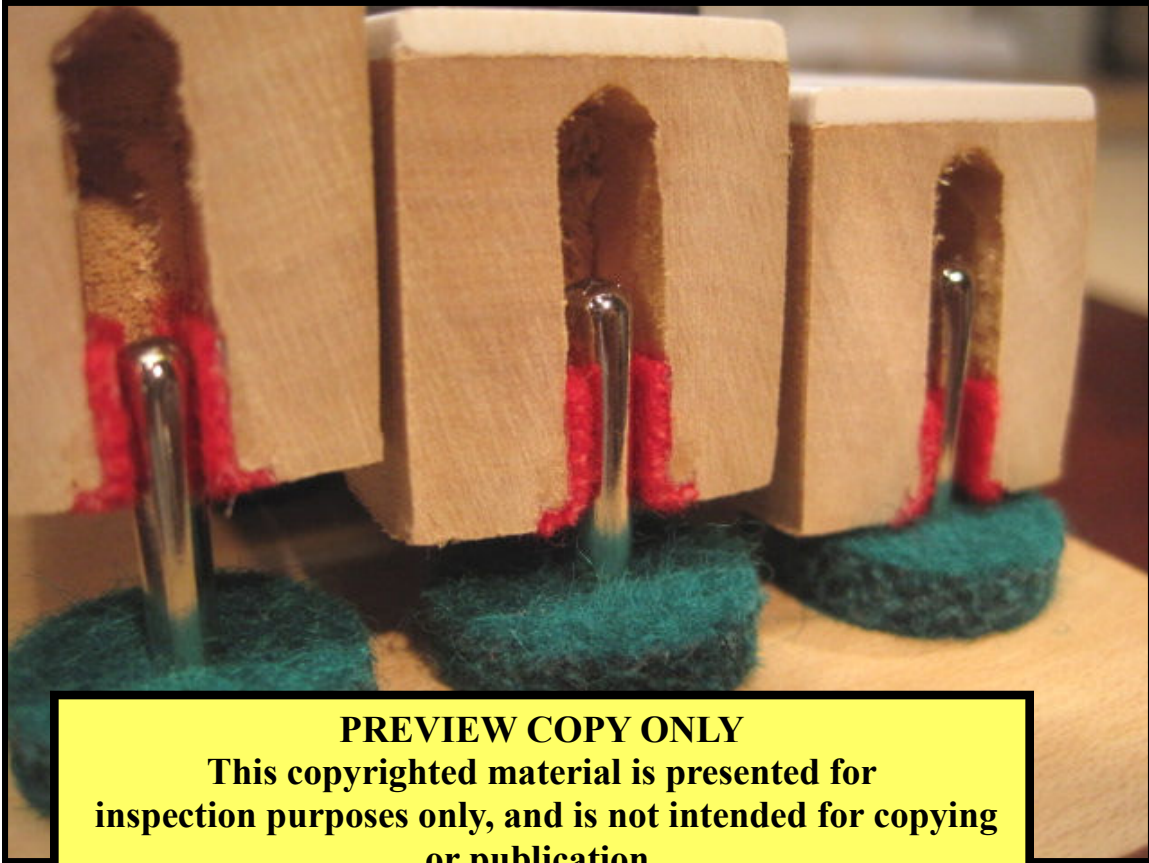


A new set of keypins help give keys a new "feel" when the piano is played.

The following commonly asked questions have been answered to help you in deciding whether to replace the keypins on your piano.

How does one decide when a set of keypins need replacing as opposed to a simple polishing?

The deciding factor is if the surface of the keypins has succumbed to corrosion or not. If the pins are simply tarnished, a gentle polishing may be all that's necessary to restore things to good order. If the surface of the pins has become pitted, however, replacement is necessary. Corrosion becoming noticeable on a set of keypins is similar to rust bubbles appearing on the surface of a car's fender. It's almost certain that the damage is more than what meets the eye. In the case of keypins, even if a piano technician were to grind off the corrosion, the slippery nickel plating would be gone, and the dimensions of the keypins would be changed.



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How do keypins assist in the operation of the keys when the piano is played?

In the above photo, the front 3/4" of a set of three keys has been cut away to reveal the keypin / bushing system that stabilizes the keys and allow for nearly frictionless up and down movement of the keys. Smooth, polished keypins and good quality bushing felt (the red felts on the insides of the mortises) are essential for this system to work efficiently. The bushing are sized so that the felts make gentle, but positive contact with the keypins. Ideally, there is a nearly imperceptible resistance on the keys but an absolutely smooth movement up and down with no play (wobble) perceived to the right or left.

The photo to the right shows front rail pins corroded beyond repair. (The cover photo shows the condition of the balance rail pins from the same piano) The gritty surfaces of such pins act as an abrasive and quickly chew into the felt bushings as the piano is used, leaving keys which have discernable wobble.

The only solution in a case such as this is to carefully remove the old pins and replace them with a new set of high-quality keypins.

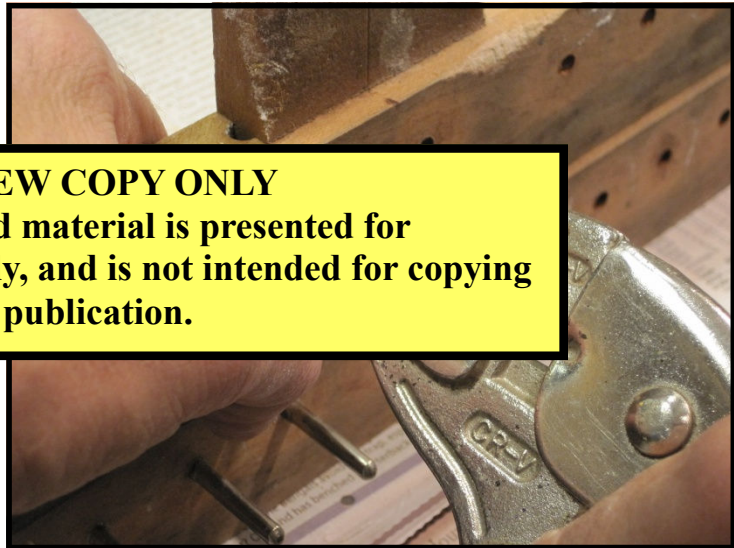


How is the removal of the old pins accomplished?



The keys need to be removed from the piano to access the keypins. Additionally, the keyframe itself is typically removed so that the repair work may be done on a workbench. In the case of a grand piano, the action is removed, then the upper stack is taken off of the action to access the keys.

Front rail pins are here being carefully removed from the keyframe with a pair of vise grips. Because the pins are tapered, the pins hole is tapered into the keyframe. Careless removal by an untrained technician can result in loose fitting replacement pins, making a bad situation worse.

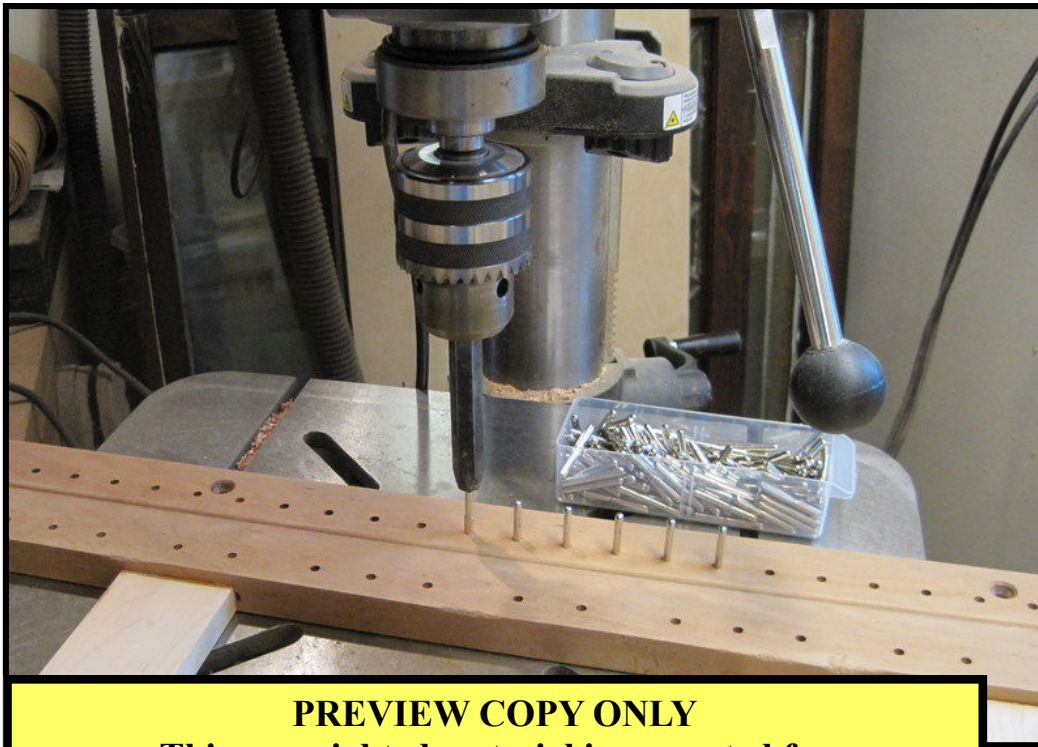


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In the photo to the left, balance rail pins are shown being tapped out from the underside of the balance rail. Again, care is taken not to damage the original hole. The old pins will be measured with a micrometer to determine their exact size. The new pins, when they are driven in, will be tight as long as care has been taken in removing the old pins.

What are the basic procedures for installing a replacement set of keypins?

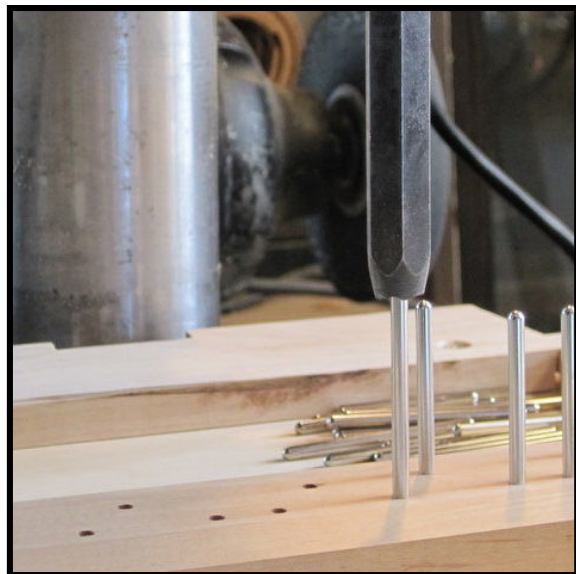


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(typically nickel-plated), a press is often used to push the new pins into place to the correct depth.

With the piano disassembled to this point, it is an opportune time to complete any work related to the keyframe which might be needed. In the case of the keyframe shown in these photos, mice had done considerable damage to the portions of the framework made of basswood (the front-to-back supporting members). The balance rail and front rail, being made of hard rock maple, were untouched by the mice. New basswood parts were cut to match the old, the rails were sanitized with baking soda, and the resulting framework was as good as new once the work was

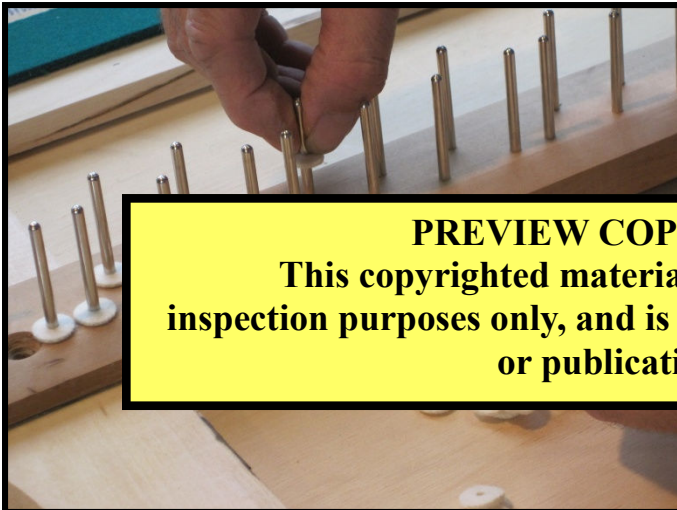
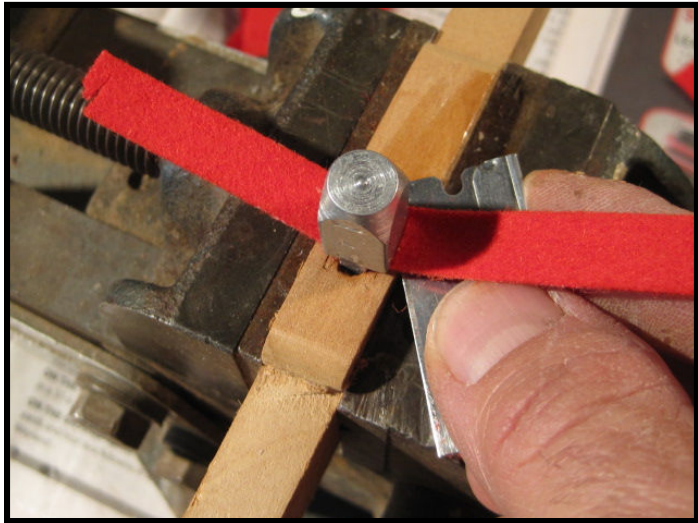


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Is there other repair work which would complement this job?

Yes, three other jobs in particular are often needed at the same time as keypin replacement. First, since the surfaces of the original keypins were corroded, an inordinate amount of wear and tear to the key bushings often has taken place. The old bushing felt may be removed and replaced with new, high-quality bushing felt that will work together with the new balance rail pins to produce a like-new feel to the keys.



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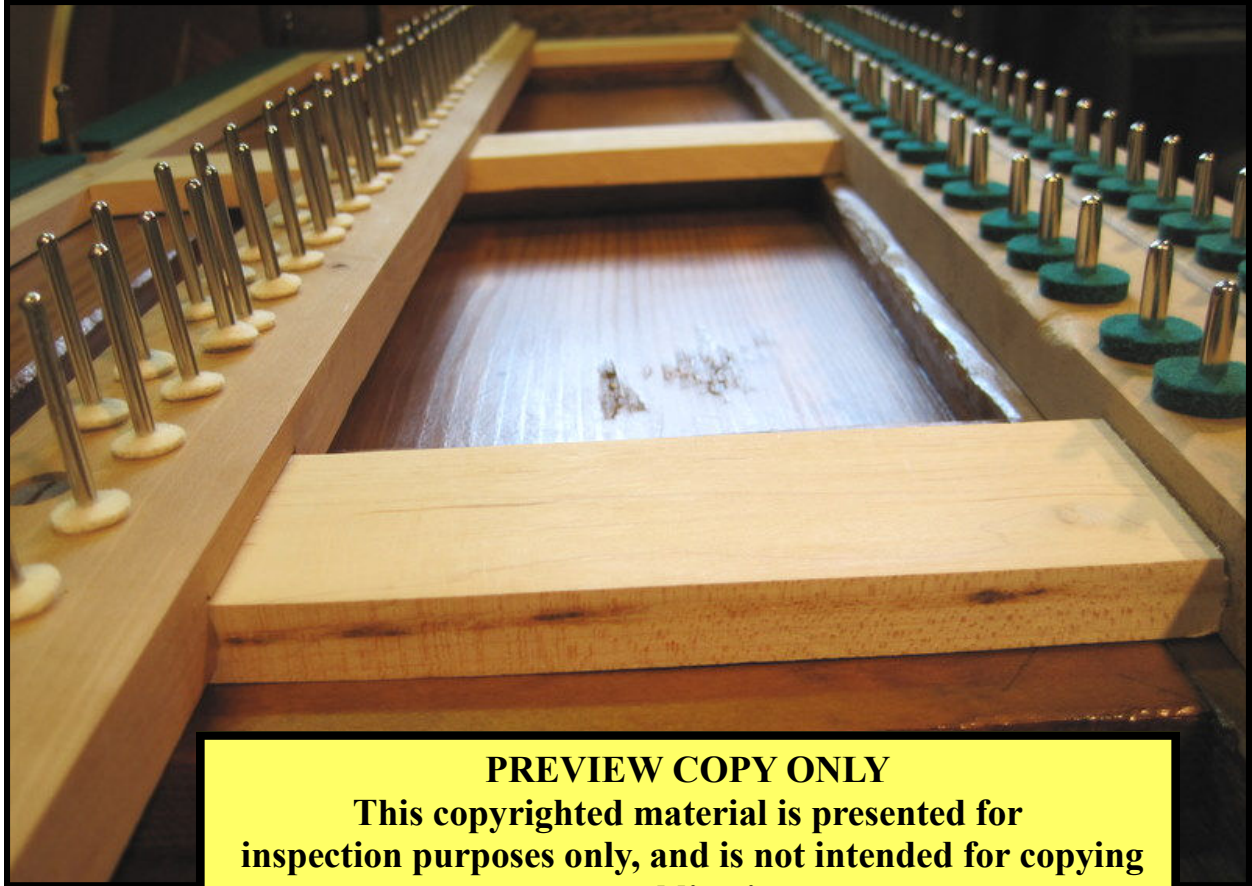
Secondly, while the key-frame is out of the piano, it is an ideal time to consider having the old back rail cloth, balance rail punchings and front rail punch-

These help
Many
er worn
by
moths or mice, both of which have a fondness for felt.

Finally, with all the other work being done, the keys will need to be leveled. This is done by placing paper punchings under the balance rail punchings to bring the height of each key up to a precise setting.

Better yet, the piano could be given a complete regulation, so that the newly refurbished keyboard is working in harmony with the action to deliver optimum performance from your piano.





New front

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