This Instructable will cover how to rebuild the original "foam rubber sandwich" sticky pads used in the Hohner Pianet C, Pianet L, Pianet M, Pianet N, and Combo Pianet.

Step 1: Materials and Tools

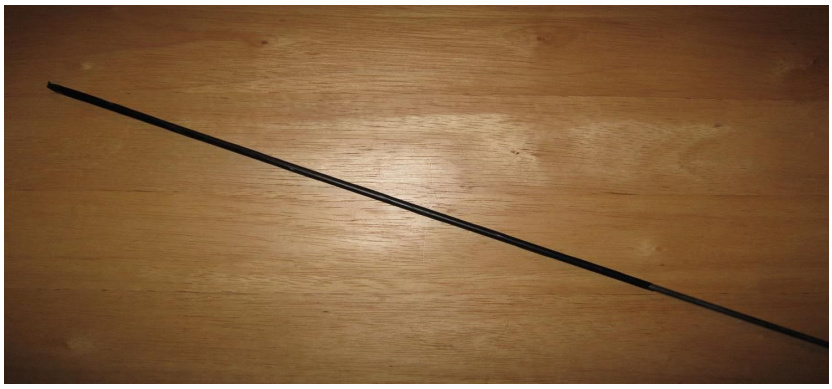
Here's what you'll need:

1.) 3M Super Weatherstrip Adhesive: This is glue. Strong stuff. Available from Grainger. EDIT: also spotted at OSH.
2.) pure silicone oil, 100,000-200,000 centiStokes if I remember correctly, Shepherd-Silicone-Differential-Oil-150000Cst

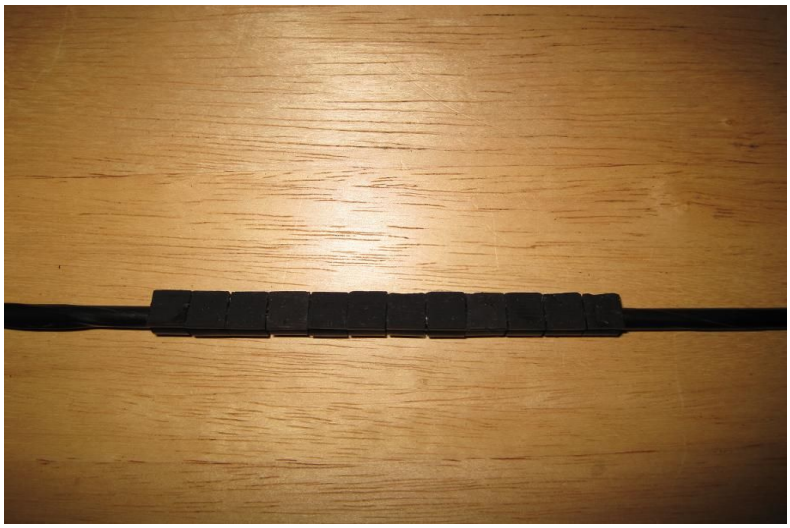
3.) X-Acto knife, X-Acto blades.
4.) Single-sided razor blades.
5.) Ruler.
6.) Electrical tape.
7.) Narrow gap rubber tape, 3/8" wide by 3/8" thick, open cell. I used the Ace brand. I can't guarantee that any old brand will work.
8.) One piece of finished lamb skin, approximately 4 by 3 inches, any color. Try to get a piece that has an even texture, without a lot of fibers sticking up. I got mine from a leather supply place.
9.) Rough-grit sand paper
10.) 3/16" diameter rod. Could be plastic or metal. At least 12" long.
11.) Scissors
12.) 1 piece of canvas cloth, at least 6" by 6"
13.) One full set (61) original Hohner Pianet sticky pads, any condition as long as the black rubber collar parts are intact.
14.) Isopropyl alcohol
15.) Q-tips
16.) Paper towels
17.) Glass of water

Step 2: Prepare the 3/16" rod

Wrap one layer of electrical tape around about 12" of the 3/16" rod in a long spiral, so that there is little-to-no overlapping. This is to make the rod about as thick as the Pianet key shafts, which are about 5mm in diameter.



Step 3: Clean up the black rubber collars.



Using a pencil, mark the original locations of the sticky pads on the tops of the aluminum key shafts.

Remove all of the old fragments of sticky pads from inside the keyboard, saving the upper, black rubber parts. Make sure the reeds don't have any rust or residue on them. There are rust removal kits available online. Clean the tops of the reeds with alcohol and Q-tips.

Cut, scrape, and sand away all of the existing foam, glue, and residue from the original black rubber collars. Be careful not to damage them. Stack 12 of the collars on the 3/16" rod as shown, leaving a gap between each about the thickness of a razor blade. The flat outer surfaces of the rubber should be sanded rough, and lined up flat with each other. Clean them with some isopropyl alcohol.

Step 4: Apply weatherstrip adhesive

Cut a piece of rubber tape about 4 inches long.

Place the tape with the non-sticky (cloth) side up, next to the 12 rubber collars which are lined up on the 3/16" rod.

Lay a thin bead (about 1/8" wide) of weatherstrip adhesive along both the rubber tape and the flat surface of the collars. You can get the bead of weatherstrip adhesive to break free from the tube by pausing for a second, then quickly raising the tube straight up in the air.

Using the handle of a Q-tip, spread the adhesive evenly over both surfaces. Try not to get any adhesive on the side walls of the rubber tape.

Pretty quickly the adhesive will start to get tacky. At this point press the 2 parts together, being careful to keep the long edges aligned. Squeeze them together. Some excess adhesive will probably squirt out of the sides, this is OK.

Step 5: Now for the lambskin

Cut a piece of lambskin exactly 3/8" wide, by about 4" long.

Carefully remove the liner from the adhesive side of the rubber tape. Stick the smooth side of the lambskin to the rubber tape, being careful once again to align the long edges perfectly. To be very clear, the fibrous suede-like side of the lambskin will be exposed on the outside.

Leave the assembly on the 3/16" rod, and place it in a well-ventilated area to dry.
It will take at least 30 minutes for the weatherstrip adhesive to harden.

Step 6: Burnish the lambskin

Slide the block of 12 pads off the rod. Place the canvas cloth on a flat surface and scrub the lambskin on the canvas. This will remove the thinner, looser fibers so that they won't shed off onto the reeds while in use. You will probably only need to rub for about 20-30 seconds.

Step 7: Slice through the foam

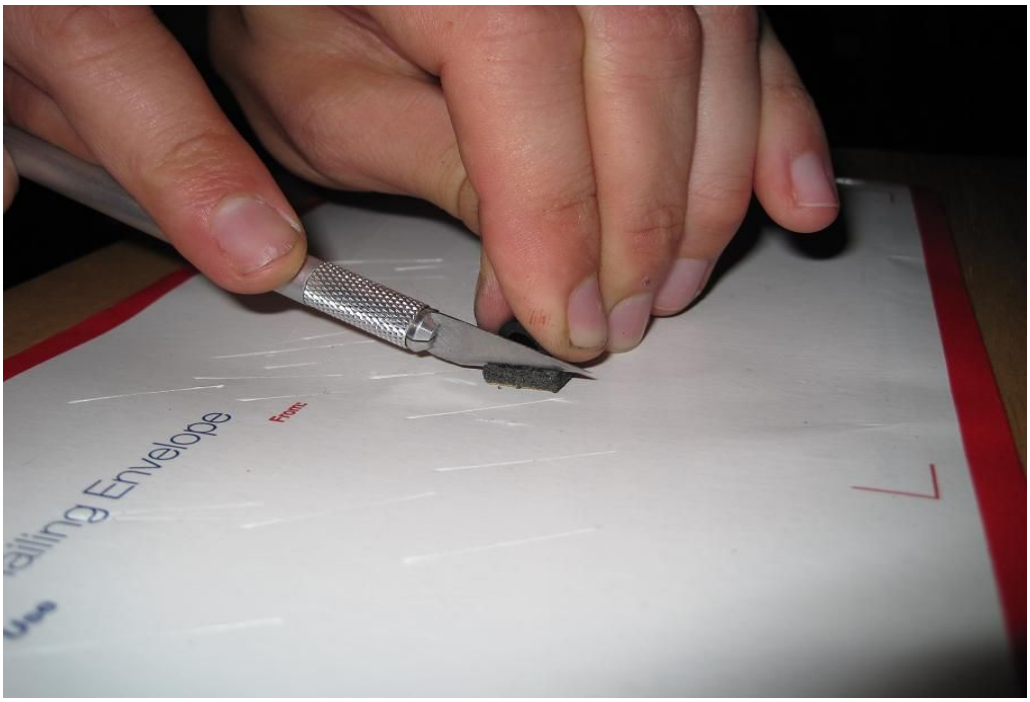
Using a razor blade, slice vertically through the dried weatherstrip adhesive and the foam rubber, being careful to keep the blade both vertical and square to the length of the block.

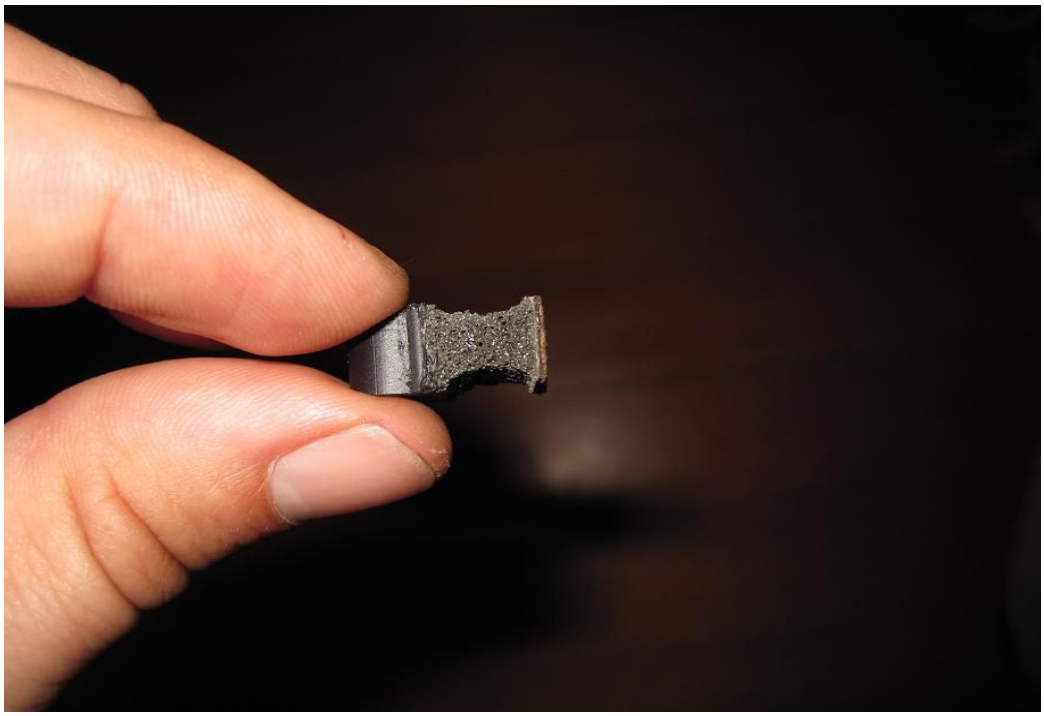
You will probably need to "saw" through the weatherstrip adhesive and the top part of the foam, but after you get about halfway through the foam, you should be able to press straight down on the blade (still keeping it vertical and square) and cut through the rest of the foam.

Step 8: Slice thru the lambskin

Using the X-Acto knife, cut through the bottom layer of lambskin. Once again, be careful to keep the blade square to the block of pads. You may decide to clean up the edges of the lambskin if they're not quite straight.

Step 9: Optional: cut hourglass profile

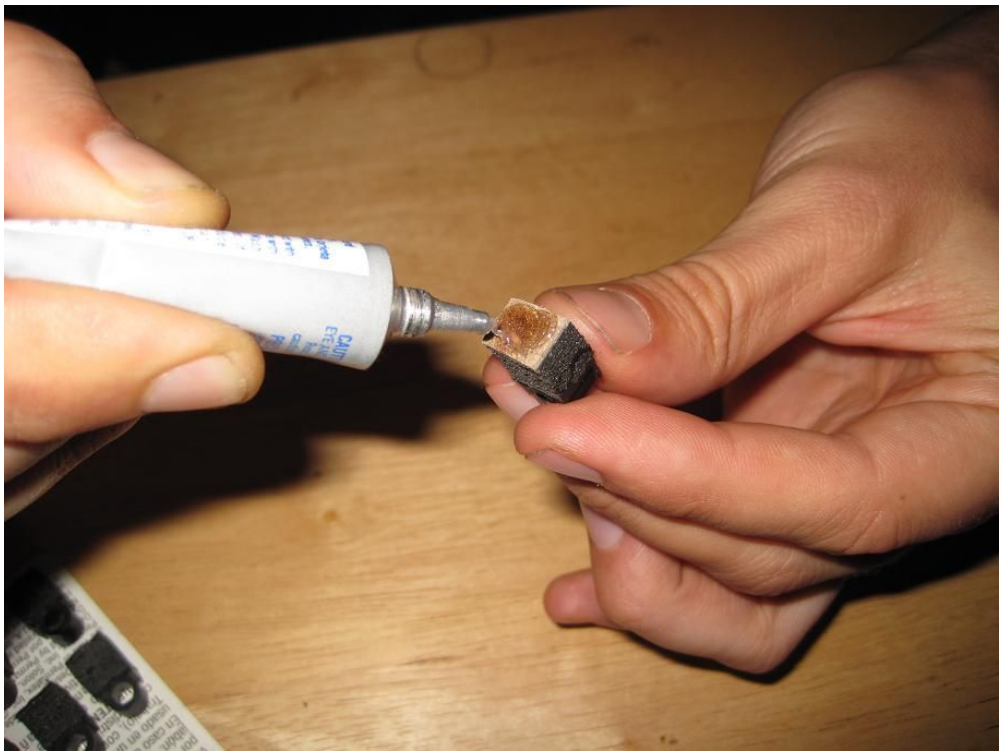


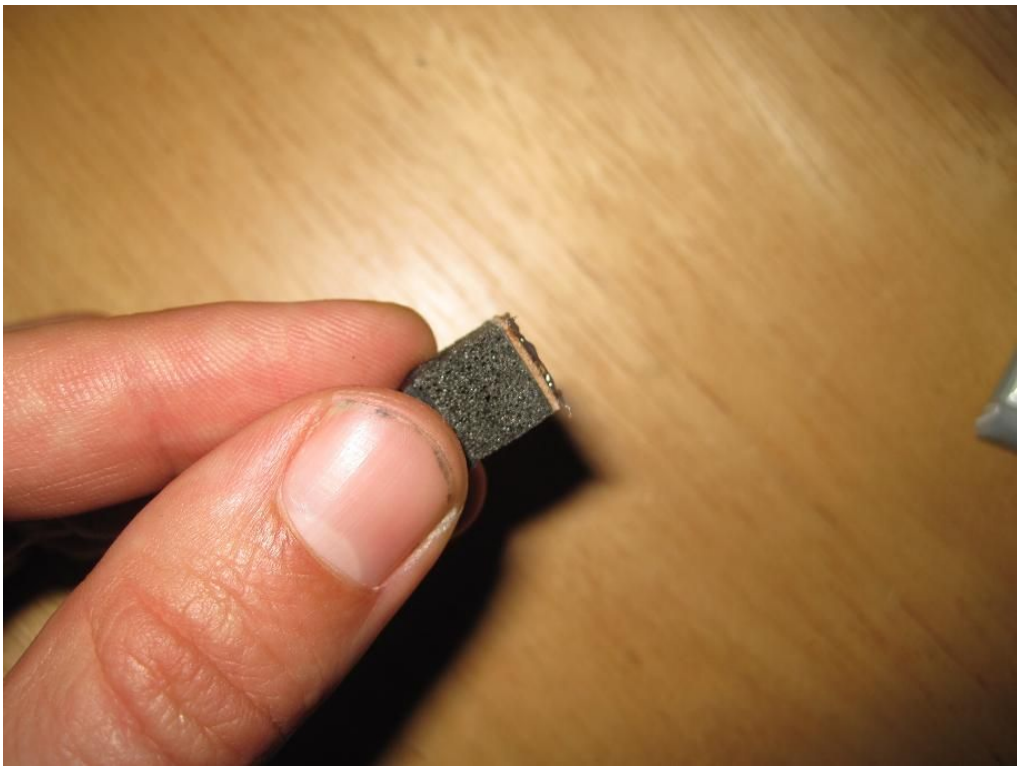


If you are starting from scratch with an untouched Pianet, you may find that these home-made pads are a bit too thick and stiff and require some of the key shafts, particularly on the black keys, to be bent up about 1/16" to 1/8". Alternatively, you can make the pads less stiff by following step 9.

Take each pad and place it lambskin-side down. Compress the foam rubber by pressing straight down on the black rubber collar until the pad bottoms out. Using a sharp X-Acto blade, cut away the foam rubber that bulges out of the 2 longer sides of the pad. The foam rubber will now have an hourglass profile as shown. You may also decide to clean up your trimming work with some small scissors.

Step 10: Apply the grease

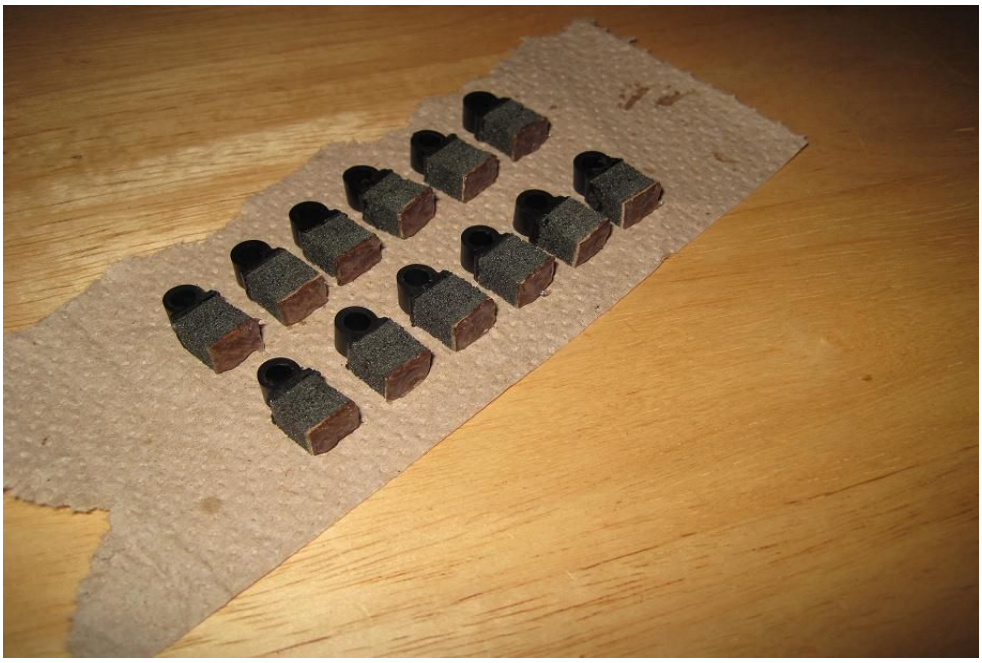




EDIT: Use silicone oil instead of dielectric grease if possible. See step 1. I didn't have time to take new photos.

Take each pad and apply a healthy dose of dielectric grease to the lambskin, using a rubbing and swirling motion while squeezing the tube. Try not to get any grease on the foam rubber. Use enough grease so that it builds up to about the thickness of the lambskin.

Step 11: Let the grease soak in



Put the greased-up pads on a paper towel and let them soak for at least 8 hours.

After 8 hours, you will want to "touch up" the grease job anywhere that the lambskin surface is starting to become visible.

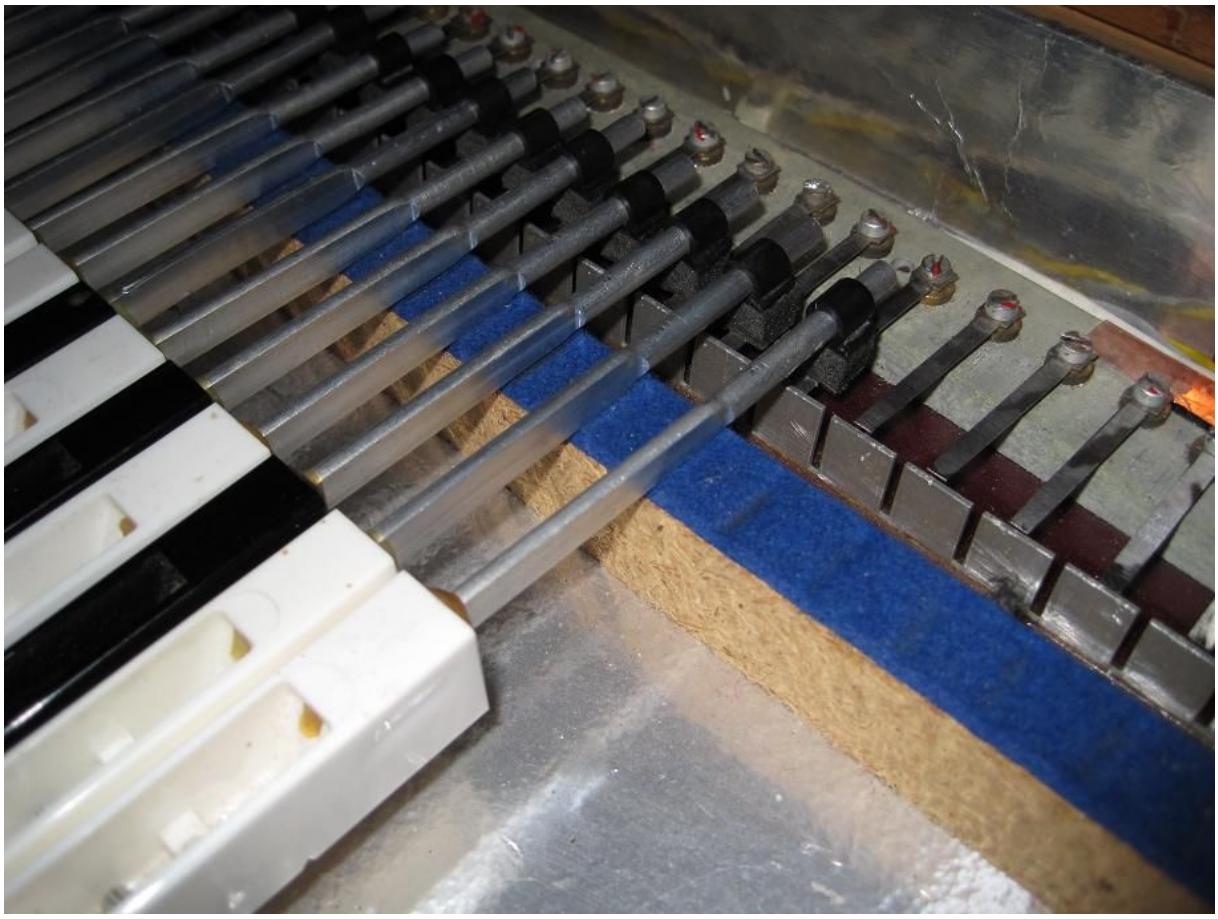
Let the pads soak for at least another 8 hours after touching them up. It's very important that the lambskin is completely saturated in the dielectric grease.

EDIT: after 3 weeks I had to reapply grease to about 15 of the pads in the top range of notes, all pads from the same batch, because they were no longer saturated at the surface. You may want to soak the pads even longer, several days maybe?

Step 12: Wipe off the excess grease

After the pads are done soaking, remove the excess grease by wiping them with a paper towel. You will want to wipe down the surface until it just barely starts to lose its gloss. I took a photo with no flash, holding the pad so that the lamp was reflecting on it, in order to show what it should look like.

Step 13: Install the pads



Slide the new pads onto the key shafts, lining them up with the marked locations of the old pads. If you don't have a record of where the original pads were placed, this photo shows them pretty clearly if you zoom in:

http://images.yuku.com/image/jpeg/38026ff597197e9ca5f6672cce0ea350f4e04cb3.jpg

If you are starting with straight key shafts, check the black keys in the middle to upper octaves to make sure the key shafts are less than about 1/32" from bottoming out on the felt stop (blue in this photo) when the key is unpressed (*). You may decide to adjust the key shafts or swap in some of the more-hourglassed, less-stiff pads (if you followed step 9).

If you are starting with bent-up key shafts, you will need to go one key at a time, remove the key, bend the key shaft back toward straight but not all the way, and then install it and check to see if the pad is making the key shaft float over the felt stop. You may want to go one octave at a time since the key springs are tough to line up on the white keys without removing the adjacent black key.

After a few days, you may find that a few of the pads are losing their stick. You can add a thin layer of dielectric grease to them and they should be fine again. I couldn't figure out why this happened, my only guess is that the soaking process was less effective for some of the pads.

(*) - Note that the return springs on the black keys are only about 2/3 as strong as the springs on the white keys, in order to compensate for the longer lever arm of the white keys. This means that the black keys will have more of a tendency for the pad to be too thick or too stiff.