



Small Shop - Big Results

Refinishing Sharps – Part 4: Testing, testing. One, two, three. Testing.

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The concept behind this month's article was to try out techniques for refinishing sharps used by a cross section of technicians. To obtain suggestions for methods and products used by other shops, I posted inquires on the Pianotech and Piano World e-mail listservs. The biggest initial surprise for me was in the variety of suggestions offered. No two shops apparently used the same exact combination of procedures and products. In all, a total of twenty-five specific products were mentioned for cleaning, dying and top-coating sharp keys.

I decided at the outset to try every product and procedure suggested. My initial job therefore was to go shopping for the items I didn't have on hand. With all the products suggested rounded up, I would be able to give every proffered procedure a fair trial. The test results thus obtained give a good picture of products that do work well. As far as those products which didn't fare so well, I would be more inclined to fault my limited grasp of proper technique rather than the product.



Photo 1: The lineup of cleaning products.

To start things off, practically every technician who responded described cleaning sharps keys in preparation for applying finishing products as a recommended first step. Most of the products suggested (Photo 1) were already on my shelves – the two products that I didn't have were available at the local hardware store.

I initially assumed that in cleaning the sharps in preparation for applying finish it was important to remove residue which might interfere with the new finish. For as long

as I could remember, I myself had gone over sharps after stripping them with a rag doused with lacquer thinner. Why I used that particular product was a mystery to me – I suppose my dad had recommended it to me when I began working on pianos in the 1970's. Several other technicians mentioned lacquer thinner, but many used something else. I was curious to see how the various offerings would stack up against each other.

To test the effectiveness of each product, I put them to the test cleaning both sharps which had been stripped and sharps which were merely scuff-sanded in preparation for top coating. For each test I used a clean paper towel saturated with the cleaning product. I judged the results by the amount of visible residue transferred to the paper towel.



Photos 2a – 2g: Comparison testing between cleaning products

The results were not at all what I expected. The products which I assumed would do the best (in that they seemed the most powerful) were lackluster in comparison with the ordinary household cleaning products which had been recommended. My product of choice, lacquer thinner, tested only slightly better than acetone, naptha and denatured alcohol. None of them in fact did very well. What was worse was the fact that all of them are potentially hazardous in that they are both flammable and produce harmful vapors.

Ironically it was the more mild-mannered household products which fared the best. Formula 409® did decidedly better than any of the solvents, and is available in a convenient squirt bottle. TPS® (Tri-sodium phosphate) and Windex® did even better. If I were to base my choice of cleaning products on this test alone it would have to be Windex, in that TPS, while equally effective, comes in powder form which needs to be mixed in water before use. TPS also requires special handling (use of rubber gloves – cautions about contact with skin and eyes) which put me off. Windex, on the other hand, is used right out of the bottle and is the only product of all of those tested that had absolutely no cautions listed. Safest, most convenient and most effective made it what seemed at first blush to be a sure winner.

Having completed the preliminary test on cleaning products, I turned my attention to stains and dyes – products to even out the color of the wooden sharp before either clear-coating or topcoating with an opaque paint or lacquer.



Photo 3: Stains and dyes.

Technicians most often recommended TransTint, (sold by a prominent piano supply house), Flebing’s Leather Dye and Higgins Calligraphy ink. I also found a second leather dye (Kiwi) at WalMart, plus an ebony dye stain at a local woodworking store.



Photo 4: Leather dye in handy applicator bottle.

After applying each of the product to a number of sharps, both ones that were stripped entirely and ones that were merely scuff-sanded and cleaned, I concluded that the product which was the easiest to use was the Kiwi leather dye (Photo 4). The applicator is a round sponge affixed to the end of the bottle. To apply, one merely pushes

the sponge down on a hard surface to release dye, and then wipes the surface being treated with the saturated sponge. It covered evenly with a very opaque black coat without skipping or dripping. The only problem that I noticed with the Kiwi dye was that froth would at times develop on the applicator which would leave a bubbly foam on the sharp key. By dabbing the applicator on a paper towel from time to time to remove the frothy foam, the problem was easily resolved. The fact that the Kiwi product was available at WalMart was a big plus for me. No shopping around or even ordering on-line required.

The Flebing's leather dye, on the other hand, took a lot of legwork to locate. It turns out that some shoe stores carry the product line, but none of the local stores carried black dye, only brown. After visiting all the shoe stores in downtown Ames, Iowa, I found a hole-in-the-wall shoe repair shop, open three afternoons a week, which had a bottle. "I'll take it!" I said to the shop owner when he pulled the bottle from behind the counter, caring little what the price was at that point in the day.



Photo 5: Effective, but messy.

While the Flebing's leather dye was as effective as the Kiwi product in producing a very opaque black surface on the sharps, its applicator left something to be desired, in my opinion. It consisted of a fuzzy absorbent ball on a stiff wire which is inserted into the bottle of dye. Using the applicator once it was loaded with dye without making a mess was difficult (Photo 5). The fact that the dye itself performed no more effectively than the Kiwi dye seemed to make a choice between the two a no-brainer.

The Higgins dye performed fairly well, but was not as easy to use as the Kiwi product. What worked the best for me was to use a pair of technician's tweezers to hold a cotton ball to insert into the ink bottle. Used this way, however, the amount of ink in the bottle was rapidly used up, so much so that just to do one set of sharps would most likely use up an entire bottle. As was the case with the Flebing's product, I had to do a bit of searching to find a local source for the stuff. An office supply store was where I finally was able to buy a bottle.

I had trouble with the Transtint, but am convinced that the problem was on my end. Enough technicians recommended the product that I'm sure it can be made to work well. As far as simplicity of usage, however, I can only say that I went through two bottles trying to get results, and was still having problems by the time the second bottle was used up. It wouldn't dry in a reasonable amount of time, no matter what I did. Therefore, unless you have help from someone who knew exactly how to mix and apply it, I would advise caution.

Only one product warranted an outright thumbs-down. The General Finishes® ebony dye stain that I purchased at a woodworking store was too watered down as it came from the can to work well for staining sharps.

For the technician desiring a quick and easy, all-in-one opaque finish out of spray can, the product which worked the best for me over non-stripped wooden sharps was Behlen's® Jet Spray Lacquer Toner in the Satin Black. To prep the old sharps, I simply scuff sanded the existing finish with 400 grit paper, then applied cleaner. With two coats of the Behlen's Satin, I obtained a smooth, hard, very even ebony finish on sharps that had well-worn finishes to begin with (Photo 6). The other products tested were acceptable, but the resulting finish was not quite as nice of quality.

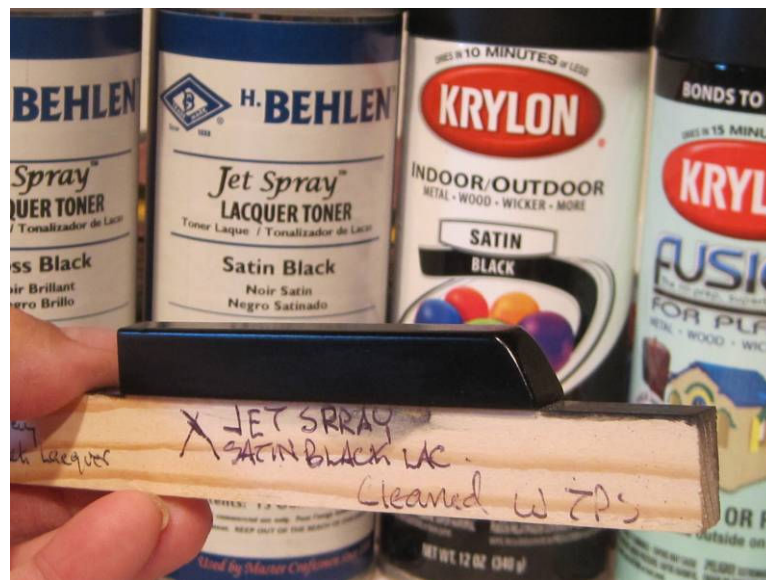


Photo 6: A truly nice finish.

For old plastic sharps which needed a fresh coating, I would give Krylon's® Fusion for Plastics product a definite thumbs-up. It sprayed on a nice even coat which made the sharps look new again.

It should at this point be clearly stated that for this type of work the condition of the sharps is a key factor to success. If facets of the sharps are badly rounded, a new coat of finish will only go so far in improving their appearance. Sharps which have been worn down to the nub (which are most likely lower quality whitewood, and not ebony) should most likely be replaced with either new ebony or plastic sharps. With the process of removing old sharps being very straight-forward and the procedure for gluing new ones on not complicated either, the whole job can be accomplished in roughly the same

amount of time as a modest sharp refinishing job. The cost of plastics sharps is very reasonable, making replacement an option worth considering.



Photo 7: Clear coats.

As a final step, various products were suggested by technicians for clear-coating sharps. For ease of use, I chose to limit testing to sprayed-on or wiped-on products. Of the six products tried, the only one which I had success with was the clear lacquer spray by Nikolas®. It dried quickly, could be second or third coated without a long delay, and buffed out easily to a nice satin finish. The only other product which had a reasonable drying time was the Bulls Eye® spray-on shellac. It, however, produced a very garish finish which might be suitable on children's toys, but looked out of place on sharp keys. The rest of the products all took far too long to dry to the point where they might be buffed, especially the two tung oil finishes and the wipe-on poly finish that I tried. The day after I applied these products, in fact, the surface of the treated sharps was still tacky.

To be honest, for anyone interested in trying new products for refinishing sharps, I would recommend taking my advice with a grain of salt. The tests that I ran were of an extremely limited nature, with me trying products that were in some cases entirely new to my shop. I would be confident in saying that the products that worked well for me would probably work well for others, but for those products that I didn't have success with, the failure could just as well be in my application procedures as in the products themselves.

On a related note, one aspect of my testing which bothered me from the start was the fact that the sharps which I used came from various pianos which had been subjected to a variety of conditions. I had a box of old sharps of my own that I used, and Joe Garrett was kind enough to send me some additional sharps to include in my testing. The specific factor which I worried might influence the results of the testing was the amount of residual finger oil in each of the sharps, which of course would depend on who played the piano that the sharps came from. How oily was their skin? The fact that some of the sprayed-on products tended to bead up on certain sharps (especially on the ends of the sharps, where the old finishes had tended to wear off) reinforced my suspicions.

In an attempt to test which of the cleaning products might alleviate any problem with oil residing within exposed wood, I constructed a second rack of sharps for test purposes. These sharps however, were made by me out of yellow pine, cut to size, dyed black and mounted on simulated keysticks. The idea of the test was to saturate the surface of the sharps with an oil similar to finger oil, and then test-clean a strip of the sharps with each of the cleaning products which had already had been given the residue test. The effectiveness of the cleaning products used would be verified by spraying on the opaque lacquer spray which had showed the tendency to bead up the most (which happened to be the Behlen's gloss black lacquer) during the earlier trials of the opaque finishes.



Photo 8: Basting the sharps.

Despite the inordinate amount of time it took to produce and prepare the ‘faux’ sharps for testing, the testing went nowhere for the simple fact that no matter how much oil (I used a lemon oil similar to finger-board oil) was brushed on, after the sharps were wiped dry and allowed to sit for a short amount of time, no beading up of the sprayed-on finish ever occurred, even before I scrubbed the sharps with any of the cleaning products. It seemed as if the yellow pine I used was dry to the point where it simply sucked the oil up. I therefore had no clear idea of which cleaning product might be used on the old sharps to best level the playing field.

The upshot of this is that while I did come up with a list of products that did seem to work well, the testing procedures are somewhat suspect because of the unavoidable variables within the sample sharps themselves. I would therefore advise trying out products for yourself to see what results you obtain in your own shop.

That advice should go without saying for everything presented (by me at least) in the Journal. The techniques I describe work well for me, but always there are alternative techniques and products which work equally well, if not better. Use my ideas as simply a jumping off point in discovering for yourself what works best for you.

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