Finish Repair

(Notes by Dean Petrich)

Can I really make this to look better than it is now? A repair will never look as good as new. Polyester has advantages over other finishes. Talk over the job with the customer to establish realistic expectations. You don't really know how it's going to come out until you do the job. The only way to have an idea is to practice.

D Started with old furniture. Then he got some parts from old pianos. He took parts to his shop, banged them with a hammer to make dings, and then worked on making the nicks disappear. He soon found that his right arm got tired from so much sanding, so he switched to using his left arm equally.

Sources

Mohawk sticks are quick for small repairs and can be done at no charge. Sometimes these can't be made much better by filling anyway. Sources: Allied Piano in PA, and Mohawk on-oline. Ruth at the NAMM show is very helpful.

There are basically two types of damage:

1. Nicks dings & scratches
2. Sun and UV damage.
    a. Most people are sensitive to the smell of lacquer. Take the part home. Take toners to neutralize the color. Color matching is the hardest of all. Mohawk has great toner products for UV damage.

- Finishes.

Know what kind of finish you're working with. Sometimes oddball parts are different. Kawai has check blocks that are sheeted with plastic. Polyester is impervious to just about anything. Lacquer thinner or acetone on any other finish will melt other kinds, such as lacquer. To test, find a spot under the piano rim that is inconspicuous. Then you'll know what will happen.

For home furniture people just sand it, stain it, clear-coat it and you're done. Pianos are much more involved. Always use a drop cloth or you will end up with a serious carpet cleaning or repair bill.

- Colors
    a. Colors don't look the same from the side as they do from head on.
    b. The topography of the surface with the surrounding finish is not the same, so the final result will never look perfect.
- Grains
    a. Open grain & closed grain
        i. Danish oil
        ii. Finishes on a lacquer piano are only .005-.007" thin.
        iii. Steel wool along the grain.
        iv. Wax will blend things in, but only use wax as an aid in repair one time.
            1. TSP will remove wax
            2. Elbow grease
- Fillers

    a. Volatile compound
    b. Fillers have to be beveled or tapers
    c. Burn-in
        i. Put the balm in, dropping it in carefully and uniformly with the heat knife.
        ii. However, if your knife is not perfectly flat, the heat of the knife can destroy the finish.
- Waxes
    a. Koenig has both hard and soft wax.
    b. Use a butane hot knife and drip it.
    c. Make an over-sized lump.
    d. Use the plastic filing tool to get the wax flush with the rest of the finish without scratching the surrounding finish.
    e. Use a heat gun to clean the tool.
    f. Because wax (hard or soft) is rather soft, don't use it on corners.
    g. Soft wax is quick for fixing little dings.
    h. After doing a wax, take out a razor blade and carve in grain. You can also draw in grain with fine brushes.
    i. Once you have repaired the wax, take out a color kit and mix up some other colors. Black with a toner can fix a lot of things – a lot of clear with a little tiny bit of color.
    j. Once the wax is set spray a little bit of lacquer.
        i. Steel wool any over-spray.
        ii. Lacquer comes in clear, matt and
    k. Use soft wax for pin holes.
    l. Get soil and oil off the surface or the wax and finish can mix together.
- Polished surface
    a. Polyester looks like a mirror. If a small scratch is sanded out, the surface will then be curved and will look like a fun-house mirror.
    b. For a ding, enlarge the tiny ding into a duck pond – a smooth shallow bowl-shaped indentation. Either use a lithium battery moto-tool or a chisel to make this crater.
    c. Clean the crater with lacquer thinner.
    d. Fill the crater with lacquer.
    e. Almost all finishes have some kind of gloss aspect, so any time it is clear-coated it changes the color.
        i. Use Naptha (lighter fluid) on the repair area to find out what gloss will look like
        ii. Then the naptha evaporates. At least you know how it will look.
- Black.
    a. Asian black is more charcoal.
    b. Blacks are either very dark blue or very dark red.
- Curing
    a. The curing of polyester varies.
    b. Temperature and humidity can make too much or too little.

    c. When it cures it gets really hot, so don't leave it on anything you care about or it will damage the surface.
- Patching polyester.
    a. Hog a lot of material off with a rasp
    b. Then go to 320 or 360 paper, working down to 2000 paper.
    c. Every time you use a new abrasive, not only are you getting rid of the ding, but you are also getting rid of all your scratches.
- Side Repairs
    a. Build a dam using plastic sheets or tape.
    b. Fill the dam with polyester and let it cure for 30-45 minutes.
    c. Remove the dam.
    d. Fill down the lump.
    e. Gels won't run, but they are really hard to sand down because they are so hard.
    f. With polyester there is a certain number of pounds of pressure to use before it can be cut or sanded.
- Prices
    a. People don't argue about prices, but body language speaks.
    b. Explain how long this type of job takes
- Rub out the finish
    a. Use 000 Steel wool.
    b. Use water and soap to keep down the steel wool dust.
    c. Mohawk says to use 50% wool lube.
    d. Rub it down carefully because the finish is not very thick. Be particularly careful around edges.
- Water Spots
    a. Treat each spot as an individual project.
- Automotive Supplies
    a. Swirl removers
    b. Scratch removers
- Business
    a. Materials
        i. Materials cost 100's of dollars, but make big profits
        ii. It involves carrying around hazardous and toxic materials.
            1. Alcohol, paint thinner, naptha, etc.
        iii. Leave all these tools in the car.
            1. Heat can possibly harm
            2. Keep small enough quantities to keep the smell down.
    b. Liability
        i. Watch that one repair doesn't lead to an unanticipated repair at your expense.
    c. Protective equipment
        i. Ear protectors
        ii.