



While mastering some of the techniques used by spot finishers can take a lifetime of patience and experience, says David Larson, others are pretty basic. Fortunately, he adds, the two mainstays of the spot finisher's repertoire — burning in and French patching — tend to the basic side of things, can be picked up quickly, and have application in any refinishing business, on-site or shop-based.

Healing the Wounds

By David H. Larson



What is spot finishing? How is it different from refinishing? Why is it important? How is it done?

When asked to explain spot finishing, I say its defining characteristic is that it enables one to make repairs even complex ones, on site.

Mastery of spot finishing's basic skills is obviously of great value to the field worker, but it will also prove a valuable adjunct in the refinishing shop as well. Correcting defects in an original finish, fixing damage incurred in delivery, erasing accidental damage from ordinary use, putting the finishing touches on pre-finished millwork, even refurbishing quantities of furniture on a continuing basis – all of these are possible with spot-finishing techniques.

Often referred to as “touch-up” work, spot finishing is much more complex than that term suggests. In fact, the techniques used by spot finishers are so numerous and varied that they cannot possibly be covered in a single article. As a starting point, let me address damage repair and the most basic (yet important) procedures in spot-finishing: burning in and French patching.

UP-FRONT ASSESSMENT

Let me make one thing clear at the outset: The methods I'll describe here are *not* the only way to accomplish these repairs. If you are a veteran of the trade and do things differently to achieve the desired result, I'm not suggesting you change your ways. Besides,

Figure 1



Figure 1: Use a very sharp chisel to shave away any “rim” around the edge of the defect, making the surface level.

if you're a veteran of the trade, I suspect you've already mastered these techniques.

If you're new to the game, however, this information should be helpful. Be forewarned: Some of my methods run contrary to what is generally taught. Rest assured, however, that my methods do work and have been doing the job for me through more than 40 years in the business.

Before we get into the procedures, however, we must pause to understand exactly what it is the spot-finisher is trying to accomplish when repairing damage to a finished wood surface. Seldom is only the finish itself damaged. Almost invariably, the wood beneath the damage is crushed, torn or partially missing.

So what's to be done? We cannot grow new wood or point a magic finger and say, “Heal!” There is not magic elixir, nor any single procedure that will solve every problem. And there's no such thing as a perfectly invisible repair. If we consistently strive for perfection, however, sometimes we come excitingly close.

Having said all that, what the spot finisher really does is *camouflage* the damage or defect so that it no longer calls attention to itself and, above all, so that the customer is satisfied. Indeed, a happy client is the real objective in this whole exercise.

Let's start with a common gouge in the top surface of a table, desk or sideboard. Let's assume as well that the finish is classic nitrocellulose lacquer. Right away, I know I'm going to do a burn-in to repair the damage.

My first step here is checking to see that the edges of the gouge are level with the surrounding surface. Very often, when the gouge is caused by a blow or a falling object, the edges of the gouge will have “mushroomed” and there will be a slight rim around the edge of the damage. If that's the case, I get rid of this rim right away. My favorite tool for the purpose is a 1-inch chisel, very sharp and with no burrs on the back side (Figure 1). If used

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carefully, this tool will shear off any protruding material without damaging the surrounding finished surface.

If, however, the finished surface is of a different color than the substrate, I may cut away the mushroom edge so that the substrate is slightly recessed—thus enabling me to touch it up to match the surrounding surface. This way, the substrate will not show through around the edge of the burn-in, where the fill is very thin. I perform this perimeter work with touch-up lacquer, powders, a graining

pen, or, as shown in Figure 2, with a touch-up marker. (Note: if I use lacquer, I'm careful to give it sufficient drying time before I do the subsequent burn-in.)

BURNING IN

Now that the surface is prepared, I'm ready to do the burn-in.

I have a choice of several filler materials (see the sidebar on p.5 for a list). For purposes of this discussion, let's assume a "shellac" stick is the best option. I also have a

choice of application tools (see the sidebar on p.7 for a full list).

Regardless of the filler or the tool I use to apply it, my procedure will be the same: First, I take a heated knife in my right hand (because I'm right handed) and a burn-in stick along with a small piece of cloth or paper towel in my left. I've chosen a burn-in stick of a proper background color and melt a bit of it onto the tip of my knife (Figure 3). I then deposit enough of this melted material into the cavity to slightly overfill it (Figure 4). If air is



Figure 2

Figure 2: Touch up the substrate to approximate the color of the finish.



Figure 3

Figure 3: Melt a bit of the burn-in stick onto the tip of the knife.



Figure 4A

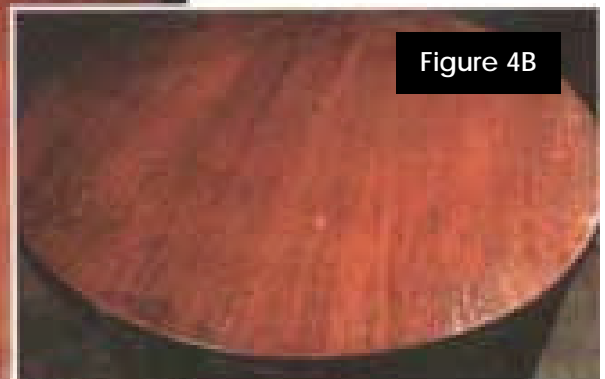


Figure 4B

Figure 4: Fill the defect with the melted material (A) until it is slightly overfilled (B).

trapped in the liquid and sends up a bubble, I'll touch my finger to my tongue and press the burn-in materials back into place with my moistened fingertip. Now I let the liquid cool and solidify before I begin leveling it.

As I go, I use the cloth or paper towel to wipe excess material off of the blade of the burn-in knife. I want to keep that blade as clean as possible between strokes.

I do most of my leveling with the burn-in knife, and I find that "patch lube" is a big help in doing so. This material, sometimes called "burn-in balm," is like a heavy petroleum jelly. Its purpose is twofold: First, it helps the knife to slide smoothly. Second, and more important, it keeps the burn-in material from sticking to the surrounding surface, where I don't want it to go. So I apply a little patch lube to one side of the burn-in (Figure 5). Drawing the knife across the burn-in material that I'm leveling, I deposit the material I've removed onto the lube, repeating these strokes as often as necessary (Figure 6).

I don't want to heat the material in the patch to the point where it becomes liquid again. If I do that, the patch will end up concave instead of flush. To avoid this, I remove a little material at a time, let it cool, then remove a little material at a time, let it cool, then remove a little more and so forth until the patch is level. This may sound time consuming, but with practice, it all goes rather quickly.

At this point, I have to make a judgement call. If this is an average repair on nitrocellulose lacquer, then filling and leveling in this manner followed by a little buffing with #0000 steel wool may be all that is necessary. But if this is a highly critical repair — I may want to stop leveling with



Figure 5

Figure 5: Apply a little patch lube on one side of the filled gouge.



Figure 6

Figure 6: Gently scrape the excess fill onto the lubed area.

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the knife just short of making the patch flush and finish the process with a sheet of very fine abrasive wrapped around a small cork block.

In either case, what I've done to this point is simple. Very often, however, things get more complex. Perhaps the patch isn't quite the right color, for example, and hasn't blended very well with the surrounding surface. I could solve this problem with my hot knife by taking advantage of the fact that burn-in sticks come in a multitude of colors and can be mixed on the knife to achieve the background color needed. Not only that, but by mixing them incompletely on the knife, I could even duplicate a grain pattern with the fill itself. With a little buffing, I might have a good repair.

More likely, however, I'll need to take a further step.

FRENCH PATCHING

If I don't have a satisfactory repair after doing the burn-in, I don't hesitate in moving along to that next procedure by performing a bit of French patching. This technique takes practice, but it's here that the spot finisher can really work some magic with the proper materials (see the sidebar on p.6 for a list).

I start by dispensing a bit of a solvent-based "polish" from a squeeze bottle onto a cloth pad or a "rubber" (Figure 7). How much I dispense is important, because shellac sticks are sensitive to solvents in the polish: If I begin my polishing with a rubber too wet with polish, the burn-in may erode slightly and will no longer be flush with the surface. To prevent this, I start with a rubber that is barely damp and begin by applying the polish over the burn-in with light, straight-line strokes along the grain of the surrounding wood.

After a few strokes, I can begin to apply color with dry anilines or pigments. If my background colors need some correction, that's my first order of business. I apply



Figure 7

Figure 7: If the patch is not perfect, dampen a small "rubber" with polish.

STICK BASICS

The classic material for a burn-in is a "shellac" stick.

These sticks come in a multitude of colors and were originally made of shellac. In recent years, however, a number of types of synthetic sticks have been developed — and present both advantages and disadvantages when compared to sticks actually made of shellac.

For starters, they are not as hard as real shellac sticks. In fact, they come in several degrees of hardness. The softer the stick, the less heat it takes to melt — and some now are so soft that they require no heat at all and are simply rubbed in. These softer sticks are easier to level and can be topcoated with low-luster lacquer without glossing up. Their very softness, however, makes them less desirable to use on surfaces that are subject to wear. Furthermore, these softer sticks do not have any transparency, so they will not allow the wood grain to show through on a shallow burn-in.

Fortunately, some of the harder synthetics are up to medium-duty service. Your best bet: Take the time to learn the different performance characteristics and select the right stick for the job.

— D.W.L.

dipping my little finger into the jar and then use that finger as an applicator (Figure 8A). Each stroke of the pinky is followed by a few strokes of the rubber, which I kept sufficiently wet to dissolve the powder *without* melting the burn-in material (Figure 8B).

When I'm satisfied with the background, I proceed to the graining, which can be accomplished in a couple of ways depending on the figure of the surrounding wood.

The more widely accepted graining method has you dissolve a dry powder of the proper color in a graining liquid and apply it with a very fine graining brush. An alternative technique I use frequently has me employ that little finger again as an applicator. By varying the amount of powder, the amount of pressure, the position of the finger and the wetness of the rubber, some amazing effects can be achieved. I can only describe this technique in general terms. You have to practice it to perfect it. (Also, I've found that this finger-graining method only works if the grain of the surrounding wood permits.)

Once I have the patch blended and grained to my satisfaction (Figure 8C), I'll apply enough additional polish to topcoat the repair.

FRENCH SUPPLIES

For full-scale French polishing, I make my own polish from dry shellac and quality alcohol. For most repair work, however, a ready-made polish will do just fine — and I always have some on hand in a squeeze bottle in my kit.

The product I prefer is Wil-Pro, formerly made by Star Finishing Products but now sold under the Mohawk Finish Products banner. Its principal advantage is that it builds slowly. This is important, because it makes it easier for me to control colors when I use it with dyes or pigments.

As with the polish, the rubber is not so critical for repair work as it is for fine French polishing. Cotton T-shirt fabric works just fine.

The size of the patch will determine the size of the rubber, but a piece of fabric about six inches square will generally be about right. Just fold it in from the corners to form a smaller square and then roll it into a ball. That's all there is to it.

— D.W.L.



Figure 8A



Figure 8B

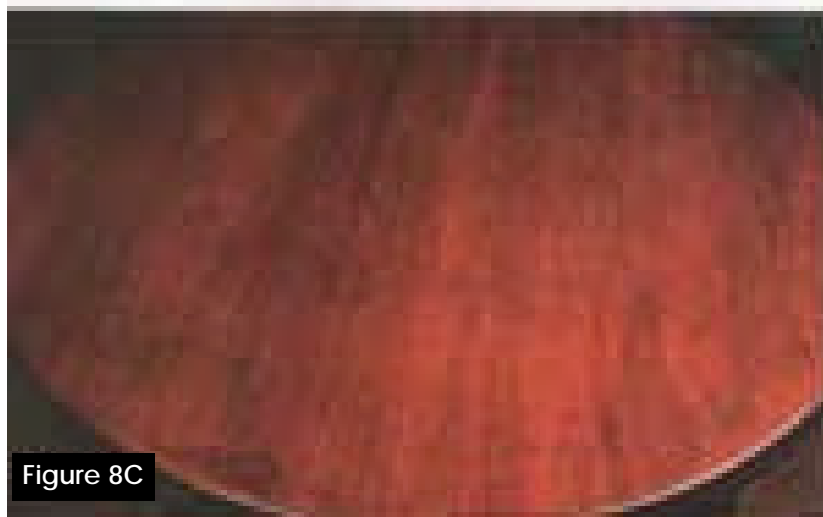


Figure 8C

Figure 8: Apply whatever pigment is necessary (A) and pad gently (B) until the defect has disappeared (C).

At this point, I'll have a *good* repair but not a *great* one, because the polish may impart a glossy look to the repaired surface. That gloss may or may not blend with the surrounding surface. In some cases, a touch of fine steel wool will take care of the problem; if not, I'll spray on a shot of clear aerosol lacquer of the proper sheen. (Again, I'm sure to give the patch area ample time to dry, knowing it will come up glossy again if I don't.)

One other fact to keep in mind is that shellac burn-in material must be sealed off *before* lacquering, even if no coloring is necessary. If lacquer is sprayed directly over the patch, it will come up glossy, no matter its sheen. If the job hasn't required you to seal the burn-in with French patching, there are acrylic

aerosols you can use. I do, however, prefer "frenching" because of its controllability.

PRACTICED PERFECTION

So there we have them: the two most important techniques in spot-finishing, and both really quite simple in concept. With practice, the burn-in procedure can become rather routine. By contrast, French patching is a constant challenge because of the color matching — the single most difficult aspect of spot-finishing.

Practice is the only means of achieving proficiency and efficiency with French patching. Whether veteran or rookie, every job is a trial-and-error procedure, the difference being that the veteran will usually achieve a desired

effect a little sooner. It can be frustrating at times, but it's *always* interesting.

Once you get into using spot-finishing techniques, whether you use them in the field or in the shop, you'll find yourself always looking for better and faster ways of doing things. In time, you'll develop many nuances of your own, but don't make the mistake of trying to take short cuts when it comes to your foundation.

The techniques discussed here *are* that foundation. By all means, master the basics first.

David Larson is a spot finisher serving mostly commercial clients in the Twin Cities of Minneapolis and St. Paul, MN. His last article on spot finishing appeared in our March 1999 issue.

HOT KNIVES

Among the spot finisher's most basic tools is the burn-in knife. These are used to melt burn-in sticks and apply filler material to the area to be patched.

The knives originally made for this purpose had rather thin, curved blades shaped something like grapefruit knives. Still used for working on curved surfaces such as moldings, carvings or picture frames, these tools have, for the most part, been replaced for work on flat surfaces by knives with heavier, flat blades. These knives hold their heat longer and do a better job of leveling the burn-in.

When I first began doing this work back in the middle ages, the electric knife heater was quite new and most spot finishers were still using an alcohol burner to heat their knives. The alcohol burner presented the obvious hazard of an open flame but OSHA did not exist then, and liability claims were not the worry they are today. From a standpoint of efficiency, however, the alcohol burner was a terrible time waster, inasmuch as the repairperson spent valuable stretches just holding the knife in the flame.

After that, electric knife heaters became the instrument of

choice for heating burn-in knives. These units are safer and hold four knives, which means the repairperson can work continuously by simply swapping knives in and out of the heater. A third option is the electric knife, which has the advantage of constant heat but tethers the operator with an electric cord — a real hindrance in many cases.

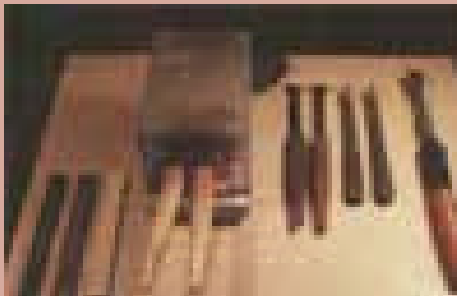
About three years ago, a new type of burn-in knife was introduced — self-heating and powered by butane. These devices are actually adaptations of the butane soldering irons used by electronics technicians and have two great advantages: First, they are untethered, which makes them very convenient for things like working on ladders. Second, their heat is very steady, thereby eliminating the cooling experienced with knives pulled from electric heaters.

You pay more to operate butane-powered knives because of the fuel, and they also require maintenance from time to time and occasional parts replacement. For me, however, the advantages outweigh the disadvantages enough that my butane knife has become a personal favorite.

Temperature control is the beauty of these new knives. First, too hot a knife will cause a color change in some burn-in sticks, particularly the lighter colors. Second, when working on vertical surfaces, I don't want the material to be too free-flowing, for obvious reasons.

With alcohol burners, it's temperature by guess and by gosh. With electric heaters, it's controlled by how far the knife is inserted into the heater. With butane knives, it's temperature by a control valve — a true advantage, in my book.

— D.W.L.



TOOLS OF THE TRADE: From left to right, three burn-in sticks of various colors, an electric knife heater with two knives inserted, a pair of flat burn-in knives, a pair of curved knives and a butane knife with a flat blade mounted.