

Bench Tips & Tricks by Dan Hunt

Eight quick tips

Menda fluid dispenser. *Buy two, one for acetone and one for isopropyl alcohol. If possible get two different color bottles. They are a bit expensive but absolutely worth it. The device dispenses fluid in controlled amount without allowing the contents of container to evaporate. This dispenser is used in many different industries where solvent needs to be dispensed easily and in a controlled manner. EXTREMELY useful. The other dispenser with the bent tip is also useful for dispensing water as needed in small amounts.*

Scotchbrite Abrasive Wheels, make your own. *I use the red pad only because that's what's been easy to get so far. Use leather circle punches or make your own punches from thin-wall pipe or stainless steel pipe. Make various sizes up to about 2 inches for use with the Foredom. Stack one and up to eight on Foredom mandrels. Sew up larger discs for the buff. Save a lot of money making your own abrasive Scotchbrite wheels. I buy a box of 20 pads, which are 6 by 9 inches. Way less money than from local retailers. But shop on line for a better deal.*

I'm still doing research on abrasive Scotchbrite type pads. 3M makes many varieties for many different applications. The red pad is just what I could get easily. Finding the right pad with the right density and abrasiveness is my goal but is difficult. I know the right pad is out there. I just need to find it. It's well worth it as any already made up wheel is going to cost you a lot more money than making your own. And I use this type of abrasive a lot. For small discs, up to 2 inches, make two brass washers that will go top and bottom with the pad on the mandrel. Make a variety of sizes of washers. You want the washer somewhere from ¼ inch diameter up to maybe 5/8 diameter depending on the scotchbrite disc size. The reason for the washer is it keeps the pad more rigid and allows it to last longer. The red pad is a little floppy but still useful. And sometimes you want that floppiness or flexibility. But sometimes you don't.

I even sew multiple pads together with several rounds of stitches, just like a small buff, so that they will be rigid and last longer. Don't use your good sewing machine. Buy one from the thrift store or wherever that is an older model, basic sewing machine, all metal construction, vintage up to perhaps the 80s. I have a Montgomery Wart vintage late 60's. This machine is made in Japan, is extremely robust and will outlast a new Singer or Brother or whatever, even an Elna or Bernina. But it won't do all the things those machines will do. But it will perform and last forever with care. If you can find one of these older machines, get one. It's totally worth it, not only for sewing up discs but for general sewing needs.

Don't laugh, but I even sew up very large Scotchbrite discs, up to 9 inches diameter. That is the long dimension of the pad that's available and probably about as big as you want to go. But I only use this very large wheel for cleaning up raised vessels and larger items. And I do that outside. Wear a respirator. I use the sewing with ziz-zag stitch and sew two pads together. I make up 8 or 10 of these. These then get trimmed down to 9 inch squares, stacked and secured onto a hub and hand sewn together. This pad is extremely useful for what I do and doesn't exist out there in this size and scale. If it did, it would be upwards of \$60. The 4 inch wheel is \$40. Anyway, very useful.

This whole subject of abrasive wheels is a vast subject. Stuff is available out there. I'm looking for very specific density of pad and abrasiveness of pad. And I don't want to buy made up pads when I can make my own and save a lot of money.

Two diamond dressers. Dress Foredom black, blue, pink and other wheels.

When using Foredome abrasive silicone wheels, sometimes you need to shape the edge to your specific task at hand. That would be any convex or concave curve or straight edge, whatever. Obtain a diamond dresser used in lapidary for dressing silicone carbide wheels. Kingsley North Diamond T-Bar Dresser, \$12.50., also Amazon. Remove the dresser from the handle if you like. I did. EXTREMELY useful for shaping black, blue and pink silicone abrasives or other similar abrasives. It's industrial diamond is intended to dress silicone carbide, aluminum oxide and other hard wheels, mainly lapidary silicone carbide. The unit will dress your Foredom abrasives, even small grinding wheels, for the rest of your life if you use it properly.

Obtain a surface grinder diamond dresser. This tool is a little more esoteric and is used in dressing the surface of grinding wheels in the machine tool industry and other industries. It is a steel rod with an industrial diamond on the end. Available on Amazon and other

sources. About \$10 to \$30. The cheap one will work just fine. I have been using this tool my entire jewelry making career. EXTREMELY useful for shaping inside curves on the same abrasives mentioned above.

Now, it's true that you can use a round bur or round diamond bit. You'll destroy the round steel bur. The round diamond bit will last pretty long. But this device I'm suggesting is specifically engineered to dress hard grinding wheels. It's used with care. In any case, it will outlast you in your jewelry making lifetime.

Bezel-Back filing jig, small vice and C clamp.

For filing the bezel-back construction, particularly in the simple bezel design. Small clamp type vice and a small C clamp. Glue cork discs onto the ends of the C clamp with epoxy. Use a leather disc punch to make a round cork disc. Use gasket material from the auto parts store for the cork. It's better constructed cork than the regular softer cork. Clamp the unit to your bench. Gives you both hands free and enables you to file the edge of a bezel-back construction and rotate the construction as needed so you can accurately and carefully file the construction. Very useful. Without this you're holding the construction in one hand and filing with the other. You'll love this device once you put one together. Upon first observation, this contraption may not seem like much. But take my word for it. This is an extremely useful device. The parts are cheap and it's easy to construct.

Leather on bench pins

Glue leather, the suede side up, onto a bench pin, one for silver and one for copper. Glue onto both sides of the bench pin. Use thinner leather, say, garment thickness. Get leather at the leather store in PV or at the thrift shop as a garment. The leather provides better friction for easier sawing and helps keep your sheet nicer. But mainly it's for the friction provided.

Eurotool hole punch with plastic washer

If you use the Eurotool hole punch, do this: insert a thin piece of Teflon or other plastic, punch a hole, leave it in the tool, trim the punched plastic down to a small more or less disc. Now leave it in the tool. When punching, the plastic will eliminate or reduce marring of the metal as a result of the jaw of the punch hitting the metal while punching. Very useful. If you don't have Teflon sheet, I can sell you a small piece, which will last a very long time. But that plastic cutting board sheet from Walmart or Bed Bath or anywhere will work just as well.

Toothpick, drawplate, jumprings 1/16 inside diameter

I make gemstone earrings with a very small jumpring, 18 gauge, with a 1/16 or sometimes smaller hole. While one could buy these, save money and make your own. Use a 1/16 drill bit inserted backwards in your drill, which is being held in a vice. Make a tight coil. Use your drawplate to shave a toothpick down to the size where the coil will fit snugly onto the toothpick. Now you can saw the coil with an 8/0 saw blade. Use the 8/0 so you get a thin cut. This is the way I make jumprings. While there may be a better way, I haven't found it yet. This works. And a jumpring this small requires a small, wood mandrel that gets sacrificed in the process, thus the toothpick. You need to shave that toothpick down to the size needed, thus the drawplate. Nip off one end of the toothpick. You will be hammering that end. Carefully hammer the toothpick into holes of the drawplate from the opposite side that you'd draw wire from. You want to shave off, remove, material from the toothpick. It has to go into the other side of the drawplate hole. Work through successive holes down to the size you need. This operation takes just a few minutes. Insert the coil onto the toothpick. It needs to be very snug. Now saw your jumprings. Why is this better than buying jumprings? Well, maybe it's not. But you can make jumprings the size you want in this small range as needed, as your creative process flows, and not have to stop and order jumprings. Anytime I make jumprings I always use a wood dowel with the coil on it and use a sawframe to cut the jumprings. I wind the coil using a drill bit, the drill held in a vice, and a heavy glove.

Dip edge of bezel in flux before soldering

When preparing a bezel and back to be soldered together, one will be applying flux to the area where the bezel lies on the back. Rather than paint on the flux, dip the bezel into flux that's sitting in a small jar cap. Use tweezers. Just dip only the edge of the bezel. Don't dip the whole bezel. Control your amount of flux. It only needs to be on the edge. Keep the flux at a minimum. A quick dip then place it on the back. Observe that you have full coverage and contact of flux on the back as a result of capillary action. This is very fast and efficient. It occurred to me one day when I was trying to think of a faster, better way to get flux on the bezel and back rather than using a paint brush to paint it on. Try this. You'll like it.