



by Robert M. Vaughn

Installation of standard band saw tires is not precision rocket science, so don't let a lack of experience intimidate you. Read the instructions first to familiarize yourself with the principles. It's likely you'll need to vary the methods to suit your own specific conditions. Just remember:

Tires are consumable wear surfaces like the brake shoes on your car. Rubber tires come up to 20% undersized and must be stretched over the saw's wheels.

PREPARATION

- The easiest way to install new tires is with the wheels off. On larger saws, this isn't always practical, but there is usually plenty of working room for hands and clamps.
- Clean the work area of sawdust.
- Clean the rim of the wheel. I prefer to use flammable solvents like lacquer thinner for this nasty job. (*see Carter section below for additional cleaning requirements*)
- Clean the rough side of the tire. Make sure to use a rubber safe solvent.

WHEEL AND TIRE PREP REQUIREMENTS

- Sand the inside of the tire (surface to be glued to the band saw wheel) with course grit sandpaper and clean thoroughly with an alcohol based cleaner such as denatured or isopropyl alcohol.
- Do not use any cleaner that may leave any sort of film or residue. This will create a situation that will result in the adhesive not adhering to one or both of the surfaces.
- Do not use any sort of cleaner that may cause harm to rubber products. This may result in problems with adhesion and / or cause damage to the tire material.
- *Regardless of what cleaner you use to prep the wheel surface, it is important to use a high percentage isopropyl alcohol or Denatured Alcohol as a final finish step as both these leave no residue on the wheel surface.*
- The best adhesion of the tire to the band saw wheel will be accomplished when both surfaces are properly prepared and cleaned.

INSTALLATION TOOLS NEEDED

- 2 small C-clamps
- 2 pieces of 1/4" thick wood to be used as clamping blocks

STRETCHING THE TIRE IN PLACE

The tire may be smooth on one side and rough on the other. I've cemented both with equal success over the years, but since manufacturers most often recommend the rough side against the wheel rim, I usually choose that option.

CONTINUED ON REVERSE SIDE

STRETCHING THE TIRE IN PLACE (continued)

1. Slide a portion of the tire on the wheel, put the 1/4" thick wood clamping pad on top of the tire and the clamp pad on the wood. Use only enough pressure to hold the tire (see illustration 1). Please note that this may take two tries and that wheels with no spokes may require two small clamps.
2. Stretch the tire to the opposite side of the wheel and clamp the tire in a similar manner (see illustration 2).
3. Pull one side of the loose tire out to the rim at right angles with one hand and hold. Work the tire over the rim with your other hand as shown. Wood or steel levers can be used if the tire's resistance is greater than your own hand strength. Make sure there are no sharp corners that can cut the rubber.
4. Repeat for the other side of the wheel.

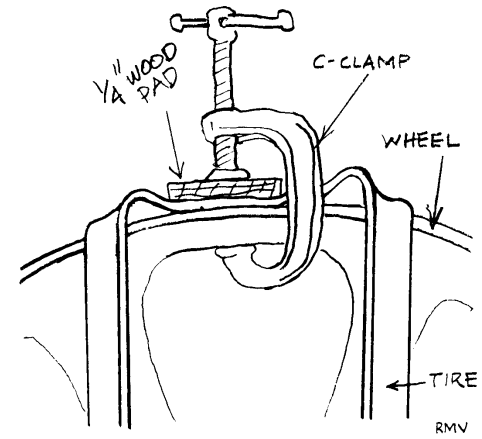


ILLUSTRATION 1

GLUEING THE TIRE TO THE WHEEL

You will need the following items:

- A short piece of rod 1 inch or so in diameter (steel is better than wood).
- A thin disposable cement applicator (I use a 3/4" wide piece of Formica)
- Tire cement

If the wheel has been removed from the saw, begin by clamping the wheel upright in a wooden-jawed vise. Mark a starting point with a piece of tape or felt-tipped marker.

1. Lift the tire and insert the rod between the tire and the rim of the wheel.
2. Roll the rod around the wheel's rim one revolution to ensure that the band's pressure is equalized.
3. Squeeze a dollop of cement on the applicator stick (see illustration 3).
4. Insert the paddle under the tire and smear cement on the tire and then on the wheel surface.
5. Roll the rod and expose the next length of surface to receive the cement.
6. When you get back to the starting point, remove the rod and smear glue between the tire and rim as best that you can.
7. It is best to let the cement dry for 24 hours before putting the saw back into service.

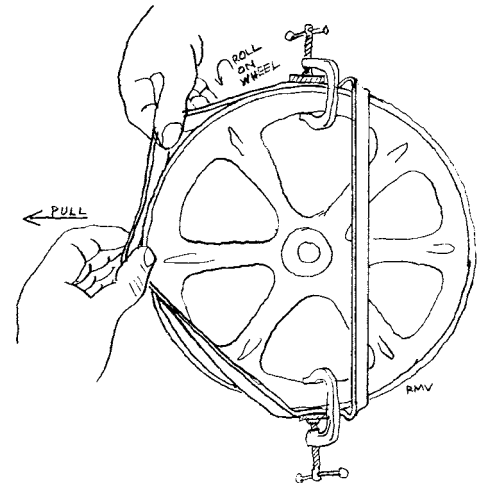


ILLUSTRATION 2

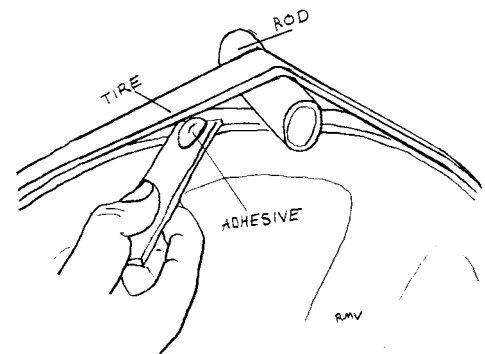


ILLUSTRATION 3

TIPS AND COMMENTS

- If using Epoxy as the tire adhesive, mix only enough for one tire at a time so as not to run into problems with the cure time of the epoxy.
- Tears and cuts on the rubber tire sometimes can be repaired with C-A (super glue) adhesives.
- If tire trimming is necessary to match the width of the tire to the width of the wheel rim, the tire must be on the wheel before trimming. Trim with a sharp utility knife. Trim the tire after the adhesive has set except in cases where the tire fits into a groove machined into the wheel's rim.
- Sticky sawdust from soft or wet wood can load the tire's surface and change its tracking characteristics. Mount a toothbrush on the band saw so it brushes across the bottom wheel.
- For proper tracking, the band saw blade must run on a crowned surface. That's a law of physics that no one has yet been able to repeal. Some bandsaws have crowned wheels and some don't. If your band saw does not have crowned wheels, crowning will be necessary for satisfactory tracking.