Removing Bassoon Bands

By Chip Owen

The body bands of the bassoon's wing, boot and bell joints rarely need to come off but when it becomes necessary they can often prove difficult to remove.

A number of repair operations require removing the body bands. Obvious reasons include work on the bands themselves such as removing dents, buffing and plating. Other reasons may include work on the body of the bassoon under the bands such as repairing splits in the sockets of either the boot or bell joints.

First Steps

The first step for removing the bands is to eliminate the obvious impediments. Remove any posts, neck strap rings or other parts which might be screwed through the band and into the body of the joint. Usually the posts on the wing and boot bands will be screwed in but some makers silver solder these posts to the bands.

Easy Removals

Sometimes the bands are ready to fall off at this point. Usually it is necessary to apply some heat. Apply the heat to the band with a torch aiming the flame toward the end of the joint so that the finish on the body doesn't get scorched. Get the band hot enough that you won't want to handle it. You can expect to see some oil bubbling out of the end of the wood when it gets hot enough. Using a strip of inner tube rubber[1] grab the band and twist and pull the band until it loosens. Even the oval band of the boot joint can be twisted to a small degree around the joint.

Not every band is going to come off just with heat. Some of them will demand more drastic action. But before you resort to that, and if you have enough time available, attempt to remove the band with heat a few more times during the next day or so. You may find that the band will be more willing to come off after a few attempts.

Difficult Removals

Sometimes, nothing short of drastic action will succeed. The band is simply not going to come off without mechanical coercion. This most commonly occurs on the boot but can also occur on the wing or bell. The tool for this procedure is a two jawed gear puller, readily available from stores selling automotive tools.

To use the gear puller a couple of lugs must be attached to the sides of the band near the end of the joint. The lugs can be made of pieces of brass or nickel silver scrap about 1/4" wide by 1" long and curved to fit the contour of the band. Soft solder the lugs to the sides of the band just below the top edge. Avoid soldering them too close to any impressed trademark, screw holes or other obstacles that might make later clean up more difficult.

The gear puller will need to push against the end of the joint. Something must be provided for the puller to push against so that the joint will not be damaged. For the boot joint a simple piece of scrap metal about 1/8" thick placed on the end of the joint will be adequate. (Make sure that it doesn't overlap the band or you'll never succeed in getting the band off.) For the wing joint a piece must be shaped to bear against the wood on the end of the joint without damaging the top of the bocal socket. For the bell a special plug must be made that allows the puller to push against the bottom of the tenon socket.

Hook the jaws of the puller onto the lugs and have the center screw bear against the end of the joint as described above. Work quickly so that the band will still be hot from soldering the lugs when you have the puller attached. As the screw of the gear puller is turned it will force the band off the joint. It would be extraordinary if this procedure failed to succeed. Sometimes the lugs will be pulled off but a better job of attaching them will usually yield success.

The biggest problem with this procedure is that it leaves solder on the band. This won't be a problem if you are planning on replating the band as you will need to remove both the solder and any existing plating down to the base metal anyway. If you intend to simply reinstall the band after repairs are completed it will be necessary to remove the solder cleanly without damaging the plating. Wipe off as much excess solder as possible and buff the remaining solder carefully so that you remove the solder but do not buff through the plating. It is difficult to completely remove all evidence of the solder; usually there is a “shadow” that stubbornly remains.

Re-Installing The Bands

Certain goals must be kept in mind when securing bands in place on bassoon joints. First, the band needs to stay in place for a long time into the future. Second, at some point in the future it may

need to be removed. In addition, the band is intended to reinforce and protect the end of the joint. All of these needs must be kept in mind while refitting the band to the joint.

Be sure to clean off any old adhesives that may remain. They may get in the way of doing a good job of installing the band.

Many adhesives are available which will hold the band on.. Some heavy adhesives such as Leach F-26 or silicones sealers work well and will fill spaces but must be clamped at least overnight as they tend to push off the band during the long setting time. Shellac is surprisingly effective[2] when securing a well fit band but will not fill in any excess space that may exist between the wood and the band. Also, care must be taken as some finishes may be damaged by the alcohol solvent in the shellac. Shellac is usually my preference and the remaining instructions relate to using shellac.

It is likely that there will be excess space between the wood and the band. Remember that the band was originally fitted to the joint when the wood was fresh and new. Over the years the wood has dried out and shrunk while the band is still the same size. Ideally, the band should fit snugly so that it must be pressed into place.

The easiest way to fill in the excess space is with strips of newspaper. Cut the strips slightly wider that the band so that you will end up with paper hanging out of the end to be trimmed off later. Experiment with dry strips first to get an idea how much paper will be needed. A single layer of paper works fine; multiple layers get awkward and messy.

Coat the wood liberally with shellac and lay the paper in place. Leave a slight gap, maybe 1/8", between the paper and the painted surface of the joint. This will serve to keep the paper from getting between the end of the band and the end of the band tenon and preventing the band from getting fully into place. Coat the paper surface with shellac so that the paper is completely saturated with the shellac. Now the band can be put in place on the joint. Press the band onto the joint or tap on the end of the band with a mallet to make certain the band is fully in its proper place. If there are any posts or other hardware to be screwed into place through the band install them at once to aid in properly positioning the band. Clean up any shellac that has squeezed out immediately.

Revised October 17, 2001

---

[11] Pieces of inner tube rubber are very useful for a variety of tasks. It is easy to think of them as "universal wrenches." A piece 10" to 12" long and 4" to 6" wide can easily grip anything you can get your hand around. Not only will it provide an excellent grip but it will also keep you from getting burned by hot objects or getting impaled on a bunch of needle springs. A strip 1" by 4" is good for turning posts by hand. Be sure to use an inner tube from an automobile tire; truck inner tubes are too thick and don't work well.

[2] If you have never used shellac as an adhesive you may be surprised to find just how effective it can be. It is capable of bonding the parts together in very little time. Its bond strength will continue to increase for several days. And when you want to take the parts apart simply heat them up and they separate easily. Don't use the white shellac commonly sold. Less refined grades of shellac such as orange, garnet or button are much superior for any use. You can buy orange shellac already mixed or, better yet, purchase shellac flakes and mix them with alcohol yourself.