Modifying the Chanter Reed

Altering reeds is a controversial subject. Some pipers swear by barely touching their reeds at all. Others have scraped so much that they could do it in their sleep. Problem is, the reeds you get are sometimes going to require more pressure than you can muster and are not always going to match the characteristics of your chanter. Unless you want to just toss the reed into the trash (which some pipers do), that's where sanding, scraping, pinching, poking, squeezing comes in.

A chanter reed's—for lack of a better term—"red zones."

Reed is too hard.

If a new reed is a "gut buster" here are a few things you can do:

- **Play it until it softens up.** This can take weeks, but is the safest method and leaves you with the strongest reed. Just plug up the drones and play it as long as you can, it may only be five or ten minutes. Over a week or two, when comfortable, add a drone until you have your full set going. If after a few weeks it's stopped getting easier to play and it's still too hard, then think about taking a more proactive step.
- **Hydrate the reed.** Dip it in water for a second or two, then shake it out and dry it off, then play it. New reeds are usually pretty dry and need moisture. (Unless you get a "Piper's Pal" humidity control product for storage of new reeds.) Avoid using saliva as it may contain microbes that will begin to eat the reed—there are no enzymes in human saliva that digest cellulose, it's only the microbes we'd worry about. Don't soak a reed, it can warp. You can repeat this, but less dramatic hydration is better. Store the reed in a reed cap to keep it from drying out too much, or ideally, use a Piper's Pal cap to help regulate humidity.
- **Pinch it with your fingers.** This will temporarily ease a reed (and raise its pitch). Try to keep pinching to the top third of the reed. If you squeeze too low and too hard you will collapse the sound box and destroy the reed. You can repeat pinching, but again less is better. If you overdo it, a mandrel may help open the reed back up.
- **Install a rubber band bridle.** Slide an orthodontics rubber band wrapped a few times over the staple up past the hemping to a point about 1/5 of the way up the exposed cane of the reed. If this makes it too easy, slide it down a bit. If it's still too hard, scraping may be in order or move the bridle up a bit—too high though, and the top hand will sound a little thin. After a few weeks to months and the reed eases, this bridle may be removed or gradually worked down the reed as time goes on. If you wrap the rubber band very tight or the reed is weak or you just want to be safe, it'll be best to only slide the bridle up during playing sessions, and to lower it back to the supported staple area after.
- **Pinch the staple with pliers.** This is more drastic and usually unnecessary. Needle-nose pliers either well wrapped in tape or covered with leather works well. If you squeeze too hard, but haven't damaged the blades, you can open the staple back up with a mandrel. I've also "bitten" the staple with my teeth, but a pair of pliers is easier to control.

- **Sand/Scrape it.** This is irreversible. Removing part of the cane from the reed cannot only reduce required pressure, but can also have the unintended side-effect of changing the sound of a reed. Dangerous "red zone" areas that typically affect sound also are: the top strip of the reed, the sound box, and the area down the center of the blades. (*See image above.*) Where you scrape depends some on the type and make of reed. A very drastic step is to carve notches at both edges of the reed a bit above the hemp line—only if you really have to, such as "the parade is tomorrow!" On a ridge cut reed, you can scrape/sand down a bit on the pronounced ridge itself. Don't take a brand new reed and scrape it down to your usual comfortable blowing pressure. Always leave "room" for the reed to weaken. If you start at soft, it'll turn to mush later.

Reed is too soft.

If the reed shuts down easily with normal blowing pressure, it probably won't last long and you should consider discarding it. (Unless you are a hard blower, in which case you can pass it along to another piper.) However, there are a few options if for some reason you wish to chance it.

- **Pinch the edges of the reed to open its mouth.** You might have to do this repeatedly.
- **Moisten *then* pinch the edges of the reed to open its mouth.** You might have to do this repeatedly.
- **Use a mandrel to open up the staple and force the mouth open.** Just be careful to keep the blade symmetrical—that is, the blades should be an equal distance from an imaginary center line across the length of the mouth.
- **Cut off the tip of the reed.** We're talking about a reed that's on it's deathbed anyway (even if it's a new reed), so amputation may not out of line as extreme as it is. This will also increase the pitch and will most likely alter the relation of the high notes to the low notes. Use a very sharp blade and cut precisely even. Cut off small (0.5mm) amounts—as long as you can keep it even—since you can't put it back!

Mandrel. While a mandrel looks like a small screwdriver, it differs in that the end of the blade is a quite rounded on the two sides. A cross section of the end would reveal a stubby rectangle with rounded corners though mandrels vary in shape somewhat.

Reed doesn't sound right.

Customizing chanter reeds for sound can be a bit of a mystical art, sometimes shrouded in secrecy. Reeds are by nature organic and therefore somewhat variable. To further complicate the issue, reeds are made differently by different makers as you would expect. What works for some reeds can be a disaster for others. Adjusting the high notes produced by a reed is the best understood, but it's problematic trying to change the reed to affect just a single note on the scale.

Here's a few situations you might run into:

If the top hand is too sharp, you can sand/scrape off some off the top fifth (or so) blades. Careful, you don't want to sand all the way through the lips of the reed. *An alternative to modifying the reed is to tape the top of the chanter holes to flatten notes that are too sharp.*

If the top hand is too flat, the reed is too soft, see the remedies given above. *An alternative to modifying the reed is to sink the reed farther into the chanter to sharpen notes that are too flat.*

If the High-A is too sharp, you can sand at the very tip of the reed. Again, you don't want to sand all the way through the lips of the reed. *An alternative to modifying the reed is to tape the top of the chanter hole to flatten the note that is too sharp.*

If the High-A has too much "crow", aside from just blowing through it (blowing harder) or giving a new reed some time to break-in, you can sand at the very tip of the reed as you would to flatten High-A. Again, don't sand all the way through the lips of the reed as this will actually make the blades shorter.

If the High-G is too sharp, gently sand about 1/16" down from the top of the reed.

F is inconsistent or flat relative to other notes. An inconsistent F is known as a "collapsing F" or as a "double-toning F." The note varies wildly with small changes in pressure. It is usually caused by three things: the sound box being too open, the blades being a little too long, or the reed being positioned incorrectly in the chanter's reed seat.

- For some very odd reason, sometimes the F note can become flat when the reed is pushed too far *into* the chanter. I have yet to hear a good explanation for this counter-intuitive phenomenon. If you are in a non-band situation, try moving the reed out (or in) to correct a problematic F.
- Try gently pinching the sound box, repeat as necessary.
- The easily reversible procedure to try is to tie hemp around the sound box creating a bridle to apply a little pressure. You can also try a small rubber band (such as used in orthodontics) as a bridle around the sound box, but since this applies more pressure, it would be wise to roll this type of bridle down onto the binding when you are done playing the reed, otherwise you may gradually collapse the sound box.
- The drastic option is to cut a bit off the end of the reed, which will also make the reed harder to blow. On the other hand, you don't have to worry about bridles shifting.

Unfortunately, there's no great substitute for experience. The road to true mastery of reed scraping and sanding will be littered with destroyed reeds. Just go easy, start timid.