Bassoon Maintenance

Nuts and Bolts

The main parts of the instrument

- Bell
- Long Joint/Bass Joint
- Boot Joint/Butt Joint
- Wing Joint/Tenor Joint
- Bocal/Crook
- Hand Rest
- Seat Strap
- Reed
- You

An issue with your playing could involve any one of these parts (especially the last one…)

Swabbing

This is the most important thing you can do to keep your instrument playing well

- Only two joints need swabbed after playing: the boot and the wing
    - The others should never get water in them in the first place
- A silk or cotton swab is best
    - Silk has the advantage because you can use the same one in both joints
    - However, cotton is slightly more absorbent and tends to better match the size of the bore
- DO NOT use a stick swab (also known as a push swab)
    - Can cause damage to the metal U-tube at the bottom of the boot joint
- Make sure there are no knots in your swab
    - They can get stuck and cause serious problems!
- Always swab the boot joint first
    - Half of it does not have the rubber lining and so we do not want to bring moisture to the unlined wood.
    - Think "Big to Little"
        - Insert the swab in the larger hole and draw it out the smaller
    - Once should be enough
    - Can draw water out of tone holes with suction and re-swab if desired
- Swab the wing joint second
    - This joint is completely lined
    - "Big to Little"
    - Can draw water out of tone holes with suction and re-swab if desired
- Leaving moisture in a wooden instrument can cause it to *rot* over time
- Plastic bassoons should also be swabbed
    - Just think of all the crud you blow into your bassoon after lunch!
- Bocal Swabs are unnecessary and sometimes dangerous (they can get stuck)
- To clean your swab
    - Once a month is good
    - Tie it in a sock
    - Throw it in the laundry

- Stuck Swabs
    - Swabs get stuck for a few reasons
        - Knots
        - Wrong swab
        - Inserted in wrong end
    - Usually happens in the wing joint
    - To Remove:
        - Use a swab extractor (basically, a metal rod with a screw welded to its tip.
        - Insert the extractor in the large end of the wing joint
        - Gently screw the threaded end into the stuck swab
        - Pull
            - This will probably destroy your swab (but it is a lot cheaper than a bassoon repair)
            - Good extractors are available from both Forrests Music and Charles Double Reeds

<u>Cleaning the Outside</u>

For Wooden Bassoons:

- Use a small brush (for paint, makeup, etc.) with natural bristles to remove dust and other foreign objects.
- To keep the outside looking clean and shiny, wipe it down every time you finish playing with a clean, soft cloth.
- If you want to polish a wooden bassoon, use the tiniest amount of light mineral oil and a soft cloth.
    - DO NOT get oil on the pads!
- Keys can be polished using a specially designed polishing cloth
    - DO NOT get the polish on the wood!
    - But really, shouldn't you be practicing?

For Plastic Bassoons

- Use a damp cloth
    - Try not to get the pads wet

<u>Oiling the Bore</u>

Most bassoons do not need to have the bore oiled on any regular basis.

- Only wooden bassoons would ever need to have their bores oiled
- **Do not do this yourself**
- If you suspect the bore of your bassoon needs oiled (perhaps it is not responding well—even after all other leaks have been accounted for), consult a qualified bassoon technician.

<u>Keeping Your Bocal Vocal</u>

Bocals should be cleaned about once a month

- A dirty bocal will affect your tone and articulation
- Use a specially designed bocal brush and running water

    - Forrests Music sells a really nice Dutch bocal brush aptly named "The Best Bocal Brush."
    - Run water through the bocal as you pull the brush through
    - Again, "Big to Little"
- Use a few bristles from the bocal brush or a toothbrush to clean out the bocal vent
    - DO NOT put anything hard (metal or wood) in the bocal vent without professional supervision
- A clogged bocal vent will make playing above the staff more difficult
    - Notes will be more prone to "cracking"
- Also, keep the bocal cork sufficiently greased.
    - A sticky cork makes an obnoxious noise and could cause your bocal to split

<u>Tenon Health</u>

A tenon is not the same as a tendon.

- Tenons can be wrapped with either string or cork
- If your string-wrapped tenons are slightly tight or squeaky, rub them with a bit of paraffin wax
- If your cork-wrapped tenons are slightly tight or squeaky, apply some cork grease
- If your cork wrapped tenons are all gunked up from too much cork grease, apply some cold cream (like Noxema) and then wipe off.
- If your tenons are too loose, apply a course or two of cotton thread or plain waxed dental floss.
    - Loose tenons are often a problem in the wintertime when the air is dry and your bassoon looses moisture (like that tight feeling you get in your face when it is too dry)
    - When spring and summer time make the tenon too tight, simply remove the thread/floss
- Tenons that are chronically too tight (even in winter) need the attention of a qualified professional bassoon technician.

<u>The U-Tube</u>

One should not make a habit of regularly taking off the u-tube.

- Once a year by a bassoon technician should be fine
- However, if you do take it off you may as well do a few things
    - Clean out the tube
        - Use warm water and a soft brush if needed
    - Check the quality of the cork
        - Is it smooth and healthy looking?
        - If the cork has deteriorated, it might be causing an airleak in your bassoon
    - Check the wood of the bass side for rotting
        - If you find soft, discolored wood, take it to a bassoon technician.
    - Clean any gunk you may find
        - A finger or a paper towel should work.
    - Condition the cork

        - Before putting the u-tube back on, apply a thin layer of Vaseline or cork grease to the cork.
        - This will keep the cork hydrated and airtight.

Sticky Pads

Sticky pads are usually caused by excess moisture or buildup of sugars and other organic matter

- This is a good reason to brush your teeth or at least rinse out your mouth before you play
- Use *un-gummed* cigarette paper (or better yet, blotter paper) to treat a sticky pad
    - Slide a piece of the paper between the pad and the instrument
    - Hold down the key (perhaps also tap the key a few times)
    - While holding down the key, gently pull the paper
- A piece of paper or even a dollar bill will work in a pinch, but especially with the money, you stand the chance of adding *more* gunk to the pad than you remove.
- If pad is chronically sticky, it can be treated with a very thin coating of Selmer "No Stick" powder
    - For this, you will want to remove the key so as to not get the powder in the rest of the mechanism
    - In a pinch, you could also use baby powder
        - Over time though, this will also tend to gunk up

Loose Screws

All screws on the instrument should be reasonably snug

- If you have a screw that regularly wants to back out, coat the screw head and its connection with the post with a thin layer of clear nail polish
    - This can be easily chipped off when the screw needs to be removed for some other reason.
    - DO NOT get the nail polish on the wood

Some Smaller Nuts and Bolts

Post—the metal anchor screwed into the bassoon that holds the hinge rods tubes
Post Locking Screw—a screw that keeps a post under high tension from turning
Hinge Rod—a solid metal rod that turns on pivot screws
Pivot Screw—a tapered screw that allows a hinge rod to turn while still keeping it in place
Hinge Tube—similar to a hinge rod but hollow to allow it to turn on a screw rod
Screw Rod—a threaded rod that goes through a hinge tube, anchoring it between two posts
Key—the metal part that holds the pad cup and pad
Lever—another metal part that helps activate a key
Pad—the softer disc (leather, cork, synthetic, etc.) that actually seals off the tone hole
Pad Cup—the metal seating that holds the pad in place
Foot—a metal tab that regulates how far down a key can move
Boot Cap—the metal cap that protects the u-tube
U-Tube—the metal u-shaped tube that connects the two sides of the instrument
Key Guard—a piece of metal attached to the instrument designed to keep your clothes from interfering with the mechanism

Push Rod—a rod that travels through the body of the boot joint to operate a key on the other side
Roller—a turning plastic cylinder added to certain keys to enable the fingers to slide better
Needle Spring—a thin sharp spring used to hold certain keys open and others closed
Leaf Spring—a wider, flatter spring used primarily on the thumb keys of the wing joint

Oiling Keys (and the other moving parts) the Easy Way
For this, use a needle oiler filled with a medium weight oil

- Synthetic tends to last longer than petroleum-based
- Apply a drop or two of oil to where each moving part meets the part that doesn't move.
- Wipe off excess with a cloth or paper towel.
- Problem: After a while, the oil (and the dirt it traps) will gunk up and require someone to do something along the lines of what is described below

Oiling Keys (and the other moving parts) the Thorough Way
For this, you will need the following: a flat, well-lit surface; a small assortment of small screwdrivers; a small pair of smooth-jawed (duck-billed) pliers; a paper towel; a pipe cleaner or two; a cotton swab; a tube of grease (Dr. Romine recommends *Phil* Waterproof Grease—sold at bike shops); a spring hook (helpful but not required); patience; a good amount of time

- Disengage any needle springs involved with that key
- Remove the appropriate screws
    - If it involves a screw rod, gently push in while unscrewing. When the threads pop against the post, the screw rod is ready to be removed
    - While holding the key/lever steady, remove the screw rod either with fingers or with a pair of smooth jaw (duck-bill) pliers, grasping as near the post as possible and pulling straight out.
- Remove the key/lever
- If it involves a screw rod, put it back in the hinge tube for safe keeping
- If it involves pivot screws, put them somewhere safe and remember *exactly* which screw went where
    - Good instruments will have each pivot screw specially fitted
- Clean the posts with a paper towel and pipe cleaner
- Check the tone hole for gunk or signs of rotting
    - Clean out tone hole with a cotton swab if necessary
- Clean off the screws with a paper towel
- If you are working with a hinge tube, clean it out with a pipe cleaner
- If you are working with a hinge rod, clean out the pivot points with a pipe cleaner or paper towel
- If you are working with a hinge tube, put a small amount of grease on the screw rod just behind the threads and work it through the hinge tube
- If you are working with a hinge rod, use a small screwdriver to place some grease in the pivot points of each end
- Place the key/lever back between its posts

    - Some keys will require you to reengage the spring at this point. Others can wait.
- Replace the screws
    - If you are dealing with a screw rod/hinge tube, turn the screw rod backwards until it begins to pop against the post. Then, screw it completely in.
- Reengage the spring(s)

Notes:

- Removing some keys/levers require that a number of other keys/levers also be removed.
- Be very careful to remember exactly *what* goes exactly *where*.
- Only remove as many keys as is absolutely necessary
- **Never** remove posts or post-locking screws.
- Be gentle when dealing with screws that go directly into the wood.

<u>Dirty, Dirty Reeds</u>

Sometimes reeds get dirty

- It helps to brush your teeth before you play
- Avoid molding by making sure your reed case has air holes
- Gently clean out crud in the inside of your reed with a pipe cleaner
- Gunk on the outside can be scraped off with a fingernail
- Diluted Listerine is a good reed disinfectant
    - Mix up a solution and let your reed soak for about half a minute
    - If you get a cold or similar illness, it is a good idea to disinfect your reeds regularly to avoid making yourself sick over and over again.
- **Incurably gross reeds should be thrown away**

An excellent set of resources for beginners and professionals alike are the essays written by master technician, Chip Owen. They can be found at http://www.foxproducts.com/index.php/resource-center

Another useful source is the IDRS forum found through the ever-so-helpful IDRS website: www.idrs.org