

Maintenance

Oiling & Maintaining Rotary Valves

Sticky valves can frequently be repaired at home before taking a trip to the repair shop. Valves usually stick because they are dry and need to be lubricated.

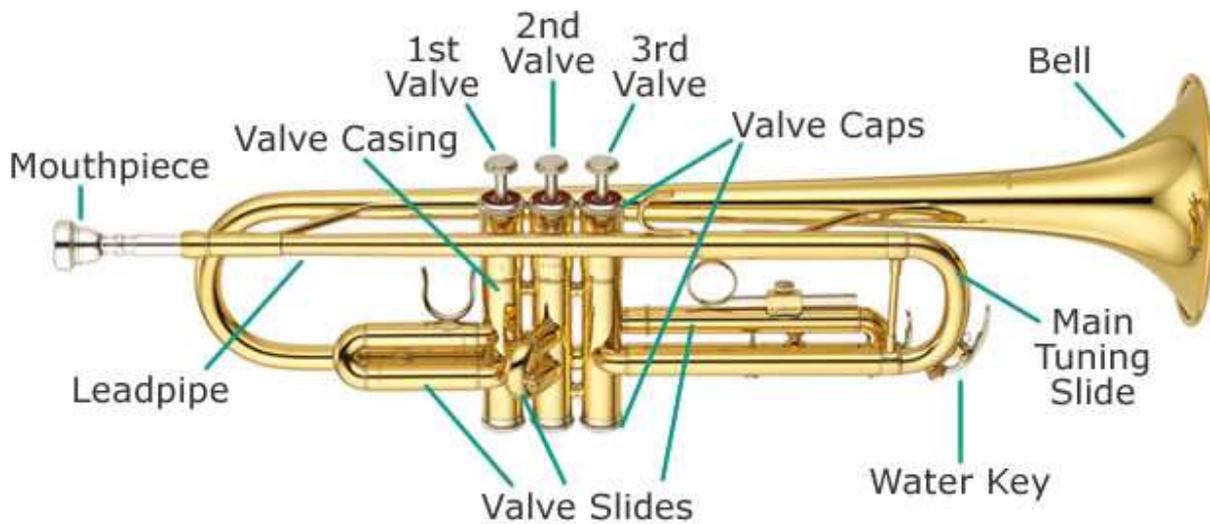
Two surfaces need lubrication: the bearings at the ends of the rotors and the areas that seal off the ports. Transmission oil works very well on the two bearing surfaces. For the bearing on the linkage side, place a few drops on the surface just below the stop arm and above the cork plate. Remove the rotor cap on the other side and place a few drops onto the rotor surface that spins. Work the valve to help spread the oil onto the bearing surfaces.

The second area requiring lubrication is the rotor itself. This can be accomplished by pulling the tuning slide (don't forget to depress the trigger) out and putting a few drops of fine trumpet valve oil into the tubes of the tuning slide. Do not drop the oil into the tubes that lead into the rotor. The oil can wash the tuning slide grease into the rotor causing sticky valves. Replace the tuning slide and turn the instrument into a position causing the oil to go into the valve while working the valve to distribute the oil.

Another area requiring lubrication is the linkage. If you have a string setup, no lubrication is necessary. Mechanical linkage requires lubrication within the ball and cup. Oil is not heavy enough and usually causes a noisy action. A lanolin based cream works well and can be obtained at your favorite music store (Schilke tuning slide grease), or can be found at the local pharmacy. Remove the cup exposing the ball. Clean both ball and cup, apply the lanolin and reassemble.



Trumpet Maintenance



Oil your valves at least once a week. Unscrew the top valve from the valve casing, and pull the valve out in a straight line. Do not twist. Apply valve oil, coating the entire valve. You may want to first wipe off the valve to remove debris before applying new oil. Do not oil your valves from the bottom caps.

Slide grease keeps slides airtight and maintains smooth movement. Vaseline should never be used because it is corrosive to brass.

Moving and greasing all slides and bottom caps once a month will help prevent slides and caps from sticking.

Valve casings and tuning slide receivers can be cleaned more thoroughly by using a trumpet cleaning rod. Insert a soft cotton cloth through the slot at the end of the cleaning rod. Wrap the cloth around the rod several times so no metal is showing. Work the cloth back and forth through the valve casings until the cloth comes out clean.

To clean the tuning slide receivers, take a clean cloth and insert into the slot of the cleaning rod. Be careful not to make the cloth too big or it will tear when you try to clean the receivers. Work the cloth back and forth in receivers several times until it comes out clean.

Trombone Maintenance



Blow all moisture out of the trombone before storing.

Wipe off old lubricant before re-applying.

Always lock the slide when not playing the trombone. The locked position should prevent you from moving the other slide.

Young players should use slide oil (Superslick) at least once a week. To apply slide oil, put hand slide into approximately third position and add oil to each slide.

Slide cream and water are recommended for mature players. A proper way to apply slide cream is to pull the inner hand slide almost all the way out, applying cream on only the very bottom edge of the inner slide.

Tuning your trombone is done by adjusting the tuning slide until you achieve the desired pitch. Move the tuning slide at least once every two weeks to prevent it from becoming stuck. Bare brass will stick together when in contact for long periods of time.

Hand slides of trombones can be cleaned by filling the outside slide with water/soap. Insert the inside slide and work in and out. This "pumping" action loosens most of the dirt. Dry exterior of instrument with a soft cotton cloth. A trombone cleaning rod can be used to further remove dirt from the outer slide. To do so, cut a 4" square piece from a cotton cloth and insert it into the cleaning rod. Work the cleaning rod back and forth in - both tubes of the outer slide. This may have to be done several times with new pieces of cloth until the cloth comes out clean. Make sure you thoroughly dry the inside and outside of the slides.

Trombones with rotary valves can be serviced by following the procedures in the [valve maintenance section](#).

General Brass Care Tips

- You can wash the mouthpiece with warm, soapy water, making sure you dry the inside thoroughly. The mouthpiece should not have any dents in the end of the shank. If the mouthpiece gets stuck, do not attempt to remove it. Your band director has a special tool for removing it.
- Wipe down the exterior of all brass instruments with a non-treated cloth to remove fingerprints and residue.
- Pitch is affected by temperature. Be sure to warm up your instrument before playing by blowing air through it.
- It is recommended that all brass instruments be taken to a professional repair technician at least once a year for general maintenance and professional cleaning. Doing so may prevent costly repairs in the future. Regular maintenance and professional chemical cleaning will also help prevent and retard "red rot", a form of corrosion that eats through brass.
- Broken solder joints should not be ignored. Have a qualified repair technician check out your instrument as soon as possible.
- Never set anything on top of your brass instrument, whether inside or outside of its case; this includes sheet music! Damage occurs easily when items are placed on the instrument and the case is closed. Make sure your case is secure and all hinges, latches, and handles are securely fastened to the case.
- Never leave a brass instrument in a hot car or in your trunk. Extreme temperatures can damage your horn.

General Brass Cleaning

Brass instruments should be flushed out once a month to clean out any accumulation of dirt and to prevent corrosion. A good place to do this is in a bathtub. Fill the tub with lukewarm water and a mild soap (not detergent). Remove all tuning slides. Unscrew top and bottom valve caps, removing the valves at the same time. Any felts on valves should be removed so they don't get wet.

Place instrument in water and flush interior with water and soap. Use a snake brush to clean tubes of tuning slides and bore of instrument. The snake brush can also be used on trombone slides, inside and outside.

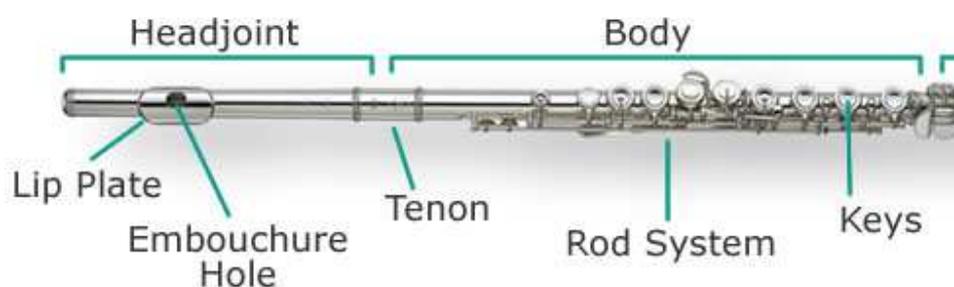
Once all tubing has been cleaned, remove instrument and dry with a soft cotton cloth. Place any felts on valves and reassemble using a high quality valve oil. Reassemble tuning slides using a lanolin based slide grease (never Vaseline). A good practice to get into is to always push the tuning slides closed when you're finished playing (primarily because this prevents the air from drying out the grease, and also, you'll have to re-tune anyway).



Woodwind Care & Maintenance

For the best use from your instrument, it is important that you give careful attention to the following recommendations.*

Flute Care



Flute Assembly

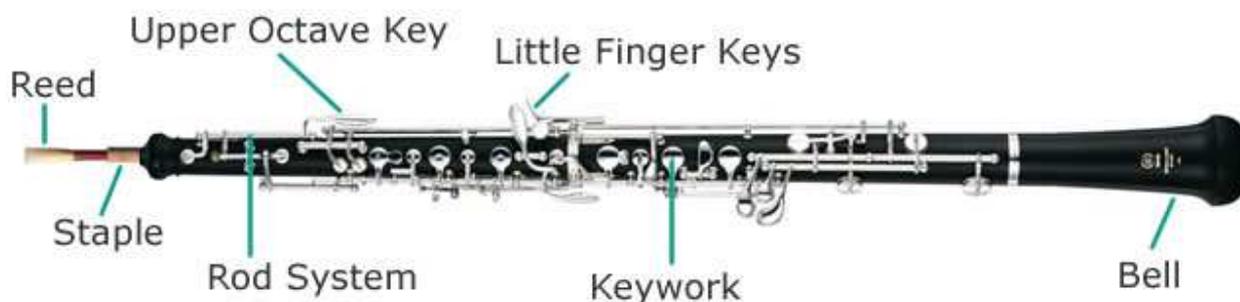
1. Holding the top of the body (not the keys), attach the headjoint to the body. Do not push the headjoint all the way in. Leave about a quarter inch of room.
2. Line up the embouchure hole with the center of the keys.
3. Still holding the top of the body, attach the foot to the body with a gentle, twisting motion. Be very careful not to bend or twist the keys.
4. The tenons work by friction and you should not use lubrication of any kind. If you are having trouble connecting them, use rubbing alcohol and a soft cloth to clean.
5. The embouchure hole should center with the C key and the D post on the foot and the D tone hole on the body.

Cleaning and maintenance

- Sterilize the lip plate.
- Occasionally, check the head cork placement by using your tuning/cleaning rod, which should be centered in the embouchure hole. Do not try to adjust the cork yourself.
- To clean the flute body, insert the corner of a lint-free cloth through the small hole at the top of the cleaning rod.

- Key oil can be used once a month or so, but be careful and use a small amount to avoid getting any on the pads.

Oboe Care



Oboe Assembly

1. Attach the bell to the bottom joint. If you have a low Bb key, hold it closed while assembling the joints.
2. Line up the posts so that the bridge keys will close the Bb.
3. Assemble the upper and lower joints, holding the top of the upper joint and the bottom of the lower joint. Align the main key posts rather than the bridge keys.
4. To assemble cork joints, gently twist the two parts until they come together.
5. Hold the upper joint, avoiding any keys, and insert the reed all the way.

Clarinet Care



Clarinet Assembly

1. Attach the bell to the lower joint.
2. Attach the upper joint to the lower joint. Be careful not to put pressure on any keys.
3. While holding the top of the upper joint, attach the barrel to it by twisting gently.
4. Attach the mouthpiece to the barrel.

5. Attach the reed and ligature to the mouthpiece.

Cleaning the Body and Pads

- Move the swab through each joint and the barrel to remove all moisture. Tenons collect moisture, especially at the upper and lower joints, so moisture should be removed with gauze.
- When drying a pad, insert cleaning paper between it and the tone hole and lightly press down. Then, carefully pull paper away.
- Use a tone hole cleaner to remove build-up of residue in the tone holes.

Saxophone Care



Saxophone Assembly

1. Hold onto the bell and neck when assembling the saxophone. Be careful not to bend any of the keys.
2. When attaching or adjusting the mouthpiece, hold onto the neck. This will help you avoid bending the neck.

Saxophone Tips

- Never leave the neck strap attached to your sax when you put it in the case.
- The use of a tenon plug is essential for the safety of the octave mechanism.
- Accidental bending of the octave key is the most common damage to saxophones, and will cause your horn to not respond correctly.

General Woodwind Care Tips

- No gum or soft drinks before playing. Sugar mixed with saliva builds up on the pads and causes them to stick, making it difficult to play the instrument.
- Use cork grease as little as possible, but make sure you use it when needed. To apply it properly, you must rub the grease into the cork. Do not use ChapStick®.
- So moisture does not absorb into the pads, use an absorbent drop swab to clean out the moisture from each section before you place it in the case.
- Wipe down the exterior of the instrument with a non-treated cloth to remove fingerprints and residue.
- Do not store the reed on the mouthpiece; store in a reed holder. Reeds can cement themselves to your mouthpiece and collect many germs. As soon as the reed cracks, chips, or softens, it is time to replace it.
- Clean your clarinet or saxophone mouthpiece in warm, soapy water, making sure the reed and ligature have been removed.
- Do not leave a woodwind instrument in a hot car, or in your trunk. Extreme temperatures can damage your instrument.
- Do not set anything on top of your woodwind instrument, whether inside or outside of its case; this includes sheet music! Damage occurs easily when items are set on the instrument and the case is closed. The keys are often bent this way.
- Make sure the case is closed securely. Check all hinges, latches, and handles to ensure they are securely fastened.
- Never use pliers or hammers on your instrument. Improper use of household tools is a common cause of unnecessary damage to instruments.
- It is recommended that an instrument is taken to a professional repair technician at least once a year for general maintenance and cleaning. Doing so may prevent costly repairs that may eventually arise. A qualified technician can often discover a problem that you may have overlooked or may not be aware of.

More Information

Woodwind instruments should have moisture removed from the bore after every playing. Pulling a swab through the bore of a clarinet removes the moisture that can accumulate and possibly cause cracking. Moisture should also be removed from the exterior of the instrument as well. Wipe the outside of the body using a soft cloth. Also wipe the keys to remove any residue that could result in tarnishing.

There is much debate at this time as to whether a wood body of a clarinet should be oiled. Some experts in the field (including manufacturers) suggest oiling the bore with a fine bore oil to maintain resistance against moisture absorption. Others say the wood will only absorb a slight amount of oil (on the surface) creating an imbalance between the surface and the wood below. This would create stress resulting in the body cracking. If you do decide to oil, use a minimum on a soft cloth. The cloth should not be dripping wet, just damp. Avoid oil on the pads and corks.

Sticky pads can sometimes be adjusted by dragging a soft cloth between the pad and tonehole surface. Place the cloth between the pad and tonehole, then lightly close the pad against the cloth. Pull the cloth out being careful not to apply too much pressure which could cause the skin of the pad to tear. We generally do not recommend the use of powders which are supposed to dry the moisture on the pad. The powder doesn't work any better than the cloth and usually ends up in the key mechanisms causing the keys to be sluggish. If the cloth doesn't work after several tries, the pad should be replaced.

Key mechanisms need to be checked periodically for loose screws. Grasp the key and gently try to move side to side. If there is play, tighten the pivot screw until the key has a minimal amount of movement. If you tighten too much, the key will lock up. Loosen the screw slightly until the key moves again. Rods need to be tightened for proper seating of the pads. Check for rods that are extending beyond the post and tighten if necessary.

Oiling of the key mechanisms is essential for proper key operation. Any of the fine key oils available from the major manufacturers will work (or sewing machine oil is acceptable). A drop on the end of a needle pin is plenty for each key that contacts a post, either where a rod goes through a key, or where a key is held with a pivot screw. Oil the keys once every year. Too much oil and it will run over the keys, eventually removing the key corks. Not enough and the keys will dry out causing the keys to be sluggish.