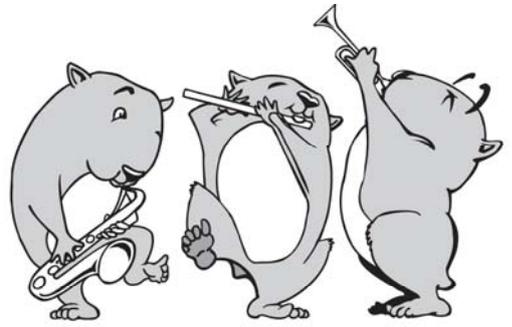


WOMBAT WOODWIND & BRASS



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PREVENTATIVE MAINTENANCE OF BRASS INSTRUMENTS

Martin Lukas

A guide to maximising the life of your brass instruments and extending the time between services.

THE GOLDEN RULES

The best maintenance is preventative maintenance. It costs nothing, makes the instrument more pleasant to play and avoids unnecessary trips to the repairer. The following golden rules serve as a guide to maximising the life of your brass instruments and extending the time between services.

Rule 1 : No food or drink (apart from water) when playing.

Contrary to the beliefs of some players, brass instruments do not need to be fed. Pizza, pie, lollies, chips, sugary drinks etc are the enemy of all brass instruments. Remember, much of what you blow into a horn, stays there.

Food particles adhere to the walls of tubing, your saliva then saturates these spots and begins to eat through the tubing from the inside out. This often results in "red rot". Red rot occurs most commonly on mouthpipes, the first tuning slides, trombone outer slides and crooks. These red spots are technically known as "dezincification", where the alloy is being eaten through. Saliva will do this slowly over time. There is no need to accelerate the rotting process many fold with food particles. Remember, saliva is intended to help digest food. Poor habits will cause saliva to digest your instrument sooner rather than later.

Food particles encourage mould to grow. Mould growing on pistons causes stuttering, sluggish action and eventually pistons will bind. Mould will also bind and freeze tuning slides. This green stuff is alive, why help it grow by feeding it? If you wish to be really kind to your instrument and have the time, before playing brush your teeth or at least rinse your mouth.

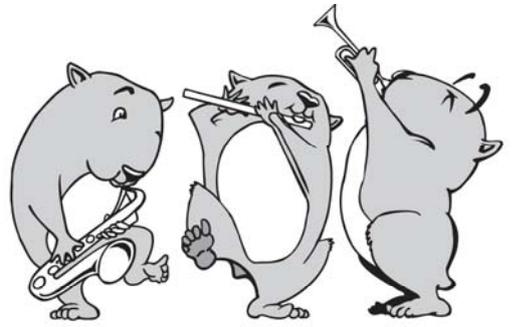
Rule 2 : Oil pistons, rotors and lubricate trombone slides before, during and after playing

Oiling pistons, rotors and lubricating trombone slides is an absolute must. This fills the gap between moving metal parts, avoids unnecessary wear and allows the best possible action. By lubricating after playing you are diluting saliva and forming a barrier between metal parts and saliva. This extends instrument life greatly by preventing pock marks that are caused by saliva puddling and eating away the pistons, casings, rotors and slides.

For pistons & rotors, use a commercial piston or rotor oil. On trombones, use slide oil or a combination of slide cream and water spray. Most anything is better than nothing.

A brass instrument without oil or lube in the case is not a complete instrument!

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Rule 3 : Move all slides and caps every time you play

Every time you play, take 10 seconds to move all tuning slides and valve caps (including the lower caps). Regular movement stops slides and caps seizing. This is the most common brass instrument repair and leads to numerous other problems.

Rule 4 : Grease tuning slides every month

A communal tub of auto grease in the band-room will suit this purpose and be worth its weight in gold in terms of the number of tuning slides it saves from seizing. Use a short bristle brush to apply. Commercial tubes of slide grease or even Vaseline work. Almost anything is better than nothing.

Slides with slide hooks, rings or triggers are designed to be used while playing the instrument. If these are being used, they require a quicker action. Lubricate these with piston oil or automotive engine oil.

Rule 5 : Store instruments safely

If an instrument is going to be put into storage, remove the slides and wrap them in paper/plastic. They can't get stuck if they are not in the horn. If this is impractical, at least grease the slides thoroughly and leave them as far out of their sleeves as the case safely allows.

Rule 6 : Nothing touches the instrument but your hands

Only use hand pressure to try and remove stuck slides, mouthpieces and valve caps (mouthpiece puller excepted). If it doesn't move, LEAVE IT ALONE.

You would be amazed at the damage, both mechanical and cosmetic caused by well meaning individuals using screw drivers, pliers, hammers, wooden spoons, vices, kitchen cutlery, large mallets, lumps of wood etc.

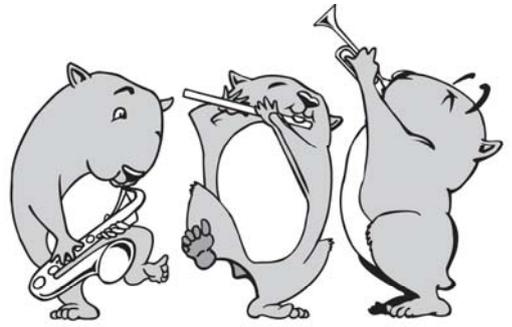
Examples of unintentional damage are

- Wooden spoon handle through the base of a piston
- Permanent plier and vice marks on mouthpieces and valve caps
- Twisted mouthpieces and broken solder joints
- Dented and out-of-round U-tubes on tuning slides
- Egg shaped valve casings, causing stuck pistons

Repairs attempted at home or in the garage can easily create a variety of costly problems.

Also, all bands should own their own mouthpiece puller. Knowing that a mouthpiece puller is readily available will prevent band members attempting to remove mouthpieces in any other way.

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Rule 7 : Clean your mouthpiece every week

Weekly mouthpiece cleaning lessens the amount of grime, food particles etc from entering the body of the instrument. Weekly cleaning also maintains the correct internal diameter of the mouthpiece shank. Brush your mouthpiece with a proper brass mouthpiece brush in warm soapy water. Flush with clean water. Check inside to ensure that the surfaces are mirror smooth. If there are still trees and shrubs growing inside, soak the mouthpiece overnight in vinegar and repeat the brushing and flushing process. Vinegar will dissolve lime and scale deposits whereas soapy water will only remove fats, oils, sugars and food.

All players should own a brass mouthpiece brush (less than \$5 each) and keep it stored in the instrument case.

Rule 8 : Wipe off finger prints after playing

The perspiration from your fingers can be corrosive and gradually eat through lacquer or metal plating. Take a moment to wipe the surfaces where your hands touch the instrument. Most any soft cloth is better than nothing, or use a special lacquer or silver cleaning cloth depending on the finish.

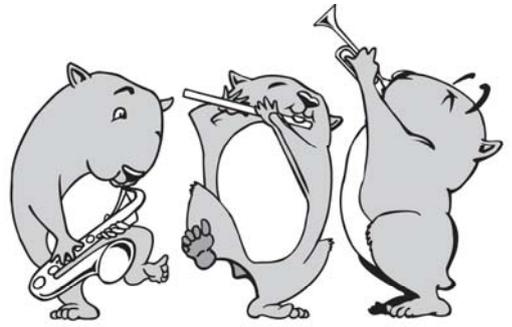
NB Never use Brasso or any abrasive cleaner on lacquered surfaces (usually yellow colored). You will permanently scar the surface. If you wish do extra cleaning, Mr Sheen sprayed onto a cloth, then used to wipe the surface is OK. For silver surfaces, a good quality, non abrasive silver polish is OK, but be prepared for a great deal of work!

Rule 9 : Use a good quality, snug fitting case

Your instrument must fit securely into a case with good hinges, secure latches/zips and handle. If it is faulty, treat this as an emergency and seek repairs immediately. Or, just purchase a new case. Good quality replacement cases are not expensive compared to the cost of repairs if an instrument falls out onto concrete. If your instrument shakes like a maraca in its case, use some foam rubber or bubble wrap to take up the free space.

Also, when carrying your case, get into the habit of facing the lid towards your body. In this way if the case accidentally opens, the lid will hit your body reducing the chance your instrument falling onto the ground.

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Rule 10 : Don't use “gig bags”

Gig bags are soft vinyl or leather zip up bags. These are known as the "repairer's friend" because they only provide an illusion of protection. On the other hand, solid traditional wood or moulded plastic cases or the newer hard foam zip cases actually do protect an instrument. No matter how careful you try to be, inevitably you or someone else will accidentally stand on, trip or fall over an instrument in a gig bag.

So, avoid the heartache of seeing your instrument in a gig bag becoming crushed and squashed; use a solid case.

Rule 11 : Don't use your case as a carry bag

Most student cases are made to carry your instrument, mouthpiece and valve oil only. If your case has no obvious area for other items, don't put them in. Your instrument will be scratched or even seriously damaged by sharing space inside the case with, medals, pencils, pencil sharpeners, pens, coins and lollies. For convenience and safety, use a separate bag for these accessories.

Also, few cases include a special compartment for the storage of music. Music should only be placed inside a case that has a special compartment for this purpose. If a case does not have this, music should not be squeezed into the case as the added pressure can bend tubing.

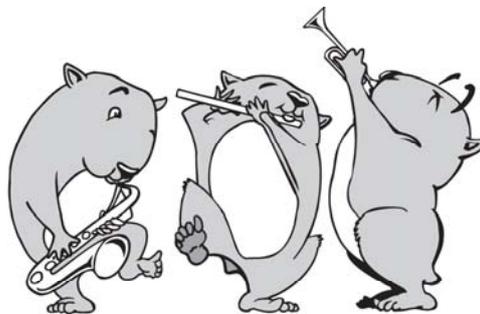
AUTHOR DETAILS

This article has been written by Martin Lukas, the proprietor of Wombat Woodwind and Brass. Wombat Woodwind and Brass provides a full range of woodwind and brass instrument sales and repair services to customers throughout Australia.

Martin holds formal qualifications in band instrument repair from WITCC Iowa USA, music performance and music education degrees from Melbourne University and has twenty years experience as an instrumental music teacher and high school band director. He also has many years of experience repairing instruments in both the USA and Australia.

This article reflects on Martin's accumulated experience as a qualified, experienced repairer and music teacher.

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TEN COMMANDMENTS OF BRASS INSTRUMENT PREVENTATIVE MAINTENANCE

1. NO FOOD OR DRINK WHILE PLAYING
2. LUBRICATE PISTONS, ROTORS AND TROMBONE SLIDES BEFORE, DURING AND AFTER PLAYING
3. NO FOOD OR DRINK WHILE PLAYING
4. MOVE ALL SLIDES AND CAPS EACH TIME YOU PLAY
5. GREASE TUNING SLIDES MONTHLY
6. NO FOOD OR DRINK WHILE PLAYING
7. ONLY USE HAND PRESSURE TO TRY AND REMOVE STUCK SLIDES, MOUTHPIECES AND VALVE CAPS (MOUTHPIECE PULLER EXCEPTED)
8. NO FOOD OR DRINK WHILE PLAYING
9. CLEAN YOUR MOUTHPIECE WEEKLY
10. DON'T USE GIG BAGS