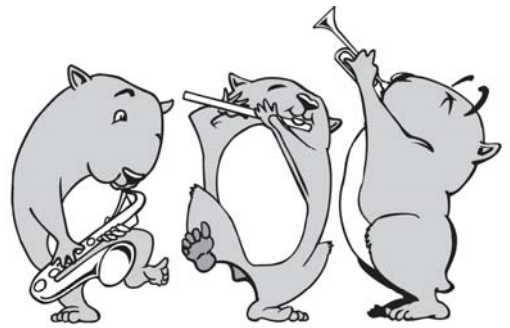


# WOMBAT WOODWIND & BRASS



40A Dight St, Collingwood VIC 3066

[www.wombat123.com.au](http://www.wombat123.com.au)

[martin@wombat123.com.au](mailto:martin@wombat123.com.au)

Tel: 1 800 246 228 (03) 9419 7337 Fax: (03) 9419 7225

## PREVENTATIVE BASSOON MAINTENANCE

**Martin Lukas**

### **A guide to maximising the life of your bassoon 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 bassoon and extending the time between services.

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

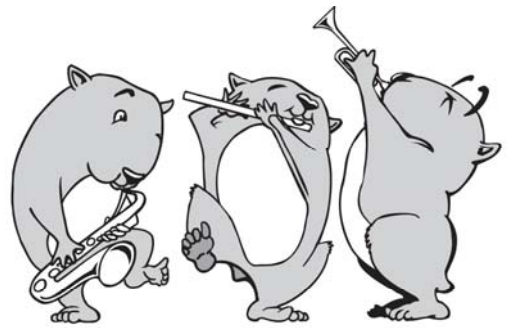
Every time that you eat or drink when playing, you reduce the life of your bassoon pads. Anything suspended or dissolved in your breath moisture contacts the pads. Food particles will stick to the surface of a pad, especially where the pad seats against the tone hole causing sticky and noisy action. Sugars are particularly bad as they are absorbed into the pad for the life of the pad, so over time forming a sticky toffee. Sticky/noisy pads are both annoying to the player and difficult to remedy. Most often the only solution for sticky/noisy pads is for a repairer to replace them.

Some modern bassoon pads have some form of waterproofing/resistant treatment. These surface treatments help pads last longer, however, when combined with sugar they can actually contribute to sticky/noisy pad action, more so than older style pads. Therefore it is more important, now then ever before to avoid sugars while playing.

Food particles also collect in the bocal and on the inside of the reed, becoming smelly and unhygienic. In an ideal world, a player would brush their teeth every time before they played their instrument or at least first rinse their mouth with water.

Players' fingers coated with food oils and fats will also coat the body and key work with oils and fats, making the bassoon attract even more dirt and grime. Ideally players should wash their hands before playing. Once a lot of dirt and grime has accumulated on the keywork and body, only a repairer can properly clean the instrument by servicing it with a "disassembly and clean". There is no need to invite such services before they are due.

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## **Rule 2 : Effectively clean and dry the inside of your bassoon**

When you blow into your instrument, you are blowing in air and saliva. The saliva in your mouth is intended to help digest food. Over time, this saliva will also digest your bassoon pads. With maple instruments this is of even greater concern as the soft wood bore and tone holes at the bottom of the boot (lower) joint can suffer rot! A bassoon must be thoroughly dried after each playing. Considering the expense of these instruments, (particularly maple bassoons) it is worth taking some time with effective cleaners. The most popular of bassoon bore dryers include the following;

- Pull through swabs on a weighted ribbon. These remove surface moisture but do not remove moisture in the tone holes. These may or may not easily thread around the “U tube”.
- Wool mops. These remove surface moisture and do penetrate some of the way into tone holes. They do not dry the “U tube” at the bottom of the boot joint and one needs to be careful not to push too hard and dent the “U tube”.
- Special “U tube” cleaner. This is a cloth connected to a chain of small ball bearings. This feeds easily through the “U tube” drying it thoroughly.

What ever you decide to use, at a minimum the boot and “U tube” need to be thoroughly dried. This is the section that suffers most from damp and causes the most maintenance problems. With maple bassoons, the larger diameter side of the boot joint is exposed wood. If left moist, over time it will rot, just like an unpainted wooden window in the weather!

I recommend a combination of these as none are perfect by themselves. Firstly, disassemble the bassoon. Pour the contents of the “U tube” out via the small diameter side of the boot joint. Develop this habit as on maple bassoons this side has a plastic liner which will not absorb water.

**1** Start with the special “U tube” cleaner as this is the wettest part of the instrument.

**2** Follow with the pull through swabs.

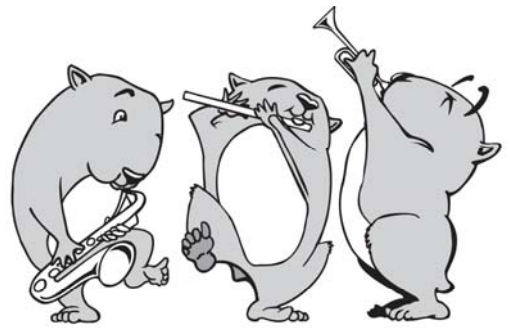
**3** Finish with the wool mops. Insert and twist a number of times to remove some tone hole moisture.

To dry pads most susceptible to moisture and to help air circulate around the problem area of the boot joint, one can place cork wedges under the key arms of the 2 lowest pads to open them. This dries those particularly wet pads and helps air dry the wood bore in maple bassoons.

After drying, it is equally important to store the mops and swabs outside of the instrument and case. Cleaners stored in the case smell and the moisture absorbed by the cleaner can lead to rods and springs rusting. There is little point in spending time drying your bassoon if all that moisture is just to be placed next to the instrument in a closed case! One manufacturer recommends that a bassoon be stored at home with the lid open and a fine cloth over it. This aids drying with air movement while the cloth avoids dust. You be the judge as to how safe that is in your house!

Therefore it is important to not only clean and dry your bassoon, but to do so effectively. Effective cleaning and drying will delay bassoon pad digestion and avoid wood rot.

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### **Rule 3 : Clean the outside of your bassoon after every time you play**

Perspiration from a player's fingers can be surprisingly corrosive. Perspiration can etch silver plated and even nickel keywork! The best thing to do is to clean the keys after every time it is played. Use a cloth or clean handkerchief to lightly wipe all keys and body surfaces. Do not rub vigorously because the cloth can catch on springs and pull them off their cradles.

NB Never use any abrasive or solvent cleaner on a bassoon body. You can cause permanent scars. Mr Sheen sprayed onto a cloth, then used to wipe the surface is OK. For silver plated keys, a commercial silver cleaning cloth fine.

Do not use cleaning liquid, cream, polish or spray on keywork. They may clean exposed surfaces but residue will be left in between the keywork and smudge onto the pads, reducing their effectiveness. A bassoon can only be cleaned properly by total disassembly. This is a job done for a qualified and repairer who will disassemble, clean and correctly reassemble the instrument!

### **Rule 4 : Avoid sunlight, dust and extremes of temperature**

To keep your instrument keywork shiny, avoid placing the instrument in sunny or dusty places. Sunlight causes silver plated and even nickel plated keys to tarnish. Minimise contact with sunlight and dust by placing the instrument in its case when it's not being played. Bassoons have many dozens of spots that need to be oiled. If these spots become dusty, the oil and dust mixture will gradually slow down the key action, even to the point of a key seizing up.

Avoid extremes of temperature, hot and cold; such as experienced in a car during a hot day or cold night. In hot conditions, the glue holding pads in place is weakened causing pads to move or even fall out. Cold weather can cause shellac-based glues used on some bassoons to become brittle causing pads to fall out.

### **Rule 5 : Don't use bare fingers to grease the bocal cork or tenon joints**

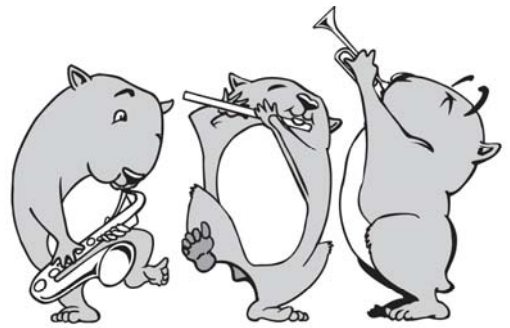
The bocal (neck) cork and tenon joints may need occasional greasing to fit smoothly. A simple way to avoid spreading the grease onto the instrument is to wrap some writing paper or plastic wrap around the finger that will be used to apply the cork grease. Once the grease has been applied, then the paper or plastic wrap can be removed and discarded with no grease residue left on your hands.

Otherwise, greasy fingers will transfer cork grease residue to keywork and eventually the whole body of the bassoon. This grease will make the instrument slippery to hold and attract dust. The only way to properly remove grease residue is a total disassembly by a professional repairer to wash the instrument body and wipe all the keys and posts with solvent. This is a substantial service that can be easily avoided.

For young, inexperienced players, it may be easiest to simply remove the cork grease from the instrument case and leave it up to the teacher to apply when required.

### **Rule 6 : Keep the bocal clean**

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This has the smallest diameter of all sections of the bassoon. It is susceptible to food particles and grunge adversely altering the way the instrument plays. Food particles and grunge can also markedly reduce the life expectancy of this expensive part.

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", 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. Lack of cleaning will cause saliva to digest your bocal sooner rather than later.

I suggest a monthly clean in a warm detergent bath. A good quality specialist bocal cleaner (basically a fine, flexible nylon push rod with a bristled section in the middle) is then run through the bocal a few times. If this has not been done for a while you will be amazed at what comes out!

## **Rule 7 : Use a good quality, snug fitting case**

Your instrument must fit securely into a case with good hinges, secure latches/zips and handle. The holding blocks inside the case must also be firmly fixed. 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.

A bassoon is heavy and can generate much more momentum than a small, light instrument. This makes the need for a well fitted, quality case even more important! Your bassoon may need an end plug of the correct length installed for the top of the wing joint. This protects the whisper key from bending and makes sure that this section does not wobble lengthwise in its case. Ask your teacher or repairer if in doubt.

## **Rule 8 : Do not use the bassoon case as a music satchel**

Bassoon cases are made to carry a bassoon and a reasonable number of accessories. Bassoon cases do not include a music compartment. Music should not be squeezed into the case as there is great likelihood that the added pressure of the papers will bend keywork.

Also, when carrying your case, face the case lid towards your body, so that if the case accidentally opens the lid will hit your body reducing the chance of the bassoon falling onto the ground.

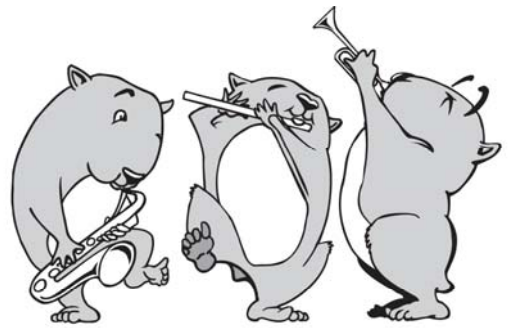
## **Rule 9 : Loose bands are an emergency**

Bassoons have varying numbers of metal bands that strengthen the thin walls of sockets. If these become loose, or even come off, do not play the instrument. Sockets without good support from bands can easily crack or snap off. This very simple repair can avoid a major expense.

Maple bassoons require this maintenance more often than plastic bassoons as wood may expand and contract according to humidity.

## **Rule 10 : Leave oiling of keywork to the professionals**

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Bassoon keywork has many dozens of spots that need to be oiled once a year. Each of these requires a small amount of oil applied exactly, using a special purpose pinpoint oiler. These oilers have a point the diameter of a hypodermic needle. However, commonly purchased keywork oiler bottles have points far greater in size that squirt out far too much oil. When excess oil is dropped onto the keywork it will smear the instrument and attract more grime. Excess oil will also loosen the glue that holds key corks, adjusting screws and silencer materials in place. So the oiling of bassoon keywork is best left to a person experienced in handling a pinpoint oiler; either a skilled teacher or qualified repairer.

## **Rule 11 Assemble and disassemble the instrument carefully.**

Take the wing joint with the left hand and the boot joint with the right hand. Gently twist the joints together with a back and forth rotation. It is not necessary to do 360° turns. Do not “wobble” to fit. From the inside curve of the wing joint (hence the name) it will be obvious where it rests.

With a similar action add the bass joint (the longest). Most bassoons have a body lock to joint these sections securely. This will be your guide as to the correct position.

Place the bell section on top. The cork or wrapping needs only to be firm enough for the bell to sit without falling off.

Finally insert the bocal so the pip (the little vent) aligns with the whisper pad. Insert your reed and secure yourself to the bassoon with a neck strap, harness or boot strap. .

For safe disassembly do the exact reverse order.

If the joints are uncomfortably tight to assemble easily, use some cork grease to lubricate. (see rule 5) If after applying the grease the fit is still uncomfortably tight, you will need to see a repairer to sand away excess cork, or to remove some wrapping if it has wound tenons. Assembly and disassembly needs to be comfortable, especially for young players, otherwise excessive grip is used resulting in discomfort and possibly bent keys.

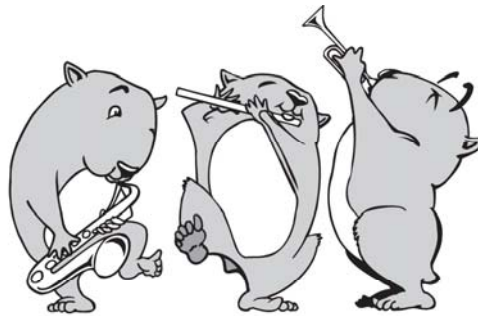
## **AUTHOR DETAILS**

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 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 BASSOON PREVENTATIVE MAINTENANCE

1. NO FOOD OR DRINK WHILE PLAYING, APART FROM WATER.
2. EFFECTIVELY CLEAN AND DRY THE INSIDE OF YOUR BASSOON
3. CLEAN THE OUTSIDE OF YOUR BASSOON AFTER EVERY TIME YOU PLAY
4. AVOID, SUNLIGHT, DUST AND EXTREMES OF TEMPERATURE
5. DO NOT USE BARE FINGERS TO GREASE THE BOCAL CORK
6. WASH & CLEAN YOUR BOCAL REGULARLY
7. USE A GOOD, FIRM FITTING CASE DO NOT USE IT AS A MUSIC CARRY BAG
8. LEAVE OILING OF THE KEYWORK TO THE PROFESSIONALS
9. ASSEMBLE & DISASSEMBLE CAREFULLY
10. LOOSE BANDS ARE AN EMERGENCY SEE A REPAIRER IMMEDIATELY