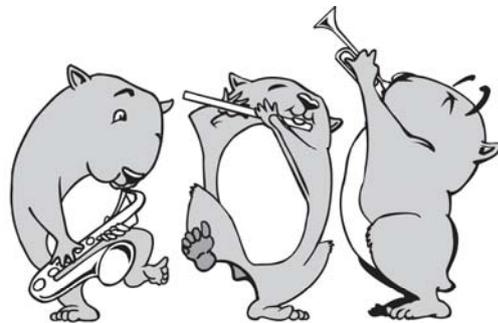


WOMBAT WOODWIND & BRASS



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PREVENTATIVE FLUTE MAINTENANCE

Martin Lukas

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

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

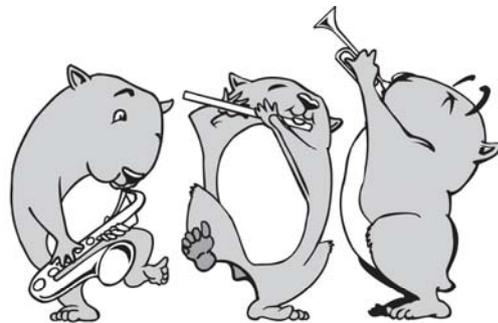
Every time you eat or drink when playing, you reduce the life of your flute pads. Food particles, particularly sugars are a flute's worst enemies. Every time a flute is played, the pads absorb and then release moisture. Anything suspended or dissolved in the moisture also contacts the pads. Food particles will stick to the surface of a pad, especially where the pad seats against the tone hole, prematurely forming "dirty rings" that shorten pad life. Sugars are particularly bad as they are absorbed into the pad for the life of the pad, forming a sticky toffee that will eventually break the skin of the pad where it touches the tone hole.

Food and drink can also be a cause of noisy/sticky pads that can be both annoying to the player and difficult to remedy. Often the only solution is for a repairer to remove and replace the affected pad.

Food particles can also form rough surfaces in the embouchure plate chimney, resulting in wind eddies that affect the flute's clean playing tone. In an ideal world, a player would brush their teeth or at least rinse their mouth with water before playing their instrument.

Players' fingers coated with food oils and fats will also coat the body and key work with oils and fats, making the flute 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 : Do not sandpaper flute pads

This may sound weird, however repairers regularly see the results of this bad practice. Some players hold the mistaken belief that they are cleaning their flute pads by pulling cigarette papers, paper money or other forms of paper between a closed pad and a tone hole. But these players are wrong! Pulling any sort of paper between a closed flute pad and tone hole (or even just pressing) has the same effect as using fine sandpaper! Instead of cleaning the pad, this practice "roughs up" the pad's surface by pulling skin fibres loose, providing a greater surface area for grime. This supposed pad cleaning only provides temporary relief from sticky pads, whilst at the same time dramatically reducing pad life and pad seal. For an experiment, pull your finger over a piece of wet tissue paper and watch the fibres come loose. It is madness to do this to your expensive flute pads! If you have sticky/noisy pads that bother you, have the flute serviced by your repairer.

Flute players who drag these various types of paper across flute pads often do so as a result of seeing oboe players do the same thing; thinking that if this works for the oboist it will work for them too! However rather than cleaning pads, oboe players are actually using the paper to dry up "dribbles" in the very small tone holes of the instrument, to avoid gurgles whilst they play. Flute pads are almost all substantially larger than even the largest oboe pads and therefore flutes rarely suffer from gurgles. Most importantly, quality oboes have pads that are predominantly made of cork. These cork pads are virtually indestructible, unlike the extremely delicate skins on flute pads!

Try pulling a finger over the surface of a damp piece of tissue paper. You will see the surface being roughed up and loose fibres appearing immediately. Do not do this to your precious flute pads.

Rule 3 : Avoid sunlight and dust

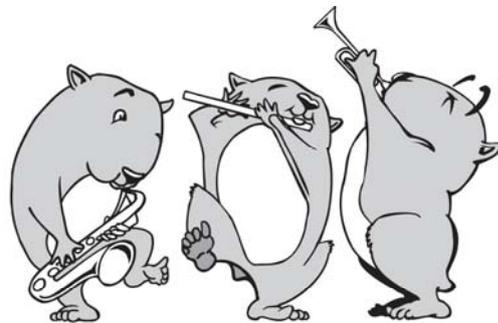
Most flute players takes pride in playing a shiny instrument. To keep your instrument shiny, avoid placing it in sunny or dusty places. Sunlight causes flutes to tarnish rapidly. Therefore don't leave your flute in direct sunlight and try to avoid playing the instrument in direct sunlight too. Minimise contact with sunlight and dust by placing the instrument in its case when it's not being played. Flutes have approximately 33 spots that need to be oiled. If any of 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.

Rule 4 : Clean the outside of your flute after every time you play

Perspiration from a player's fingers can be surprisingly corrosive to the point where it can etch silver and silver-plated flutes! So the best thing to do is to clean your flute after every time it is played. Use a plain handkerchief or a special purpose flute cleaning cloth. Use the cloth to lightly wipe all keys and flute body surfaces. Do not rub vigorously because the cloth can catch on springs and pull them off their cradles. A commercial silver polishing cloth can also be used but is not necessary on a daily basis.

Also, do not use any sort of cleaning liquid, cream, polish or spray on your flute. These cleaners will clean exposed surfaces but residue will also be left in between the keywork and smudge onto the pads, reducing their effectiveness. A flute can only be cleaned properly by first totally

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disassembling it. This is best done by a qualified and experienced repairer who will disassemble, clean and correctly reassemble the instrument!

Rule 5 : Clean the inside of your flute after every time you play

Each time you play, moisture builds up inside your flute. Flute pads absorb moisture very quickly because they are made of cardboard, felt and skin. If a pad absorbs so much moisture that it swells then it may not properly cover the tone hole causing it to leak air and affect sound quality. Avoid this problem by removing the moisture from the instrument after each time it is played. The moisture can be removed from each section of the flute separately, by using a lint free cloth and flute cleaning rod. Firstly, separate the flute into its three sections. Each section will be cleaned separately. Start by threading the cloth through the eye of a flute cleaning rod, then wrap the cloth around the tip and length of the rod and insert, rotate and remove the wrapped rod from each section two or three times. Never store this moistened cleaning cloth inside the flute case. Make sure to store it separately forever! Leaving the cloth in the case is bad for two reasons. Firstly; moisture will be retained in the case causing ferrous metal parts of the flute such as the pivot screws, adjusting screws and rods to rust. Secondly, the moisture can cause the case to smell musty. Always have two cloths. One for the inside and a different one for the outside surface.

Fuzzies (commercially available fuzzy cleaning sticks) can also be used to clean the insides of flutes. However, they need to be used with care. If you choose to use a fuzzy to clean your instrument, just as for the cloth, do not leave the fuzzy inside the instrument or even store it inside the case. In both situations, the moisture remains in or near the instrument. Also, the drying fibres will adhere to pad surfaces, reducing a pad's ability to seal. Repairers regularly see pads with multi-coloured fibres stuck to them. Removing the fibres is a delicate process and an unnecessary repair.

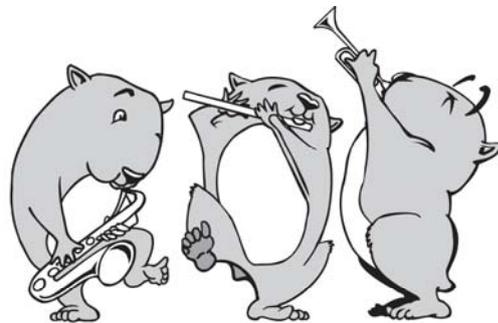
Rule 6 : Do not use the flute case as a carry bag

Flute cases are made to carry a flute and cleaning rod only. There is no space to carry anything else inside a flute case. A flute will be scratched or even seriously damaged by sharing space inside the case with medals, pencils, pencil sharpeners, pens and other office equipment, coins and lollies. So, if you want to store something with your flute, you should buy a purpose built flute carry bag that covers the flute case and also has external storage pockets. These carry bags will also help protect the flute case and prevent the instrument from accidentally falling out of an open case.

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. 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 in its case, use a clean folded hanky or silver cleaning cloth to take up the free space. Do not use your damp inside cleaning cloth for this purpose!

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Rule 8 : Keep tenon joints clean

Tenon joints are the two joints that connect the three sections of the flute together. Tenon joints must fit snugly so that air doesn't escape from the instrument. However, over time grime can accumulate on these joints making them difficult to fit together. It is time to clean tenon joints when you find that you are using an increasing amount of pressure to fit and un-fit the joints. Clean the inside and outside of grimy joints using a handkerchief lightly moistened with methylated spirits. This can remove a surprising amount of grime. However, if the joint remains tight, repeat the cleaning process using Brasso. This is a stronger cleaner and will remove more grime. After using the Brasso to remove grime, you will need to reapply methylated spirits to remove the Brasso residue. Accidental key damage may result from gripping a flute too hard to fit grimy joints. So, avoid this type of accidental damage by cleaning the tenon joints before needing to use excessive force!

Tenon joints don't need to be greased. Not only do greasy products like Vaseline and clarinet cork grease stain the flute case, the grease also gets on your fingers and then onto the flute attracting grime.

Rule 9 : Leave oiling of keywork to the professionals

Flutes have about 33 spots that need to be oiled once a year. Each of these spots requires a minuscule amount of oil applied exactly, using a special purpose pinpoint oiler. Professional oilers have a pin point the diameter of a hypodermic needle. However, common keywork oiler bottles have points far greater in size that squirt out far too much oil. Each time too much 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 flute keywork is best left to a person experienced in handling a professional pinpoint oiler; either a skilled teacher or qualified repairer.

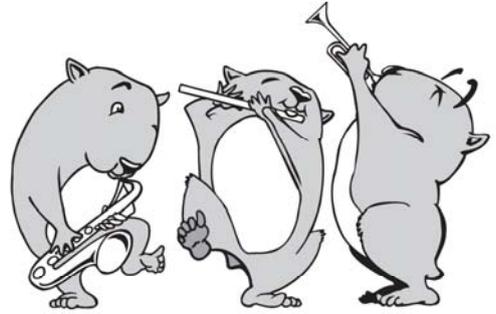
AUTHOR DETAILS

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 FLUTE PREVENTATIVE MAINTENANCE

1. NO FOOD OR DRINK WHILE PLAYING,
APART FROM WATER.
2. DO NOT SANDPAPER FLUTE PADS
3. AVOID SUNLIGHT AND DUST
4. CLEAN THE OUTSIDE OF YOUR FLUTE
EVERY TIME YOU PLAY
5. CLEAN THE INSIDE OF YOUR FLUTE
EVERY TIME YOU PLAY
6. DO NOT USE THE FLUTE CASE AS A
CARRY BAG
7. KEEP TENON JOINTS CLEAN
8. LEAVE OILING OF THE KEYWORK TO
THE PROFESSIONALS
9. NO FOOD OR DRINK WHILE PLAYING,
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