

# Evaluating the Condition of a Used Bassoon

Chip Owen

---

The objective of this article is to provide advice about the physical condition of the instrument. Advice about the price to pay for a used bassoon is outside of the scope of this article.

The advice in this article is applicable to any bassoon. The make of the instrument may give an indication of how good the instrument was when it was made but the maker cannot control how well the instrument was cared for after it left his factory.

There are very few problems on a bassoon that cannot be fixed. The object of this article is to aid you in knowing of the problems. Whether this knowledge leads you to reject the instrument or helps you in negotiating the price is up to you.

## **A repair technician's contribution**

As a general rule anyone purchasing a used bassoon should automatically plan on taking it to a repair technician that specializes in bassoons. This is certainly true for after the purchase is made. It is also true for before the purchase.

I can give you advice about details that deserve checking but no amount of advice can improve on the years of experience that a good repairer can provide. Those years of experience can allow a good repair technician to see and feel details about the instrument that exceed what I can describe.

## **Ask the private teacher**

Another person to speak with when buying a bassoon for a student bassoonist is the private teacher. The teacher should play the instrument and say that it is good or bad or in need of too much repair work to evaluate.

Teachers will also know which makes are commonly bad enough that they don't want their students to suffer with them. They cannot teach a student on a bassoon that cannot be played!

## **Age and provenance**

An instrument's previous existence has a great deal to do with its present condition.

Whenever possible contact the maker directly and supply the serial number of the instrument. The serial number is very important. With that number the maker can provide the additional information.

The maker should be able to confirm exactly what model it is and when it was made. There may be other information available as well, including who it was made for and if any special keywork was originally made for it. Maker's often receive reports of stolen instruments and may be able to warn you if

such a problem exists for the instrument you are considering.

## **Where has it been used in the past**

There are a number of generalities that can be assumed if it is known where an instrument has been previously used.

The worst category is schools. In general the standards of care for school instruments can be summarized as abuse and neglect. If you can determine that a bassoon has been owned by a school be very careful in your inspection of the instrument. Look for the types of problems that result from a lack of minimal care.

The preferable category is for an instrument to be owned by a professional musician who depended on it for his livelihood and the support of his family. In that situation you can expect that the owner took care of something that was so important in his life. This isn't guaranteed, however as many players are careless about having their instruments properly serviced. They can become obsessed with the idea that their reeds are the source of problems instead of eliminating the problem by getting their instrument fixed.

In between are privately owned instruments played by amateurs. These are likely to be in good shape. Players in this category generally take good care of their instruments but don't use them so much that they wear them out.

Watch out for instruments that haven't been used for a number of years. Sitting around doing nothing is not good for any musical instrument. They are likely to be unplayable with pads falling out. These instruments will definitely need to be serviced. Once service they should be as good as they were before they were set aside.

Old bassoons often come out of school storage rooms. They may have been put there because they were not being played. Maybe they were bad instruments to begin with or maybe there were no repair technicians available that knew how to fix them. Eventually they were traded in for some other piece of equipment that the band needed more than the unwanted bassoon in the store room. Now the store that took the trade in needs to get rid of it. After a bit of shining up it is advertised on an internet auction site where buyers are unlikely to know much about bassoons. Many terrible bassoons are sold in this way. Beware of internet auction sites—they can be a good place to sell but a bad place to buy.

### **Past service history**

Ask the seller about the maintenance the instrument has received in the past. Has it been serviced on a regular basis by a qualified bassoon repair technician? Were there any major repairs or recurring repair problems? A bassoon that has received regular annual service is likely to be in good condition. A bassoon that has not seen a repairer except when absolutely necessary will probably need service as soon as possible.

### **The first things to check**

Even before you open the case you will get some indications about what's inside. Is the case clean? If it is dusty or mildewed it has been stored in questionable conditions. Upon opening the case see if the insides are clean. Dust, debris, old reeds and other odds and ends in the case suggest questionable care.

Is the case in decent shape? The price of a new case can be a significant addition to the cost of the instrument.

The purpose of the case is to protect the instrument and to assist you in carrying the instrument. Are the latches, hinges and handles in good condition? Is the blocking that holds the instrument in good condition? Does the instrument actually fit in the case properly?

Ignore the bocals for now. If you are serious about playing bassoon you may already have a bocal you like and intend to keep using. Stick with the instrument for now and look at the quality and condition of the bocals later.

Check that all of the keys are present and look like they actually belong to the instrument. Watch for pairs of posts that obviously should have a key between them. The most common keys that are removed, lost, broken or otherwise missing include the ring or plateau key on the wing joint, the bridge key that connects the whisper key to the boot joint, the B $\flat$  trill key on the boot for the right hand third finger, and the F $\sharp$  rocker in the middle of the thumb side of the boot joint.

Similarly, check that all of the guards are present. Are there small unused screw holes in the body? Don't be surprised by an excess of screw holes where the crutch bracket and the low E key guard might be. This is an area that suffers from too many choices and guards and brackets tend to come and go. Be suspicious about screws that are obviously larger than other guard screws. An excessively large screw can cause damage.

Body locks are often a problem area. Broken or missing pins can be replaced. It is a bigger problem when the body locks have been ripped out of the wood. Sometimes the sides of the bass or wing joints

have been severely damaged when the lock was torn out and will require extra effort to repair.

### **Keywork**

Visually look at all of the keywork. Is there evidence of sloppy repair work? Are there any bends in the keys that shouldn't be there? Are the pad cups centered over their tone hole facings? Do the pad cups appear to be level to the tone hole facings? Are the posts lined up so that the screws go straight into the ends of the keys? Are all of the rollers in place and do they roll?

Noisy keys indicate several possible problems. Certainly a need for lubrication would be on the list. It is also likely that bits of cork and other materials used to silence the keywork may be missing.

Many of the problems with keys are difficult to find until the instrument is disassembled. Leave this to a repair technician. He may find bent keys that must be straightened, or screws rusted in place. Hinges get sloppy with age and he will adjust and tighten the hinges to get the keys moving more accurately.

### **Pads**

Pads are a routinely replaceable part of any woodwind instrument. Replacing older pads may improve the performance of any instrument.

Dirty pads are a common problem. Bits of debris can get between the pad and the tone hole facing and cause leaks. Fixing some leaks can be as simple as cleaning the pads with a soft dry cloth.

The first pad to go bad on a bassoon is the pad in the little finger G $\sharp$  key on the boot joint. This pad has the greatest risk of exposure to moisture on the bassoon. If this pad is looking ugly then it is time to suspect all of the others. Also be suspicious if it is the only new pad on the instrument.

If the pads visually look in good condition then check their seal. Each joint should hold a vacuum as well as a moderate pressure. Close all of the tone holes, cover one end of the bore and suck a vacuum on the other. Your lips should feel the vacuum grab firmly and hold without immediately decaying. This can be tricky on the boot joint where you have to close the large socket with your cheek while sucking on the small socket. If you still have the u-tube off it can be easier to check each side separately. With the bore end and tone holes still closed, blow into the closed joint and see if any pad blows open too easily.

### **The U-tube**

A leaking u-tube system can seriously degrade the performance of any bassoon. This needs to be checked.

Remove the boot cap. Place the u-tube end of the boot joint into a bowl of water so that the water rises

to just over the finished surface of the wood. Don't let the water get to a pad.

This part can get tricky to do. Close all of the pads and blow into the joint so that you get some air pressure inside. To do this you must close the large socket with your cheek while blowing into the small socket.

You will need someone to assist you by watching for bubbles coming from the area of the u-tube. Bubbles coming from the gasket where the u-tube meets the bracket are usually easy to fix. Bubbles coming from the bracket are more serious and require more effort to be fixed.

### **Moisture damage**

Moisture is the biggest enemy of the bassoon and the area most vulnerable to moisture is at the bottom of the boot joint near the u-tube.

Next remove the boot cap to inspect under it. Does the boot cap look in good condition? If you can't remove it get some professional help—without question you do want remove the cap and see what's under it. If there is any evidence of moisture having been under the boot cap it could indicate a problem.

Is the u-tube in good condition. There should be no significant dents from the outside of the u-tube. If there are a row of small dents from the inside it indicates the use of an improper swab. The dents themselves aren't a real problem but the use of the improper swab suggests moisture problems inside.

Carefully remove the u-tube. If it comes off without any damage to the gasket you will be able to put everything back together without a problem. If the gasket is damaged it will need to be replaced. Any visible evidence that the u-tube was glued in place indicates questionable repair work. Again, you definitely want to remove the u-tube and inspect inside it.

The inside of the u-tube should be clean. An ugly mess inside the u-tube indicates poor daily care.

Next inspect the wood bore of the boot joint adjacent to the u-tube. One bore of the u-tube is lined while the other is unlined wood. It is the condition of the wood of the unlined side that you are interested in. Over time moisture can attack the wood and cause it to rot. This condition is usually repairable but this can be an expensive repair.

Moisture damage to the wood usually occurs just under the brass u-tube bracket at the edge of the bore furthest from the lined bore. It can also appear as splits anywhere around the bore. In some cases the roundness of the bore is obviously distorted as the wood swelled into the bore. As the problem progresses it extends further into the bore.

Look for discoloration of the wood. This is often the first clue. Using a sharply pointed knife such as a #11 X-Acto knife probe the wood in the first 1/4" to

1/2" of the unlined bore past the u-tube bracket. If the wood is noticeably softer in some spots it may indicate rot. In serious cases there is no resistance to the knife point until it hits the brass band! Also in serious cases the integrity of the wood in the G# tone hole can be compromised as well.

Even serious boot rot is fixable. Until it is fixed it may negatively affect the instrument's performance. It is certainly worth fixing in a high value instrument. Think carefully before buying a low value instrument with moisture damage.

Fortunately, it's unlikely that you will see this problem.

### **Tenons & sockets**

The tenons of a bassoon might be wrapped with either thread or cork. Either material is okay. For some bassoons one may be better than the other.

Check each of the tenons. The most obvious problem would be a tenon that is broken off or with pieces missing. This tenon will need to be replaced.

There's nothing inherently bad about a replaced tenon as long as it was well done. A properly replaced tenon should look like it belongs and not be visually obvious. Watch out for tenons that were replaced with metal or plastic as they can eventually destroy the joint. There should be no sudden change in the bore where the new tenon meets the old bore.

Metal tenon caps are normal on the wing joints. Some makers will also install tenon caps on the bass joint tenons. These caps should be firmly attached and show no indication of looseness.

Bass joint tenons are vulnerable to splitting and breakage. Visually inspect the ends of the bass tenons for splits. If the edges of the split don't line up with each other, or if the splits are obvious, the tenon will need to be restored. Tenons are never perfectly round but watch for tenons that are obviously out of round.

The fit of the tenons in their sockets is something that needs to be adjusted as a routine part of any service. It is not a reason to reject a bassoon, but if the tenons don't fit will it may make the instrument difficult to try. Loose tenons make the instrument difficult to hold and if they leak they will degrade the instruments performance. A tenon that is too tight may cause other damage.

Check the sockets for splits. These can occur in the large socket of the boot joint and in the bell socket. When the joints are assembled a split will open wider from the force of the tenon being inserted. This can create a passage for air to leak past the tenon. This would have the same effect as a badly leaking pad.

The smaller socket in the boot joint for the wing tenon is normally lined with metal. Some makers

may also line the boot socket bore the bass joint and the socket in the bell. The end of the metal socket liner should be flush with the top of the boot joint. There should be no gap between the bottom of the socket and the beginning of the bore.

### **General body condition**

Look at the wood in the bore. Bassoons need to be oiled periodically. If the wood looks dry it has not been cared for. Bassoons will play better if they are oiled periodically.

Check for loose bands on the bell, boot and wing joints.

Is the bell ring in good condition? They are easily replaced on some makes but for many old instruments replacement bell rings must be custom made.

Look at the finish and condition of the outside of the body parts. Small nicks and dents are normal. Larger areas of bare wood should be repaired. If the old finish is flaking off the instrument will need to be refinished in the near future.

Is there any area of discoloration in the finish? Particularly in the wing joint and to a lesser extent in the boot joint this could indicate problems with the bore liner.

As the wood ages it may become rough. This is mostly noticed in the bore and on the tone hole facings. The bore may require polishing to restore its smoothness. The tone hole facings need to be smooth and can require careful handwork to restore. As they get rough the pads have difficulty sealing the holes against the rough facings.

### **Plating**

Several types of plating have been used on the keys, posts, bands and other metal parts of bassoons.

Nickel plating typically turns cloudy and dull in appearance. It is difficult to restore the shine without buffing the plating.

Silver plating is easier to work with. The appearance can be restored without buffing. When plating is properly applied the durability of silver plating can be better than nickel.

Stainless plating went through a brief popularity in the past. This plating will stay shiny but may become covered with tiny pits. It is a difficult plating to work with.

The shiny appearance of plating is purely a cosmetic detail. Any repair technician can buff the plating and restore the shine. However, buffing removes metal and can shorten the life of the plating.

More important is the condition of the plating. Are there keys where it has worn away? It may be desirable to have them replated.

### **Bocals**

Don't get too concerned if the trademark on the bocal is from a different maker than the instrument. Bassoonists often use bocals from different makers than the instrument. Be more concerned if there is no trademark on the bocal. If it isn't good enough for the maker to admit to having made it why should you expect it to be good enough to use?

Most bassoons and bocals are made with vent positions that are consistent with other makes. There are some makers who place the vent in strange positions. Make certain that the bocals agree with the instrument.

Look over each bocal for damage. Bocals are made with seams running the length of the bocal. Bocals with split seams will have to be fixed.

Other types of damage to look for are dents or kinks in the tube. The tips of bocals often get distorted or ragged. The vent button should be firmly in place.

The corks on bocals were they fit into the wing joint can be readily replaced by a repair technician. If the cork is in bad condition or if it fits too loose or too tight plan on having it fixed.

### **Conclusions**

Bassoons are incredibly repairable. There are very few things that simply can't be fixed. Most of the problems I have described can be fixed by any competent woodwind repairer who works on bassoons.

*Created 10/2001, Revised October 23, 2001*