THE BSS VOYAGER MULTITOOL

Congrats on your new multitool! Below are a few basic repairs that can be performed using the Voyager. Please note the Voyager is a tool and should be respected as such, please use care when adjusting your saxophone and if you ever feel concerned with your abilities please take your instrument to a professional technician or reach out to BSS. In addition I encourage you to watch our in depth video at bostonsaxshop,.com on how to utilize the Voyager.

-Jack Tyler

Adjusting the G# adjustment screw:

One of the most common issues to occur is that a horn will 'all of a sudden' develop a resistant or stuffy low end. While there can me a multitude of factors involved, the most common is the accidental venting of the G# key due to compression occurring on the material holding it closed when it is articulated by low C#, B and Bb.

The Low C Test:

To test if this is the cause, first play a Low C. Using your pinky in your left hand open and close the G# touch piece. If the Low C 'breaks' or produces a 'wah wah' sound while you are pressing down on the G# touch piece then it is evident that the G# key is opening slightly and causing a leak that will make the low notes difficult to play.

If you have determined that the G# is indeed leaking, next locate the screw that sits above the G# key cup. This will be attached to the F# key in the right hand. Using the largest screwdriver blade on the Voyager (4mm) you can turn this screw clockwise a 1/4 turn and perform the Low C test again until the Low C speaks clearly even when the G# touch piece is depressed.

If you go too far in turning the G# adjustment screw you will immediately notice that the right hand notes (F#, F, E and D) will become very resistant. Simply back the G# adjustment screw off counterclockwise 1/4 turn at a time until you find the balance using the Low C test.

See fig A

Adjusting the Bis Bb adjustment screw:

Located adjacent to the G# adjustment screw, the Bis Adjustment screw regulates the right hand notes (F#, F, E, D) to the Bis Bb in the left hand. This screw can be adjusted to seal the Bis key in the same manner as the G# adjustment screw using the largest 4mm screwdriver blade on the Voyager tool.

See fig A

Adjusting the low C# adjustment screw:

Most modern saxophones have a connecting key from the Low B and the Low C# key. These two keys are typically regulated to each other by use of an adjustment screw like the G# and Bis Bb. The purpose

of this regulation is so that when you slide from a Low B to Bb, the Low C# will not accidentally open causing a 'hiccup'. A simple way to test for the proper regulation is to play a low B and then using another finger depress the Low C# touch piece. If the Low B cracks or flutters then the regulation is not in place. You can adjust this screw using the Voyager's largest (4mm) screwdriver turning it clockwise until you can successfully play a Low B with the Low C# touch piece depressed,

See fig B

Tightening rods/pivot screws on your horn:

Often due to sympathetic vibration a rod or even pivot screw can work its way out of a saxophone wrecking havoc on the regulation and mechanics. Using the screwdriver blades on the Voyager you can easily retighten these rods on a well conditioned horn. *If you feel a lot of resistance when manipulating the rods or pivot screws I would recommend not forcing anything as there is the potential to do more harm than good. Rods and screws that are not turning easily could very well be oxidized or bent and taking the horn to a professional tech is strongly recommended.

Please use the following screwdriver blades for these applications

Smallest (2mm) blade: Neck octave key, Palm Keys, Side C and Bb

Medium (3mm) blade: Right hand stack rod, Left hand stack rod, Side F# (depending on model), Low Eb and C (depending on model), Low C# (depending on model)

Large (4mm) Blade: Pivot screws and adjustment screws

*Some particular vintage horns may require different applications of the screwdriver blade sizes. When in doubt pick which fits in the screw slots the best and use caution.

Loosening the rods/pivot screws on your horn:

Occasionally you might find a key on your saxophone is all of a sudden moving 'sluggish' and not coming back to its resting position. This can be cause by oxidation within the key, over tightening of the rod/screw or a bind due to an untrue rod. While it is by no means a permanent solution, and does not work every time, backing out the rod or screw a 1/4 turn at a time can very likely free up the key that is binding. Just turn the associated rod/screw in question a little at a time counterclockwise and test the key. Though this may work to get the key moving and make the sax playable, I recommend taking the horn to a professional as soon as possible if you encounter this issue.

Engaging/disengaging springs:

This is important: before manipulating a spring on your saxophone, inspect it carefully. If you see large amounts of rust/oxidation on the surface of the spring, proceed very carefully or take the instrument to a professional tech. A rusty spring is more prone to break and cause a much bigger issue. If you are concerned about the integrity of the spring you wish to adjust, you can use a Q Tip to remove as much oxidation as possible to inspect more carefully before proceeding. If the oxidation easily comes off and the spring does not appear to be 'pitted' especially near the tip, if should be ok to proceed with adjustment. I also recommend wearing eye protection when adjusting springs.

To re-engage or disengage a spring use the spring hook tool on your Voyager. The 'hook' part will allow your to pull a spring back into position and the notched tip will allow you to push in the opposite

direction as needed. Whenever you are manipulating a spring, you want to position the contact point with the tool right below the tip of the spring on the shoulder (see fig C). Simply push or pull the spring back into the notched cradle on the key it is attached too, being careful not to go any further in any direction than needed so as not to change the spring tension.

Adjusting the spring tension:

Using the same methods mentioned above, you can adjust the spring tension by disengaging a spring and using the following technique with the Voyager spring hook:

To increase tension, pull or push the spring (at the spring's shoulder) in the direction/angle that it naturally takes after it is disengaged.

To decrease tension, pull or push the spring in the opposite direction/angle that is naturally takes when disengaged.

See fig C

As always use caution and bend the spring slowly until you develop a feel for how the metal moves.

Leveling reeds:

Leveling the table of your reeds is a simple way to increase their longevity, seal on your mouthpiece and overall performance. As a reed ages (especially if not stored on a flat surface when not in use or when subjected to new environments quickly) it will typically form a 'bump' in the thickest part of the table (see fig E) which will cause it to not adhere to the mouthpiece table as well and will appear to play 'stuffy'.

To level a reed you feel is underperforming simply use the leveling tool on the Voyager. Holding the tool perpendicular to the back of the reed, use the bottom half to scrape along the back of the reed away from you. A few passes should be all the reed needs to improve how it seals and responds.

Removing keys/rods from your horn:

Sometimes it may become mandatory to remove a key from your saxophone to access another part of the horn. Before loosing the rod/screw associated with the key always disengage the associated spring(s) so that the key doesn't go flying when you remove it. The same is true for when you reinstall a rod or screw, attach the key first before reengaging the spring tension.

For rods, turn the rod counterclockwise until you hear a distinct 'clicking' sound which identifies that the threads have cleared the post holding them. Remove the rod with your fingers or carefully with a pair of flat or round nose pliers that have smooth edges. When removing a rod with pliers always grip the end of the rod in the opposite direction of the screw slot to avoid collapsing it.

For pivot screws, turn counter clockwise until they can be pulled free by hand.

I sincerely hope that you enjoy your Voyager, appreciate your patronage and that this tool can aid you on your musical journey.

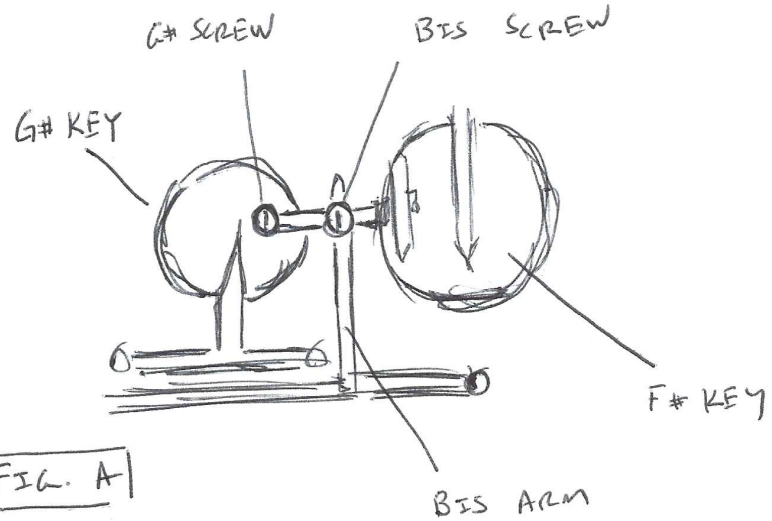


FIG. A

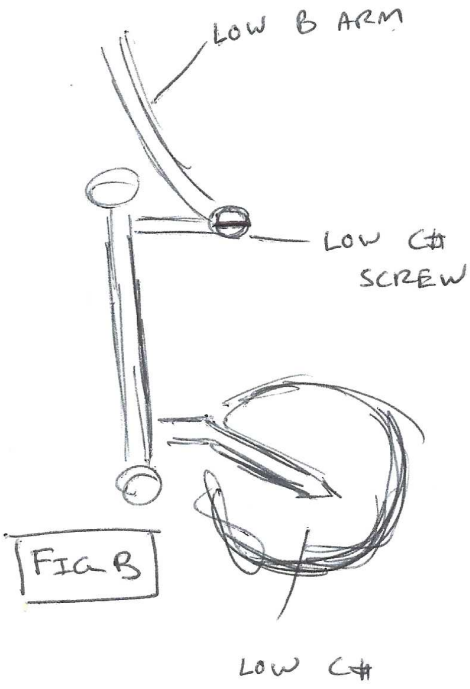


FIG B

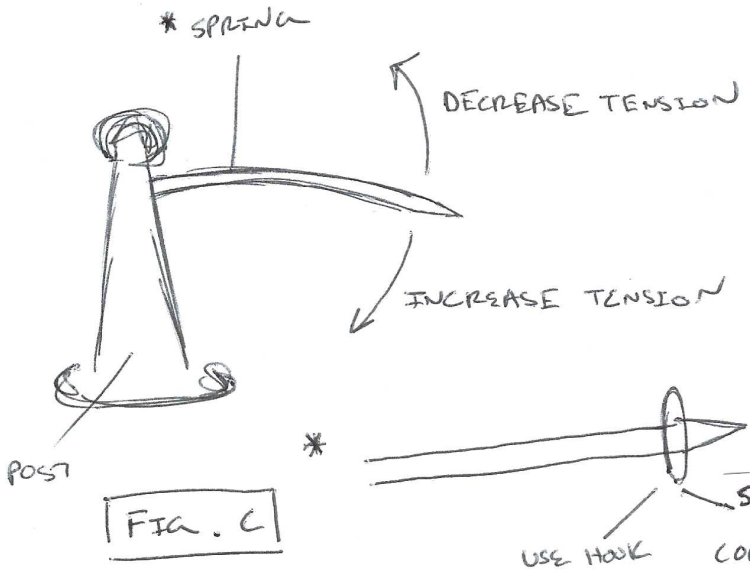
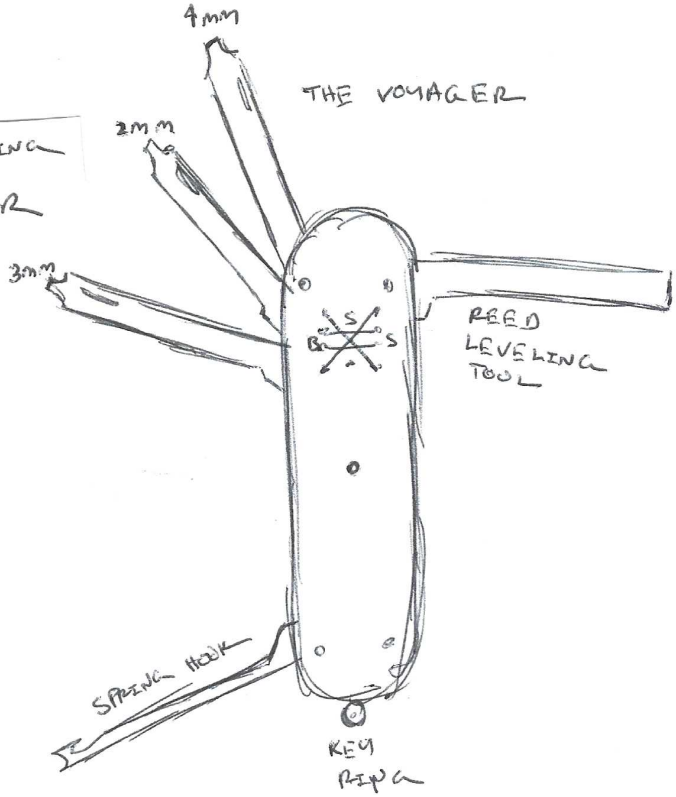


FIG. C



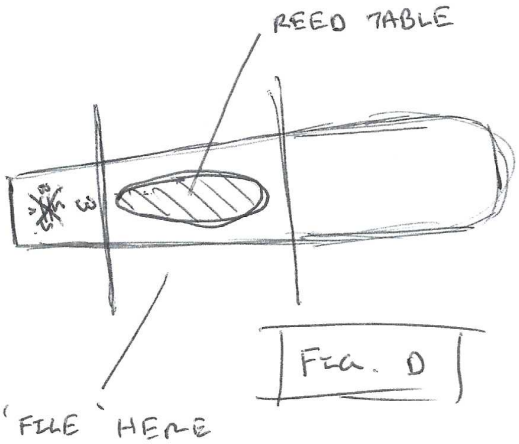


FIG. D