

## GRADING YOUR TECH ON A COMPLETE OVERHAUL

These are some things that you can check yourself both before and after you pay to have your sax overhauled. The definition of that term in this instance is that all of the pads have been replaced, the keywork has been tightened, the keys have been regulated, and all of the necessary body and dent work has been completed.

### Key noise

Without playing, finger some scales on the sax using every possible key going both fast and slow. Listen to the noise individual keys make---especially the side keys, low Eb and the fork F#. Record this sound if you have the set up to do so.

### Key play

Beginning with the palm keys, try to "waggle" each key from right to left, and then try to slide the key back and forth on its rod or between its pivot screws. Make a list of the keys and mark the ones that have any movement at all.

### Pad seating

For this you will need a bright leak light (or a dull leak light in a pitch dark room). Check all of the independent normally closed keys first to see if there are any leaks. Then go to the normally open individual keys such as low C, B, and Bb. Close each of these with the lightest possible pressure on the key and see if the light eclipses at exactly the same instant all 360 degrees. Next do the same with the upper and lower stack keys, closing each key individually with the lightest pressure. On the C and F# you will need to press the key cup to get the key to close by itself. Remember, the lightest possible pressure and instant closure 360 degrees is the standard.

### Key regulation

This is the critical area in saxophone repair and involves many variables that are all interrelated. These are key tightness, pad seating/level keys and tone holes, spring tension, and the adjustments themselves. If one or more of the variables are lacking then perfect regulation is not possible. First check the B to C key closing. Again, with the lightest possible key pressure both keys should eclipse the light completely at exactly the same time. Next check the A to C and Bis closing using the same standard.

Go to the bottom stack and check the F to F# and Bis key closing. Then hold down the G# key and check to see that key closes with the other two. Perform the same check pressing the E key. It should also close the F#, Bis, and G# perfectly at exactly the same time with the lightest possible pressure on the key. You can also check the same key regulation when you press the D key by itself if you like. Some techs adjust this firm, and some leave the D to F# closing light or even open.

The bell keys regulation is next. Press the low Bb key and check with the leak light that the lightest possible key pressure closes the Bb and the B keys perfectly around their circumference at exactly the same time. Then hold the low C# key down and press the low B key. Using light pressure, the B and C# should close together at exactly the same time.

### Neck tenon fit

The neck tenon should go in smooth and feel very snug without tightening the screw. Without tightening the screw, gently try to rock the neck up and down by holding it near the opening. The movement, if any, should be minute. Next tighten the screw just 1/4 to 1/2 turn. The neck at this point should not rotate right or left.

I'm sure others can add to this list. I left out key heights and spring tension on purpose because those areas can be subjective depending upon the taste of the player.

### Summary

Making a check list of these things both before and after an overhaul will give not only a way to measure the quality and thoroughness of the work, but will also give the player or novice repair person some idea of the detail that goes into a quality overhaul on their saxophone.