Alto Saxophone Octave Arm Diagnosis and Repair

The octave arm of a saxophone is a fragile...

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INTRODUCTION

The octave arm of a saxophone is a fragile piece of the instrument. Small adjustments can cause all sorts of muffled sounds or strange notes.

The following is a diagnostic guide that goes over the most simple issues that can cause problems with your alto saxophone, and how to fix them at home. Some of these can even be translated without much effort to different types of saxophone as the mechanism used for their octave keys is very similar.

🔧 TOOLS:

[Ruler](#) (1)
[Needlenose Pliers](#) (1)
Preferably smooth
This guide used the iFixit Toolkit Reverse Tweezers. The goal is to use a tool which will be able to bend the octave pin without damaging the rubber.
[Flathead 3/32" or 2.5 mm Screwdriver](#) (1)
2mm

Step 1 — Alto Saxophone Octave Arm Diagnosis and Repair

- Before any actions are taken, you should check the simplest possible fixes. Remove the neck and tap the back of the arm. If it moves freely and does not stick, you may skip to step 4.
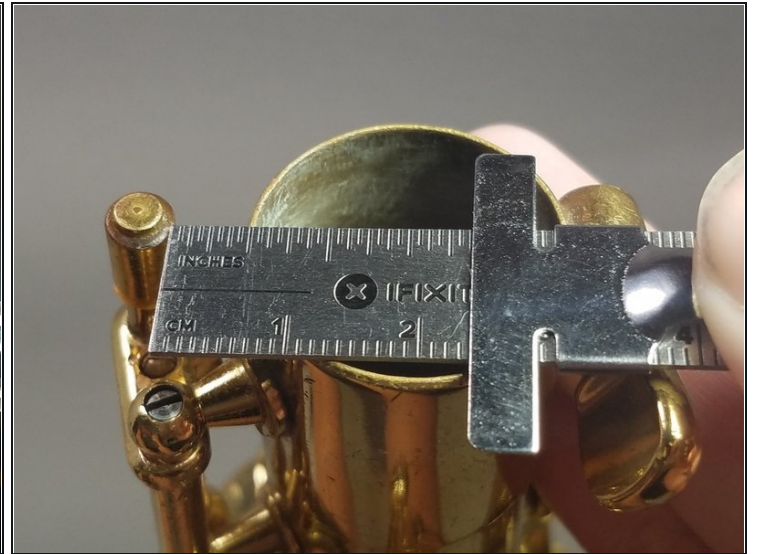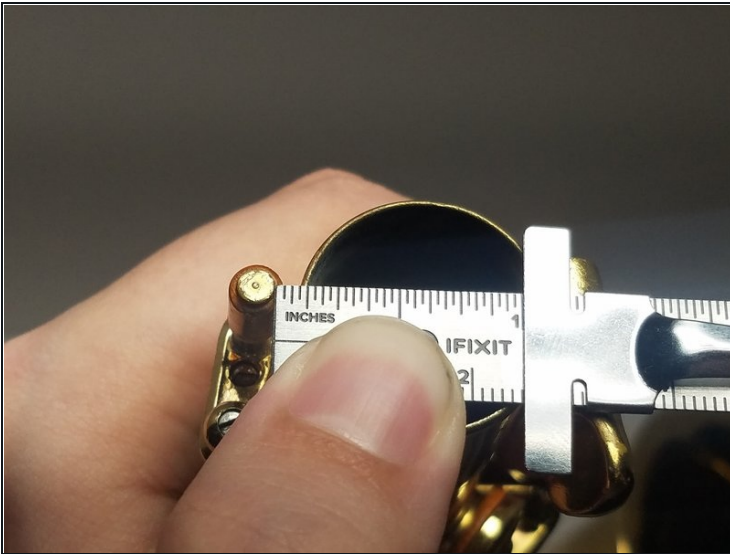
Step 2

- The octave arm should pivot freely when tapped. The least likely issue to impact the arm's performance is an overly tightened screw that holds the arm and allows it to pivot. If this screw is too tight, it causes the frame the arm sits in to constrict and prevent movement.

- Simply loosening the screw a small amount should allow movement. This model used a 2mm flat-head screw. Most models should be the same, but may vary slightly.

ⓘ The screw should not be removed. It should only be loosened enough to allow for ease of movement.
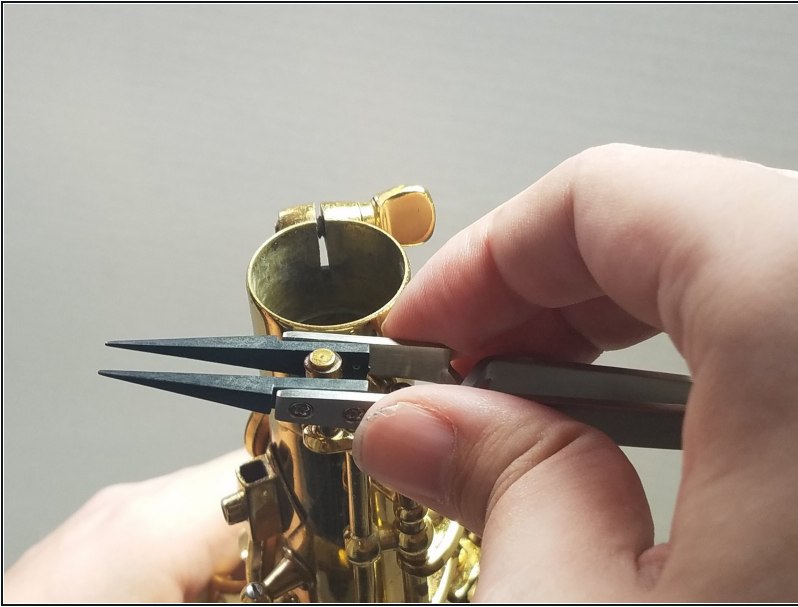
Step 3

- A sticky octave pad isn't particularly common, but it can cause issues with the sound quality and create muffled notes.

- Slide a small cloth or piece of paper between the pad and the neck. Gently press on the arm a few times to remove any dirt buildup on the pad.

Step 4

- The rubber of the octave pin should be 1/16th of an inch from the body of the saxophone when left alone, and 1/4th of an inch when the key is pressed.

- If the pin is positioned properly, you can skip to step 6.

Step 5

- Using your needlenose pliers, or in the case of this guide the iFixit reverse [tweezers](), very carefully bend the octave pin either towards or away from the body of the saxophone, depending on how it is misaligned.

⚠️ The octave pin is very delicate. Bending these pins too far can potentially break them. Use small increments to be sure the pin is aligning properly.

- Once the octave pin is properly positioned, the last potential issue is a bent arm at the base of the neck. This can cause the pin to sit up against the arm too much and lift the pad off of the neck even when the key is not pressed, or potentially not lift the pad enough when the key is pressed.

- Gently pull the base of the arm towards you and away from the neck if the pin is pulling on it naturally. Gently press and bend it towards the neck if the pin does not properly pull on it and lift the pad when the octave key is pressed.

⚠ Once again, this part is very delicate. Too much bending can cause it to break. Use small adjustments when fixing your octave arm.

It is highly recommended that between each step you check the sound of your instrument. This is a diagnostic guide and has multiple potential problems that it covers. Your problem may be fixed within the first couple of steps without further need for repair.