

## Aural and Visual Identification of Common Flute Repairs

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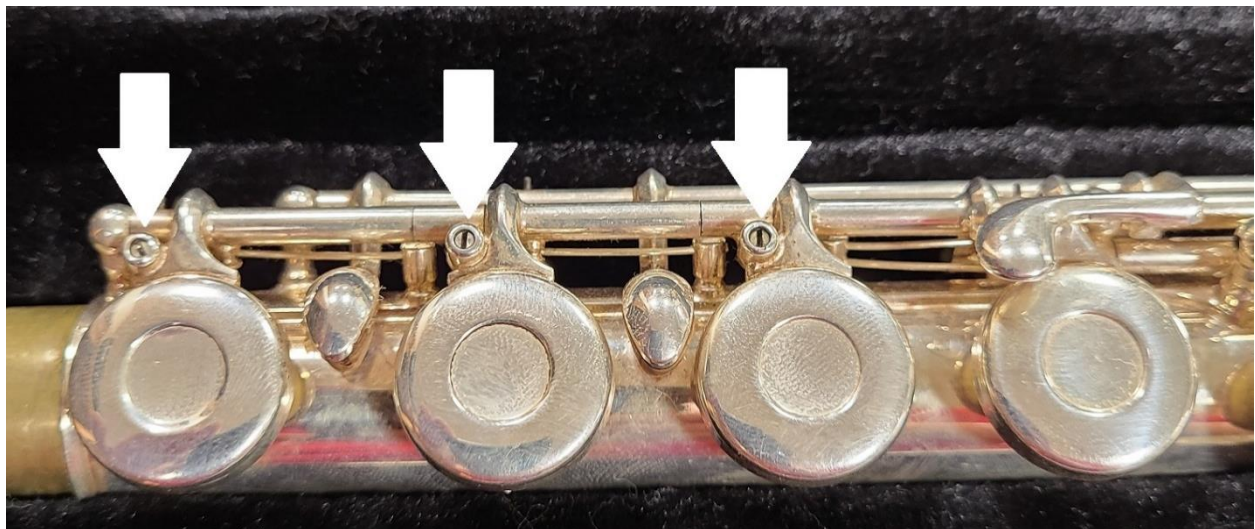
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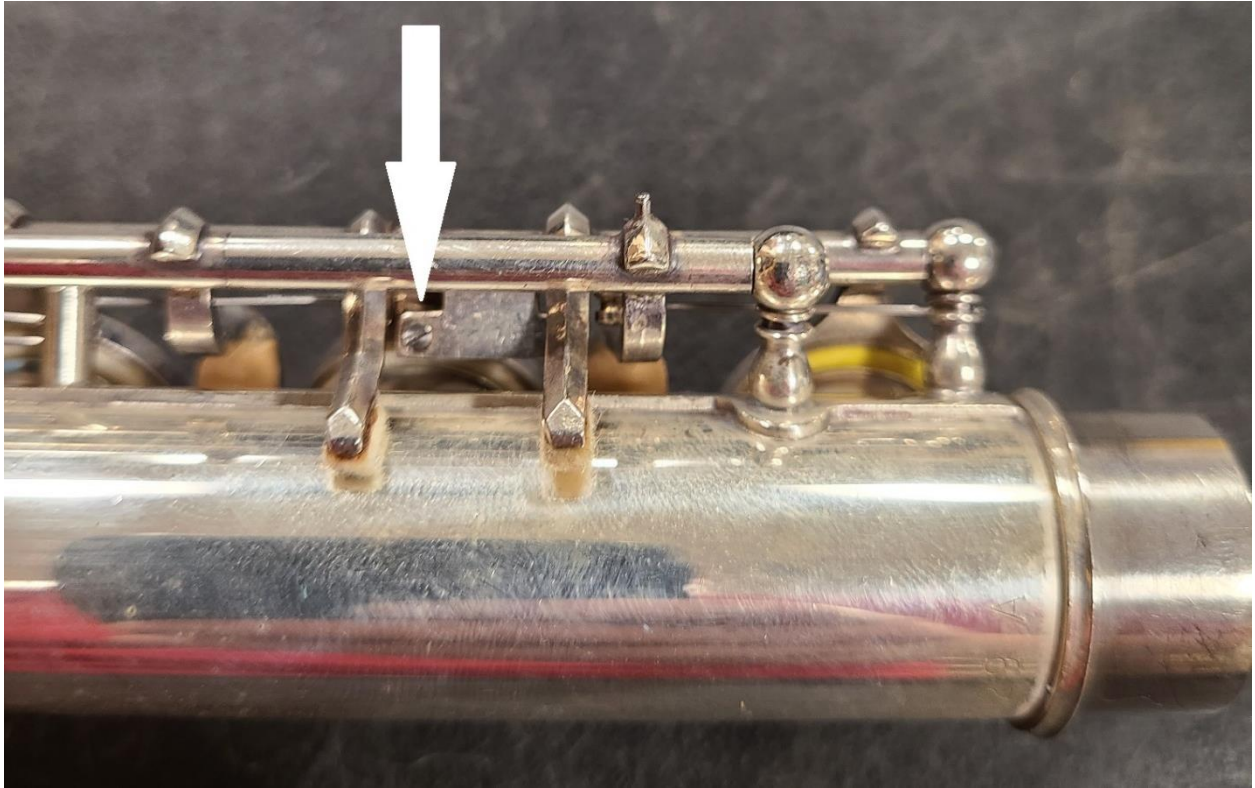
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### Terms:

- Pad Leak: individual pad not covering the tone hole
  - Damaged/worn pad
  - Dirty pad
  - Bent key
  - Damaged tone hole
- Regulation (aka Timing) Leak: Two or more keys not closing at the same time
  - e.g. F key not closing F# and Bb keys simultaneously
  - e.g. Low C# and low C keys not closing at the same time when you play low C
- Over-regulation: secondary key hitting the tone hole prior to the primary key
- Under-regulation: secondary key hitting the tone hole after the primary key



Right hand adjustment screws on a Gemeinhardt- easy to find! Thanks, Gemeinhardt.



Right hand adjustment screw on a Yamaha flute- hidden in the back! Yamaha, I thought we were friends.



Left hand adjustment screw on Gemeinhardt- easy to find! Truly putting the "gem" in Gemeinhardt.



Left hand adjustment screw on Yamaha- hidden in back and obscured by thumb key! 😊

### **Preventative Maintenance:**

- Daily swabbing of head joint, body, and foot joint with a microfiber (ideal) or silk (less ideal) swab/cloth and plastic or wood cleaning rod (avoid metal)
- Stick style, “leave-in” swabs are not adequate
- Oil keys and roller(s) 2-3 times per year (no disassembly required)
- Wipe down the instrument with a soft cloth (microfiber is ideal)
- Visit a trued technician once a year
- Get a full clean/oil/adjust (COA) every year on pro flutes (every ~3-5 years on student flutes)

### **Check Yourself Before You Wreck Yourself (or blame the instrument):**

- F# (it’s not the same fingering as saxophone, Right Hand 3)
- Second octave D & Eb (not the same fingering as low register)
- High D (it’s not the same fingering as middle D)
- Covering the holes?
- Posture?
- Cup under the C touchpiece (it isn’t missing a pad)

## Emergency Repairs:

- Head joint cork repair (fortify with tape) or replace
  - Repair- best done with Teflon tape
  - Replace- cork size is \*nearly universal
  - Head joint cork tool/stick
- Replacing a key cork
  - Synthetic cork
  - Wine/beer cork for trills and D#
  - Super Glue Gel
- Misc. bent keys
  - Smooth jaw pliers, such as Knipex Plier Wrench; pad slick; key bending lever
- Loose screws
  - Screwdriver set, such as the Woodwind Screwdrivers from MusicMedic
- Sticky pads
  - Yamaha Powder Paper
  - BG Pad Dryer
  - Key Leaves Spit Sponge
- Sticky tenons/sockets
  - Rubbing alcohol
  - Mouthpiece spray
- Minor tenon dents
  - Brass instrument dent mandrel or tapered piece of steel
- Understand adjustment screws and what they do
  - For regulation only (not key height or lost motion)
- Springs
  - Spring hook (or crochet hook)
  - Check trill keys
- Pad replacement
  - Top 3 are glued in
  - Others are held with screw/washer

**Things a band director should have:**

- Teflon tape
- Set of small, flathead screwdrivers
- Smooth-jaw pliers, such as Knipex Pliers Wrench
- Spring hook
- Yamaha Powder Paper
- Pad slick
- Leak light
- Mouthpiece spray
- Head joint corks
- Head joint cork tool
- Replacement parts assortment (pivot screws, pad screws/washers)
- Super Glue Gel
- Cork assortment
- Razor blades
- MusicMedic Flute Repair Kit

**Repair Tool/Supply Sources for band directors:**

- MusicMedic: [musicmedic.com](http://musicmedic.com)
- J.L. Smith: [jlsmithco.com](http://jlsmithco.com)
- Ferree's Tools: [ferreestoolsinc.com](http://ferreestoolsinc.com)
- Votaw Tool Company: [votawtool.com](http://votawtool.com)