

Troubleshooting

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There are two parts to a problem: diagnosing and finding a solution. Sometimes it is obvious there is an issue, but defining the problem is sometimes difficult.

Sample problems:

- Sticking key
 - Foreign object
 - Tight key bushings in front rail, center rail
 - Tight jack
 - Tight hammer flange
 - Damper guide rail
 - Hammers rubbing
 - Bridle wire bent and catching
 - Spring dislodged
- Damper guide rail
 - Center pin too tight
 - Wire not aligned
 - Spring out of place
 - Loose lead weights rubbing
 - Sostenuto not adjusted or catching
 - Action too far out
 - Rust/corrosion/burr
- Sluggish grand key frame with unicorda pedal
 - Misadjusted glides or rough glides
 - Cheek blocks too tight, bearing down too much
 - Rough wood on the key frame or the keybed
 - Dirty wood, grease
 - Weak or broken return spring
 - Action stop adjustment preventing movement
 - Keyslip warped & binding
 - Action stuck in full shift position so the pedal is not engaging
- Action Clicks
 - Loose hammer flange
 - Loose whippen flange
 - Felt cushion missing: wood hitting wood
 - Rubbing parts
 - Dislodged spring catching on adjacent whippen
 - Hammer stop rail screws are loose
 - Foreign object
 - Hammers falling on hard hammer rail felt
 - Broken part
 - Key upstop rail missing felt, or loose nuts and screws
 - Keys tilted and rubbing
 - Keytops hitting

- Loose key pin
- Inconsistent click on initial hammer strike
 - Loose hammer head
 - Loose flange screw
 - Hammer hitting damper
 - Sostenuto pedal
 - Two parts rubbing
 - Keyframe glides
 - Key clearance
 - Loose balance rail hole
 - Hammer hitting the backcheck, or backcheck against the sostenuto
 - Action in too far or not in enough
 - Pedal stop
 - Underlevers are crooked and touching the adjacent keys
- Sympathetic buzzes
 - Washer on leg bolt
 - Loose screws
 - Foreign object bouncing around
 - Lid prop touching plate or lid
 - Loose rib(s)
 - Pedal connections
 - String contact points
 - Soundboard crack
 - Loose bridge pin
 - Missing bumpers or cushions
 - Dried glue flaking off
 - Fallboard screws
 - Loose case part
 - Dangling Dampp Chaser
 - Pictures on wall/object on nearby table/lamp/two things touching
- Blocking dampers: not escaping
 - Action brackets incorrect
 - Damper guide rail crooked
 - Action spread incorrect
 - Assembly installed wrong
 - Pedals engaging incorrectly

Diagnosing

- Isolate each part, progressing from one end to the other of each section
- Keep your mind open for other possibilities
- Disassemble, reposition, replace, reassemble
- Check neighboring notes
- Buzz locating: have one person play the note repetitively while systematically moving your ear from right to left, front to back, top to bottom, near and far
- Touch or press on various points to stop the sound
- Talk to the pianist to clarify and isolate the problem