

KEY REPAIR TOOLS

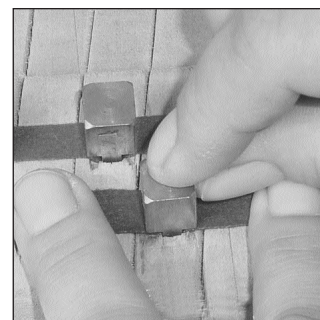
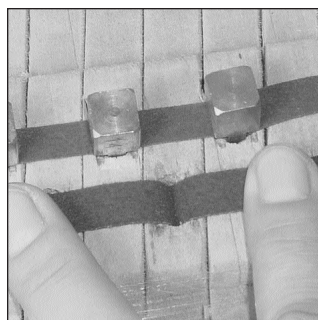
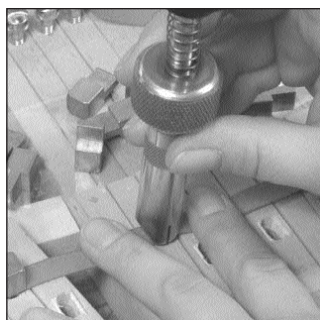
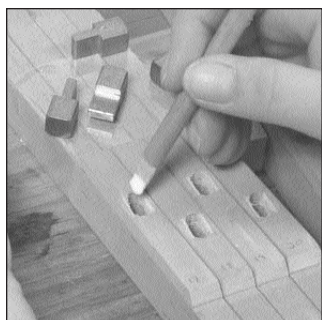
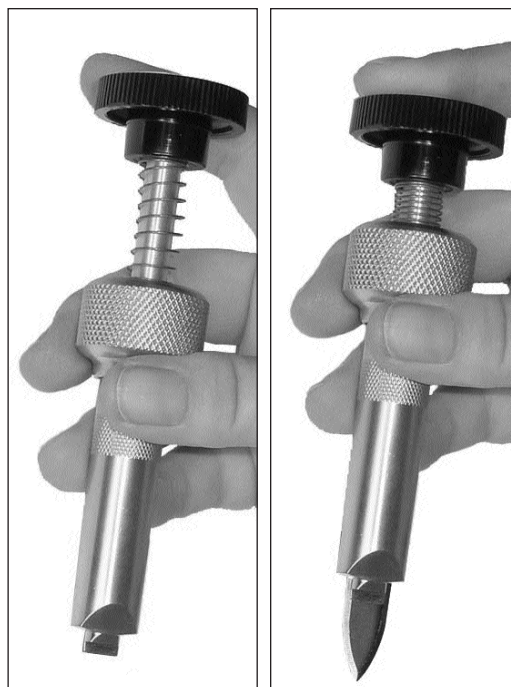
BUSHMASTER™ *The most efficient & accurate way to rebush keys.*

The Bushmaster™ key bushing tool automatically inserts bushing cloth to the correct depth in the key mortise. This finely-crafted brass tool allows you to install new bushings quickly and efficiently, eliminating guesswork.

The function of the Bushmaster™ is to simultaneously produce a uniform cloth depth and cut. With glue in several mortises, use the Bushmaster™ to push the cloth into a mortise until the Bushmaster™ bottoms out. Push the spring-loaded handle to project the double-edged blade. This foolproof method produces exacting results. Each side and every mortise will have the same length of cloth. This factory-style method guarantees accuracy and profitability.

Directions include numerous photos and helpful tips to assist you in creating very professional results. Machined in brass and aluminum. Measures 5" in length. Lifetime warranty.

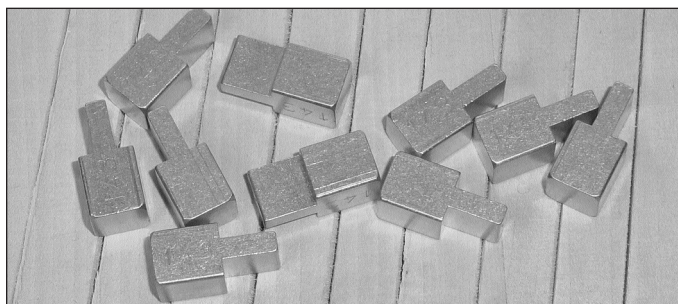
- # BM-1 Bushmaster™
- # RB-5 Replacement Blade 5-pack



ACCU-CAULS™

For professional results, use Accu-Cauls™, the finest key cauls manufactured. Finely machined from solid brass, guaranteed accurate to $\frac{1}{1000000}$ ". Front rail cauls are manufactured from $\frac{3}{8}$ " stock, while balance rail cauls are manufactured from $\frac{11}{32}$ " stock to allow insertion into all balance rail mortises.

Solid brass offers the advantage of precision fit, and can be heated for sizing, if necessary. Easy clean-up.



The purpose of the key caul is to size the bushing cloth to slightly larger than the key pin. Use a micrometer to measure the pin diameter. We suggest using an Accu-Caul™ approximately .004" to .005" larger than your front rail pin, and about .002" larger than the balance rail pin. Doing so should provide key bushings that require minimal or no easing.

<u>Accu-Caul size</u>	<u>Recommended for these pin sizes</u>
<i>11/32" square</i>	<i>BALANCE RAIL</i>
# AC162 (.162")	.160"
# AC147 (.147")	.145"
# AC139 (.139")	.137"
# AC088 (.088")	.087"
<i>3/8" square</i>	<i>FRONT RAIL</i>
# AC150 (.150")	.145"
# AC143 (.143")	.139"
# AC136 (.136")	.131"
# AC134 (.134")	.129"
# AC129 (.129")	.125"

KEY REPAIR TOOLS



ROTARY FELT CUTTER

Cut your own bushing cloth, felts, and leather accurately and with ease. Rotary cutters cut cleanly without pulling. Absolutely the best for custom-cutting cloth.

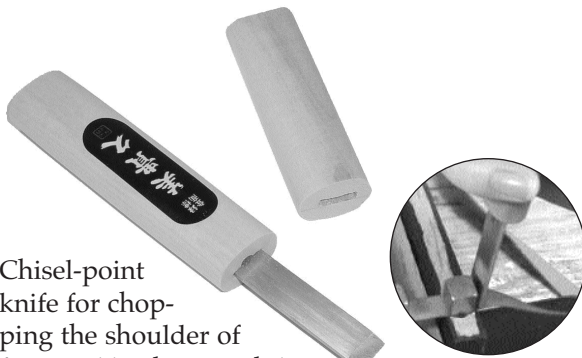
Standard Kit includes 45mm Rotary Cutter, an extra 45mm blade, and a 12" x 18" cutting mat.

- # RFC-1 Standard Rotary Felt Cutter Kit
- # RFC-2 45mm Blade only
- # RFC-3 Cutting Mat only
- # RFC-4 45mm Rotary Cutter only

Extra Large Kit includes Rotary Cutter with 60mm blade, an extra 60mm blade, and a 12" x 18" cutting mat. This kit is recommended for thicker cloths and felts.

- # RFC-1X Extra Large Rotary Felt Cutter Kit
- # RFC-2X 60mm Blade only
- # RFC-3 Cutting Mat only
- # RFC-4X 60mm Rotary Cutter only

BUSHING CLOTH CUTTER



Chisel-point knife for chopping the shoulder of front rail bushings, while the key bushing caul is still in place. About 3/8" wide. Lightweight wood handle, with protective cap.

JCC-1 Bushing Cloth Cutter

PRECISION KNIFE No. 5

Big 4 1/4" plastic handle with slightly angled #19 blade, perfect for chopping materials such as bushing cloth. 3/8" wide blade will work for most front rail mortises.

- # X-K5 Precision Knife No. 5
- # X-B19 Replacement #19 Blades (5-pack)



KEY MORTISE SPRING CLAMP

For use in repairing damaged wood in key mortises. (Not recommended for key bushing.) Spring steel clamp measures approximately 2 1/4" long x 11/32" wide.

KMC-2 Key Mortise Clamp



CAPSTAN INSTALLATION KIT



Install capstans efficiently and easily. Kit includes 1/2" countersink, drill, capstan driving tool for power tool, and one set of grand capstans.

KCK-5 Capstan Installation Kit

AUTOMATIC NUMBERING MACHINE

Ideal for numbering keys and hammers. Can be set to repeat the same number indefinitely, or to advance the number automatically. Prints from 1 to 6 digit numbers. Ink pad removes easily for re-inking.

DL-67B Auto Numbering Machine



KEY REPAIR TOOLS

KEY EASING IRON with 5 TAPERED BROACHES

For professional easing of keys. The Key Easing Iron consists of 5 tapered brass broach tips that fit into a 40-watt soldering iron (included). For temperature control, choose a separate Dial-Temp control or in-line dimmer switch.

The heated broach tip is inserted into the key mortise to iron the felt to the correct size. Ironing reduces friction, flattens irregular surfaces, & provides permanent results. A tremendous time-saver.

Includes 5 precision-machined broach tips:

- #1 tapered tip: .085" to .095"
- #2 tapered tip: .125" to .135"
- #3 tapered tip: .135" to .145"
- #4 tapered tip: .145" to .155"
- #5 tapered tip: .155" to .165"

- # KBI-1A Key Easing Iron with Dial-Temp
- # KBI-1 Key Easing Iron with in-line dimmer
- # KBI-2 5 Tapered Broach Tips only

See page D-20 for hammer head iron accessory.

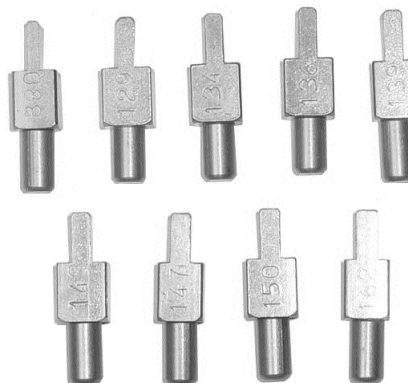


KBI-1

KEY EASING IRON with 9 STRAIGHT BROACHES

Same as above, but with 9 straight (not tapered) broaches. Broach sizes include: .162", .150", .147", .143", .139", .136", .134", .129", .088" (same as our Accu-Caul sizes). An efficient, foolproof method.

- # KBI-9A 9-pc. Key Easing Iron with Dial-Temp
- # KBI-9D 9-pc. Key Easing Iron with in-line dimmer
- # KBI-99 9 Straight Broach Tips only



KBI-99

LARGE KEY DIP BLOCK

Rosewood key dip block 48 x 20mm, tapers from 8 to 10mm (13/32") in thickness.

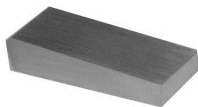
- #JKD-1 Large Key Dip Block



SMALL KEY DIP BLOCK

Aluminum key dip block 44 x 20mm, tapers from 8 to 9.5mm (3/8") in thickness.

- #JKD-2 Small Key Dip Block



ALUMINUM STRAIGHT EDGE



Approximately 2-octave span for key leveling. 15" long. Also great for use with rotary cutter kit, and for hammer travel.

- #JSE-1 Aluminum Straight Edge

CLIP-ON GRAND KEY LEVELING LEADS

With spring clips that hook over backchecks. Set comes in heavy duty box with strap.

- #KLL-52 Grand Key Leveling Leads, Set of 52
- #KLL-12 Grand Key Leveling Leads, dozen



KEY REGULATING TOOLS

KEY EASING PLIERS



Japanese pliers for easing front rail key mortises in any piano. Outstanding design includes plate for protecting exterior of mortise from breaking through. 7" in length.
#JKE-2 Key Easing Pliers

KEY EASING PLIERS



For easing mortises. *Parallel action* assures flat, even pressure. Exceptional quality. 7½" overall. Features return spring.
#KPL-4F Parallel Action Key Easing Pliers

KEY EASING PLIERS



Pivoting center plate moves to either side to protect outside of key from damage. 7" in length.
#KPL-5F Key Easing Pliers

BALANCE HOLE REAMER

Use to make thickness of balance rail hole (between key bottom and mortise bottom) the same throughout keyboard. Also removes any debris at bottom of mortise. 7¼" long with shaped wooden handle.
KCS-1B Balance Hole Reamer

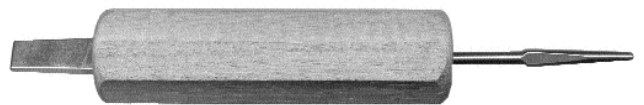


BALANCE HOLE EASER



Triangular-shaped head for easing balance rail holes. With lightweight wooden handle.
#JKE-1 Balance Hole Easer

DOUBLE-END KEY EASER



One end for balance rails, the other for front rails. Beautiful wooden handle in the center.
#JKE-3 Double-End Key Easer

BALANCE HOLE EASER

Triangular head for easing balance rail holes.



Length is 3¼". For combination handle.
#JCH-23 Balance Hole Easer

KEYFRAME SCREW TOOL



For adjusting grand keyframe screws (glide bolts).

#JKR-1
Keyframe
Screw Tool

MULTI-PURPOSE TOOL

Works for grand let-off, glidebolts, & tapered flange spacing.

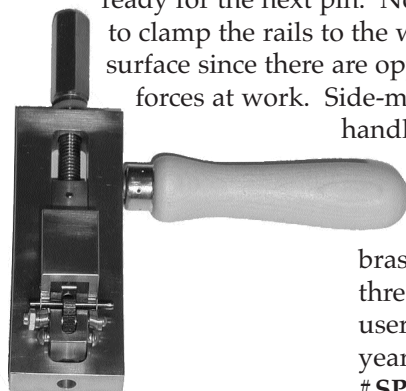
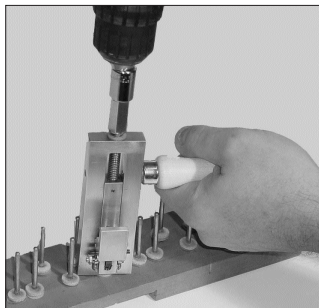


#LFT-2 Multi-Purpose Wrench

KEY TOOLS

STERNER KEY PIN PULLER

For removing balance rail or front rail pins, without distorting the hole. Position the tool over the keypin, quickly turn the hex head until it bottoms out. The cam automatically locks onto the pin. Using a drill or closed-end 1/2" wrench, spin the the hex head until the pin is out. Simply press the cam lever to release the pin. Quickly reposition the slide to the bottom again, and you're



ready for the next pin. No need to clamp the rails to the work surface since there are opposing forces at work. Side-mount handle

securely supports the tool during operation. The Sterner Pin-Puller boasts beautifully machined, solid brass construction with locking cam, threaded side handle, and includes full user-friendly instructions. Designed for years of rugged use.

#SPP-40 Sterner Key Pin Puller

OVAL KEY PIN TOOL



For straightening all front rail pins. 13" length for increased leverage. Wooden handle.

#KPS-30 Oval Key Pin Tool

OVAL KEY PIN TOOL



Fits snugly on most Asian & European front rail pins. For bending side to side. Heavy duty. 9 1/2" long.

#JKP-1 Oval Key Pin Tool

FORSTNER DRILL BITS

Makes smooth flat-bottomed hole. The correct drill for installing key leads. Manufactured from top quality high-carbon steel.



- # 570-3005 1/4" Forstner Bit
- # 570-3006 3/8" Forstner Bit (for small key leads)
- # 570-3007 7/16" Forstner Bit (for medium key leads)
- # 570-3008 1/2" Forstner Bit (for large key leads)
- # 570-3010 5/8" Forstner Bit (for x-large key leads)
- # 570-3012 3/4" Forstner Bit
- # 570-3014 7/8" Forstner Bit
- # 570-3016 1" Forstner Bit

CORE DRILL



37/64" core drill for enlarging existing key lead holes, to enable installation of key lead plugs.

37-PD Core Drill for Key Plugs

KEY LEAD PUNCHES



Punches for setting lead weights into keys. Patterned head. 8mm or 12mm diameter.

- # JLP-1/8 8mm Key Lead Punch
- # JLP-1/12 12mm Key Lead Punch

KEY LEAD HOLE PLUGS

Poplar side-grain plugs for filling hole left in key after removal of old key leads. 9/16" diameter x 19/32", not tapered.

KLD-P9 Poplar Key Plugs

