The Punch Machine™

Hand Operated Code Cutting Machine

No. 1200PCH

Exploded View & Parts List Inside

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091416 36PCH_100_00

1.0 Introduction

The Punch Machine™ (1200PCH), works on the same principle as the popular 1200CMB Code Machine (a known and proven system), but is more portable and works without electricity. All that is needed to handle almost any code cutting situation is included, and all the power you need is in the palm of your hand! The ease with which changes can be made from one manufacturer's specifications to another is unparalleled!

In just a short time, you will be amazed to find that radically different set-ups, such as Schlage to small Master to Best to double-sided Ford can be accomplished in an average time of 10 to 30 seconds each.

State of the art code cutting is made possible through the use of cards that are inserted beneath the lens. Quite often, just replacing the card is all that is required to change from one manufacturer to another. No additional depth or space adjustments are required.

By inserting the correct card, selecting the proper punch and jaw, then moving the key carriage both laterally and inward through the use of the two crank assemblies, the key blank is positioned correctly beneath the punch.

A fully illustrated, step-by-step set of instructions are contained in the following pages. Please be sure to spend some time reading and understanding all the steps thoroughly so that all of the unique capabilities of this versatile machine are fully understood.

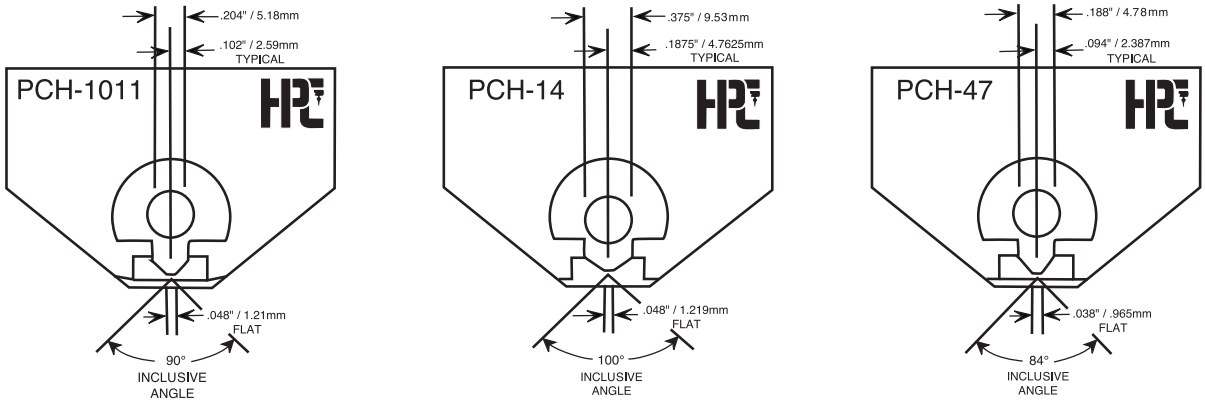
IMPORTANT NOTE

This machine is designed to cut brass or soft steel key blanks. The cutting of any hard steel or other alloys may damage the machine.

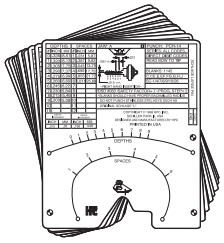
Refer to page 16 for additional information on which key blanks can be punched.

The Punch Machine™ Manual Contents

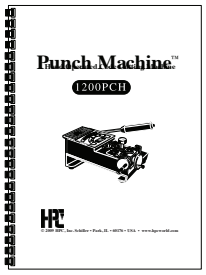
1200PCH Packaging Contents



Punches
Nos. PCH-1011, PCH-14, (installed) and PCH-47

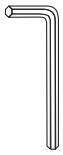


Code Cards
No. PDECK-104

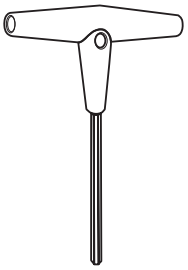


Manual
No. 1200PCH-MAN

3/32"AllenWrench
No. WRENCH-4



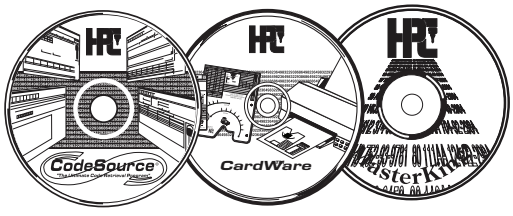
1/8"Allen Wrench
No. WRENCH-9



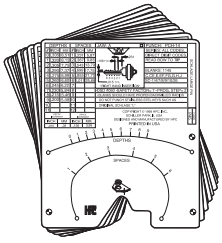
Punch/Die Wrench
No. WRENCH-5

Depth Adjustment
Wrenches
No. WRENCH-6 (2)

Optional 1200PCH Accessories Available

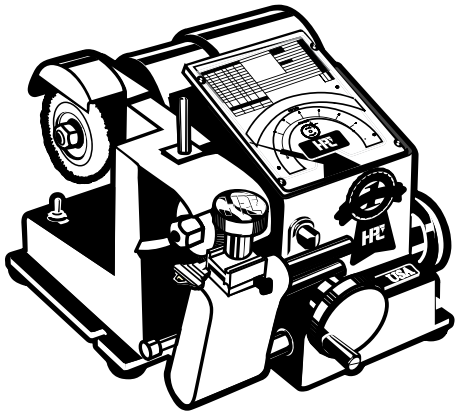


HPC Software

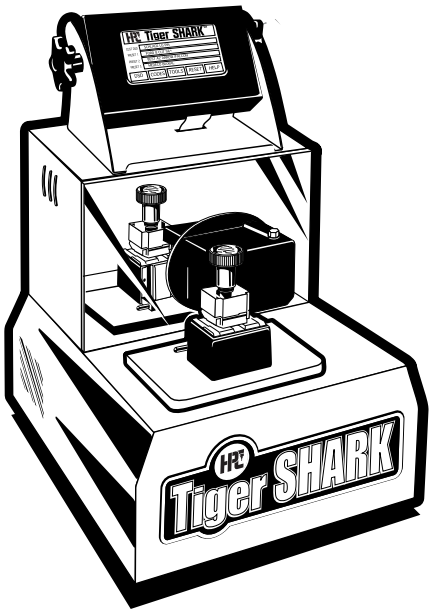


Individual Code Cards

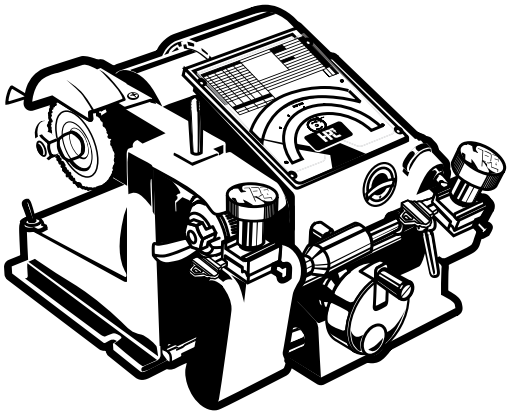
Code Cutting Key Machines by HPC



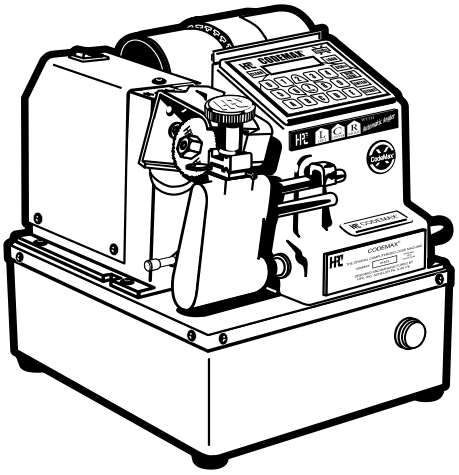
Original Blitz™
No. 1200CMB



Tiger SHARK™
No. 123SHARK



Switch Blitz™
No. 1233CMSB

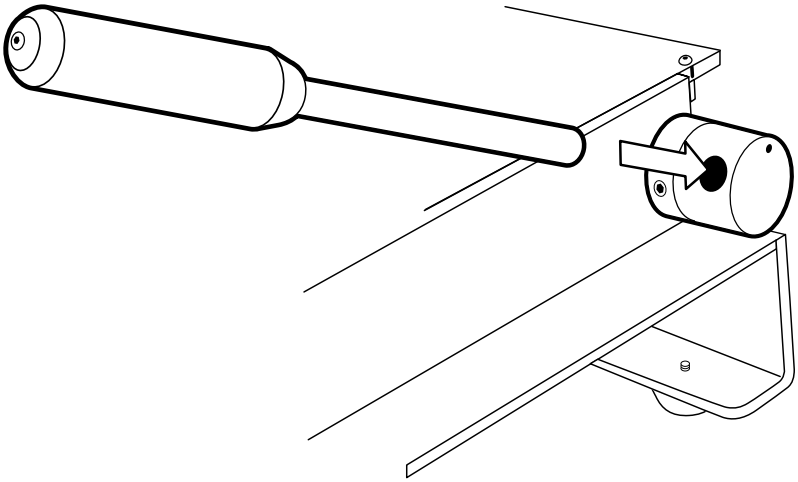


CodeMax®
No. 1200MAX

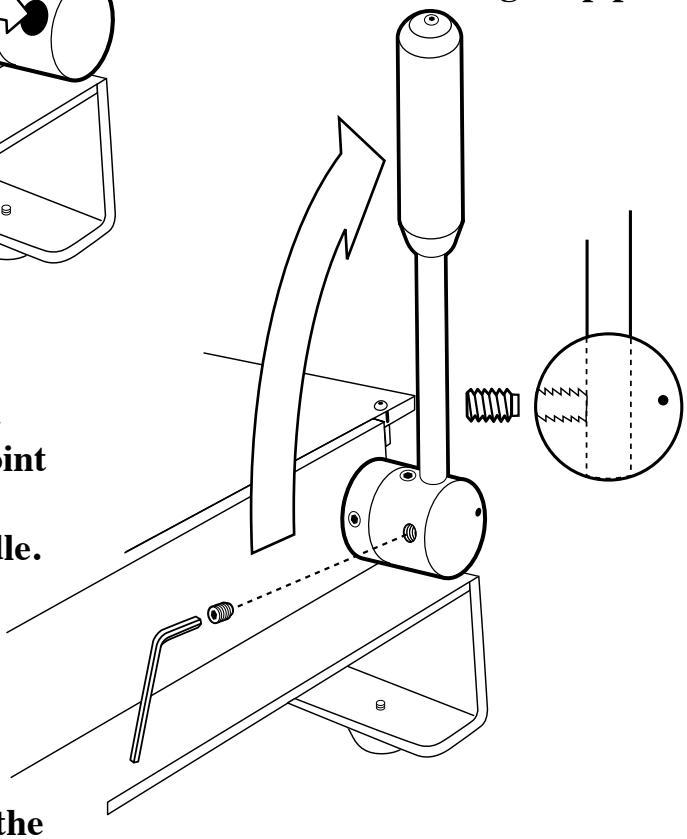
Preparation

Attach Punch Handle to The Punch Machine™

1. Insert handle into open hole of handle axle, flush to opposite side.



2. Turn handle to straight up position.



3. Using a 1/8"Allen Wrench, insert the provided 1/4"- 20 x 3/8" Dog Point Allen Screw into hole located below the handle and tighten. Lower handle.

★ **IMPORTANT NOTE!**
Never lift The Punch Machine™ by the Handle! Always lift The Punch Machine™ from the bottom using both hands.

Should you need to package The Punch Machine™ for transport or shipping, you'll need to remove the Punch Handle Assembly. Simply reverse the above procedure to remove the Punch Handle Assembly.

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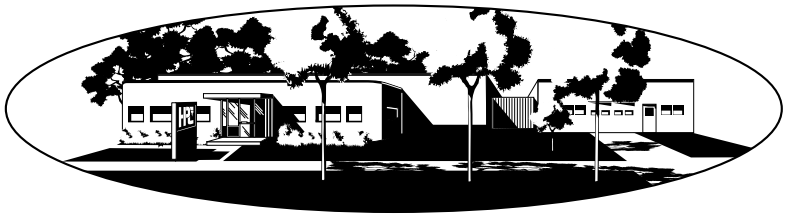


2.0
General Machine Movements

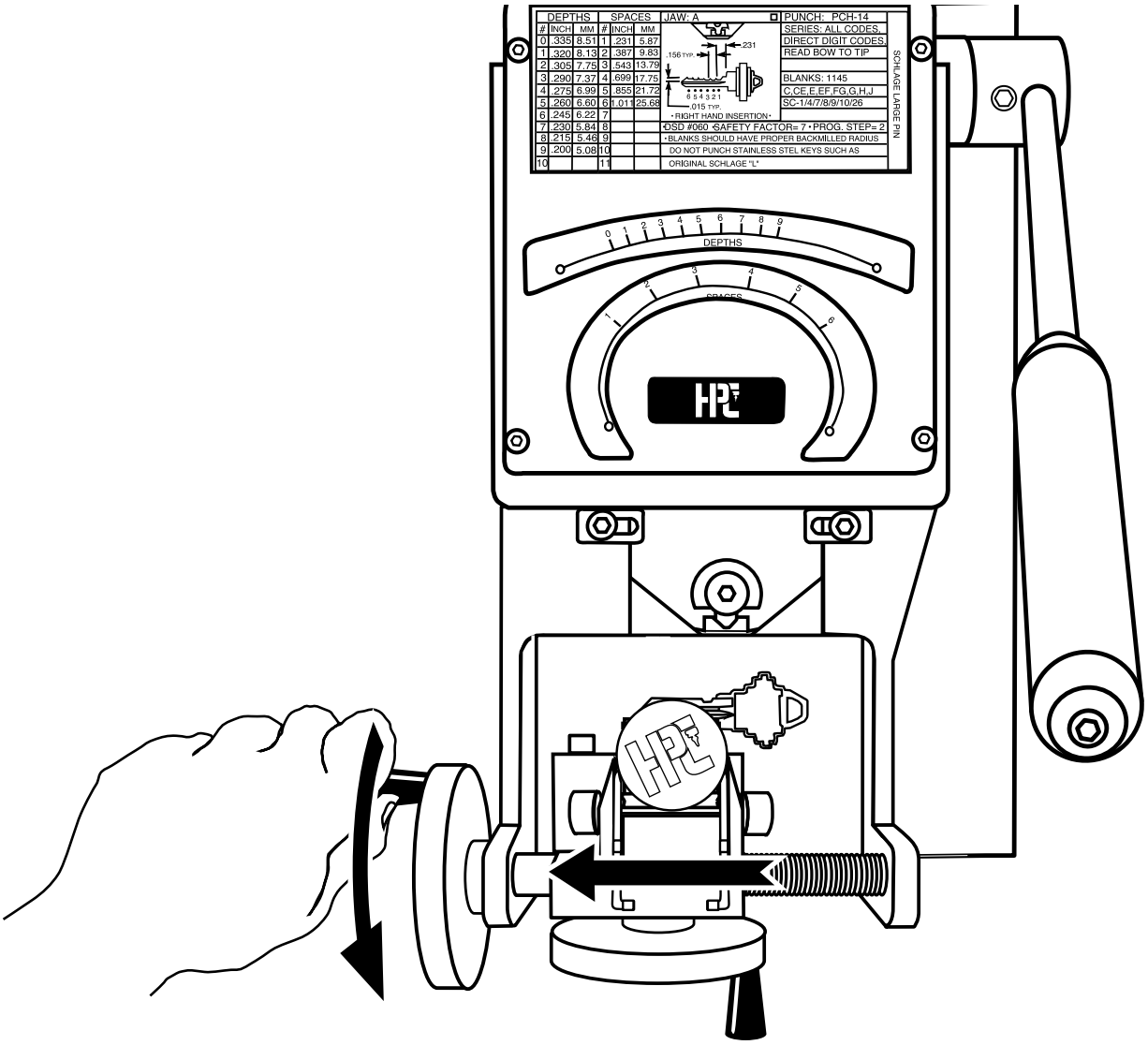


Fig. 2.1

Turn the Spacing Crank clockwise to move the Key Carriage to the left.

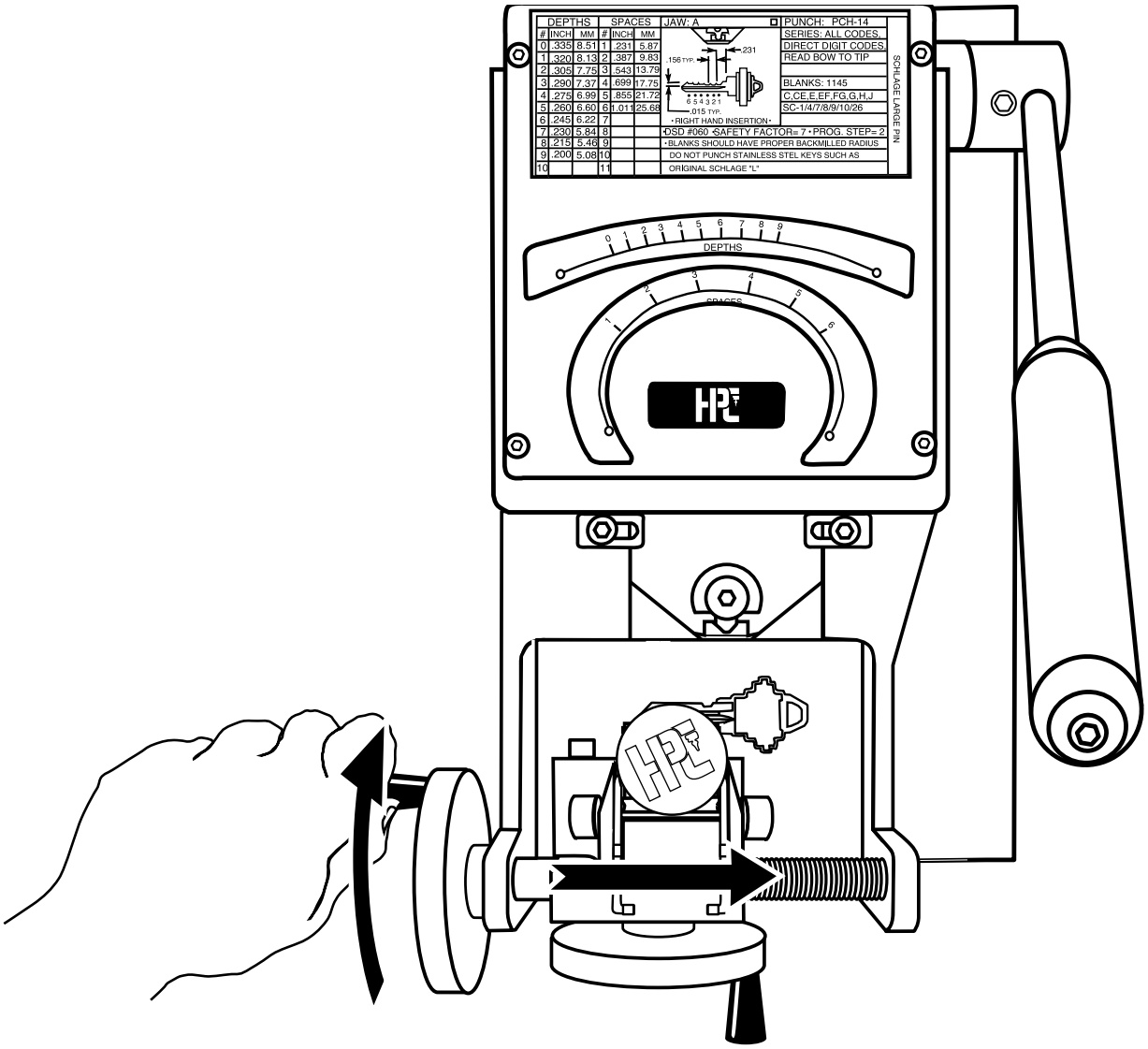


Fig. 2.2

Turn the Spacing Crank counterclockwise to move the Key Carriage to the right.

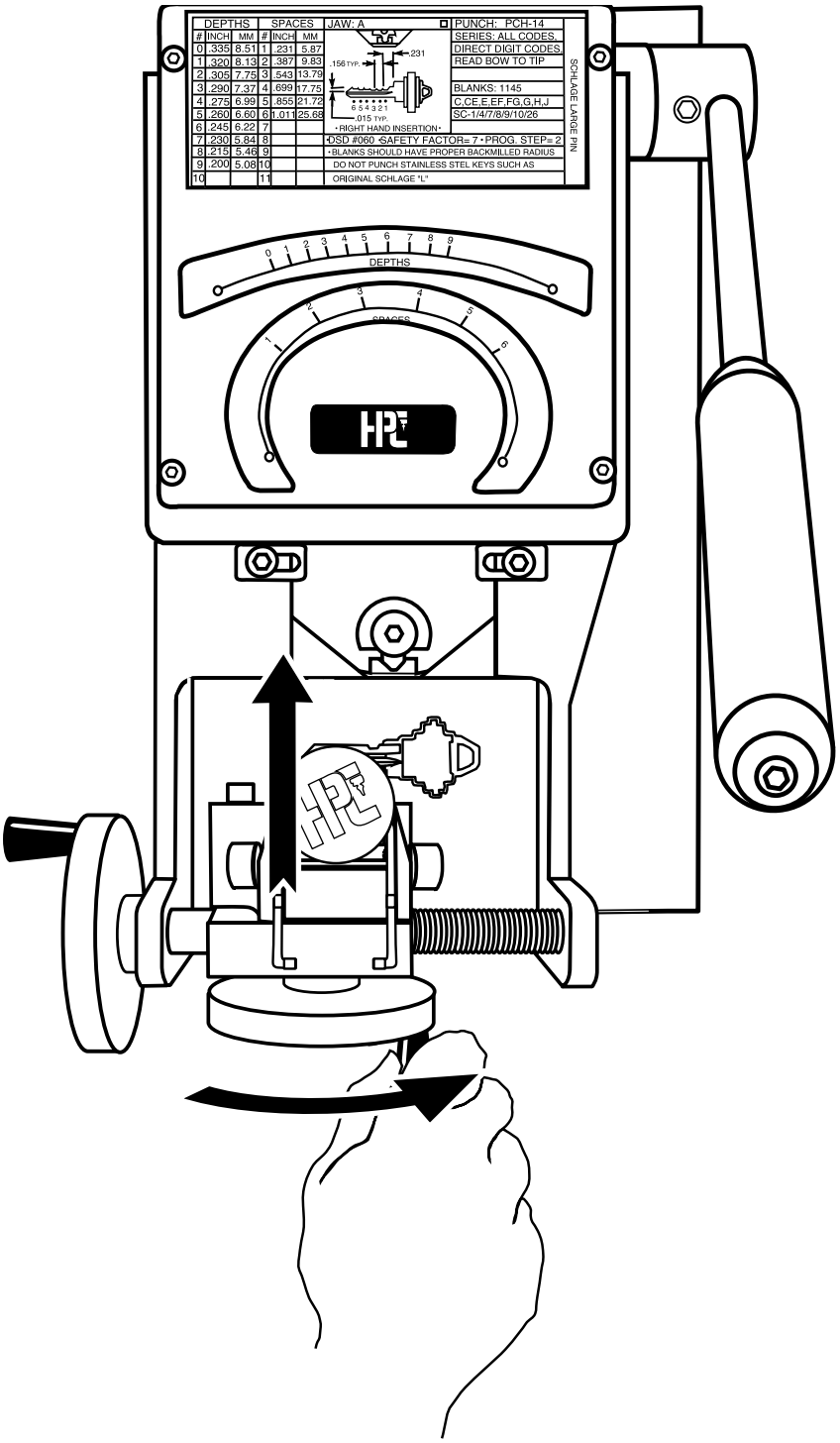


Fig. 2.3

Turn the Depth Crank clockwise to move the Key Carriage IN.

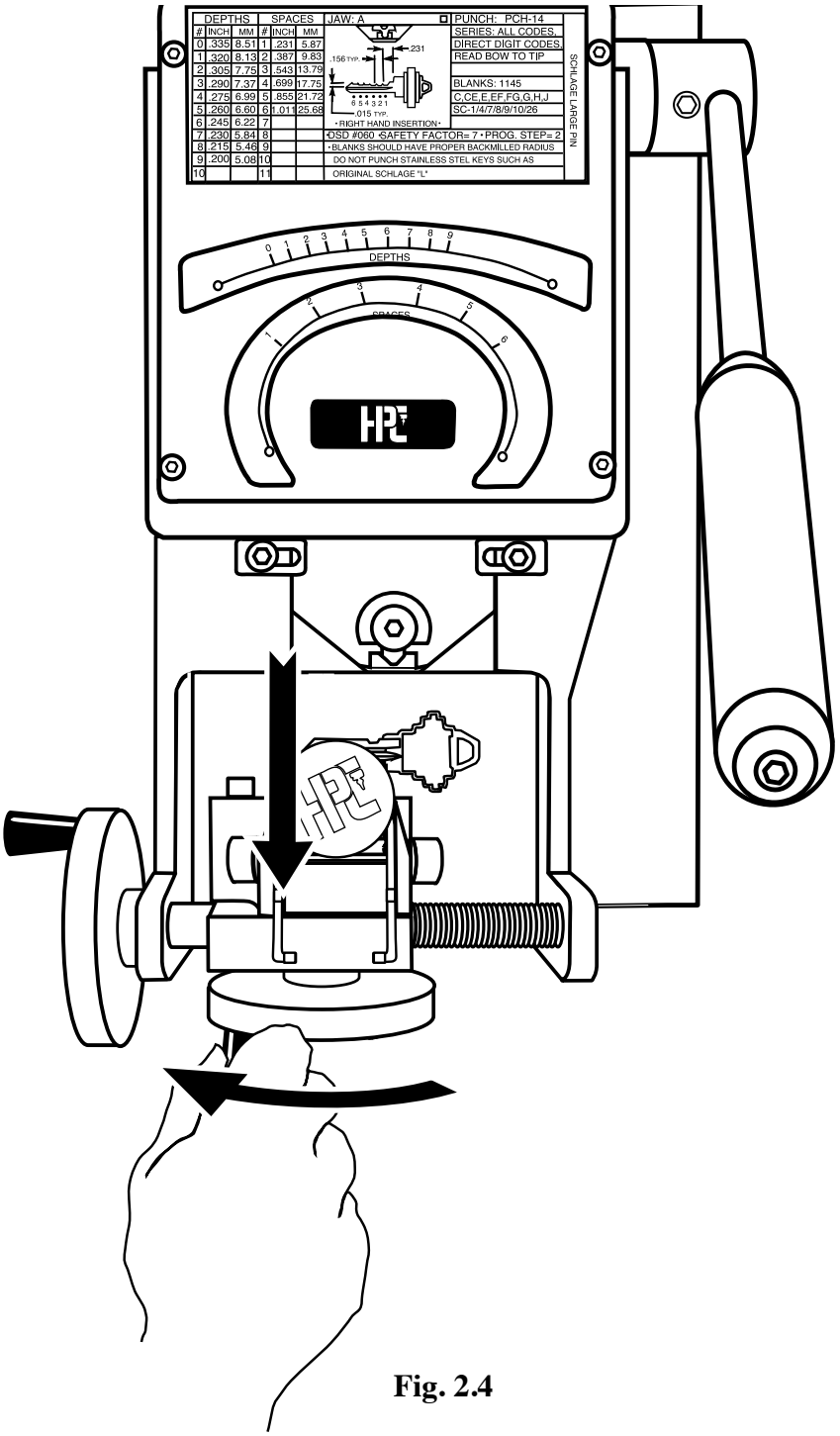


Fig. 2.4

Turn the Depth Crank counterclockwise to move the Key Carriage outward.

NOTE: <u>Never</u> force the Key Carriage or the Spacing Crank past full right position. (Full right equals the centerline of the punch with the extreme left side of the jaw).

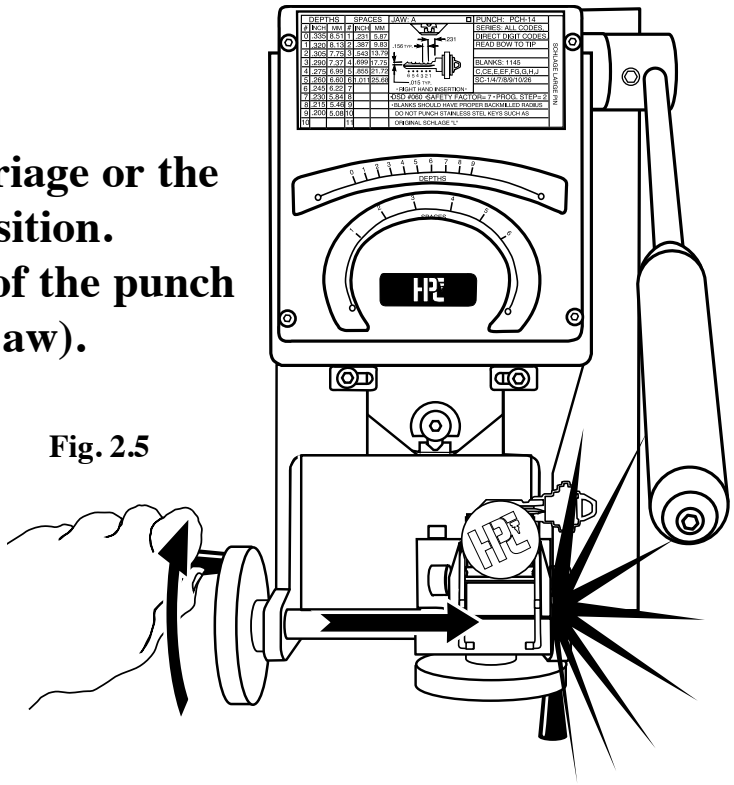


Fig. 2.5

NOTE: <u>Never</u> force the Key Carriage or the Spacing Crank past full left position. (Full left equals the centerline of the punch with the extreme right side of the jaw).

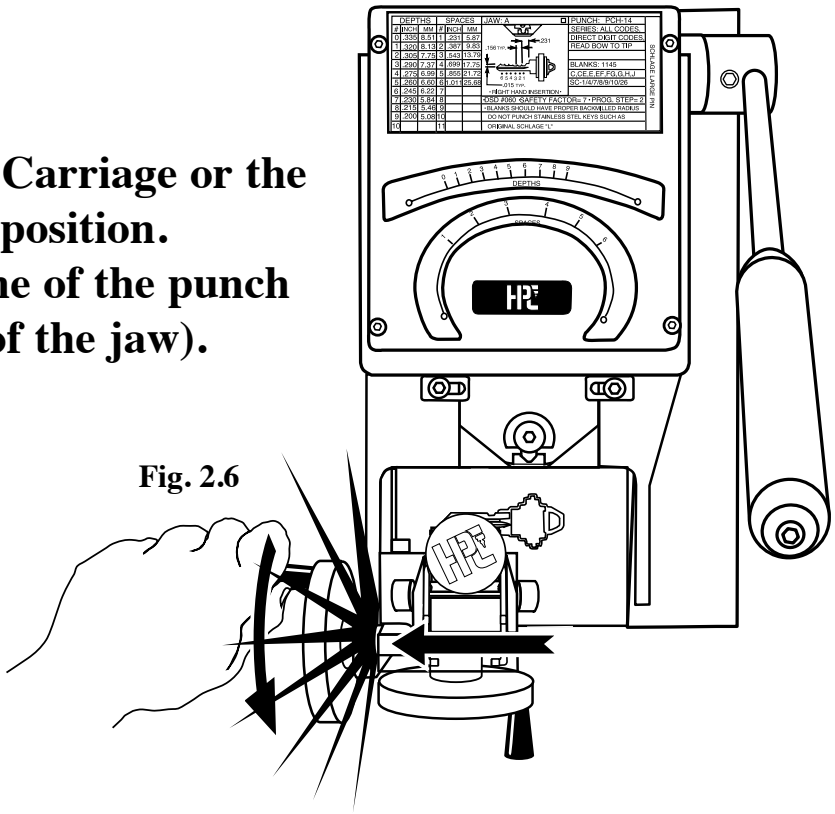


Fig. 2.6

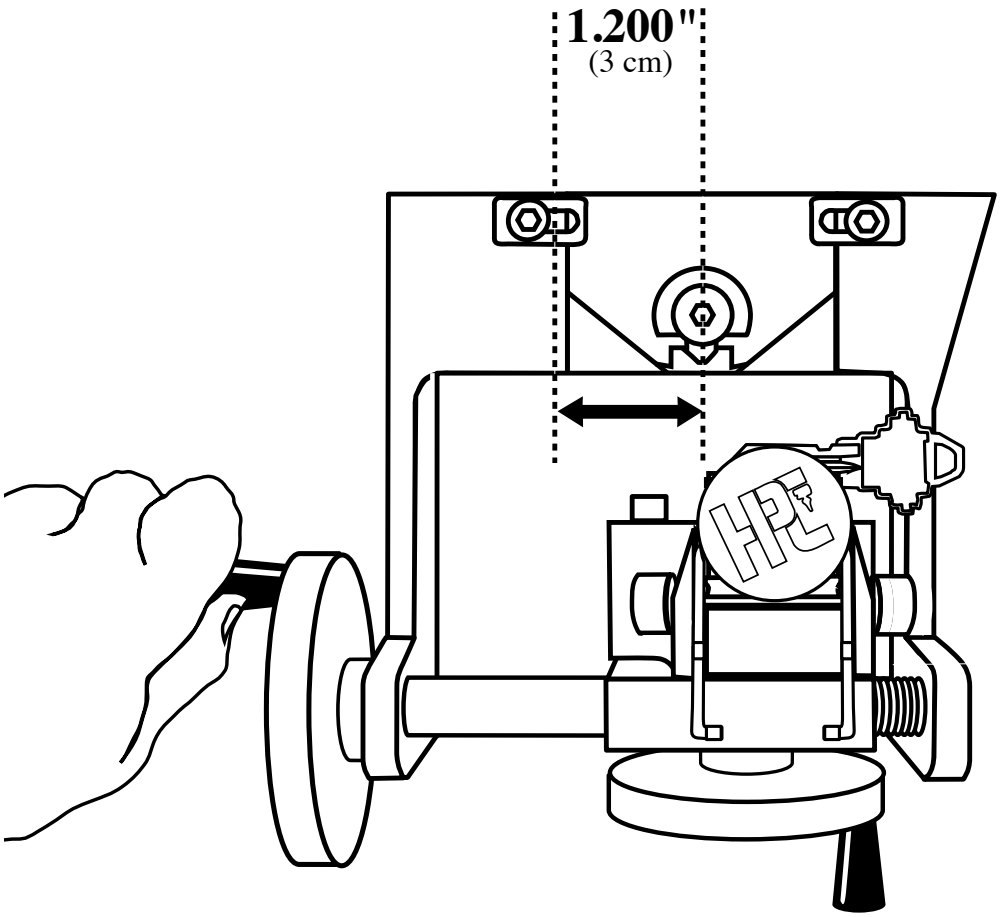
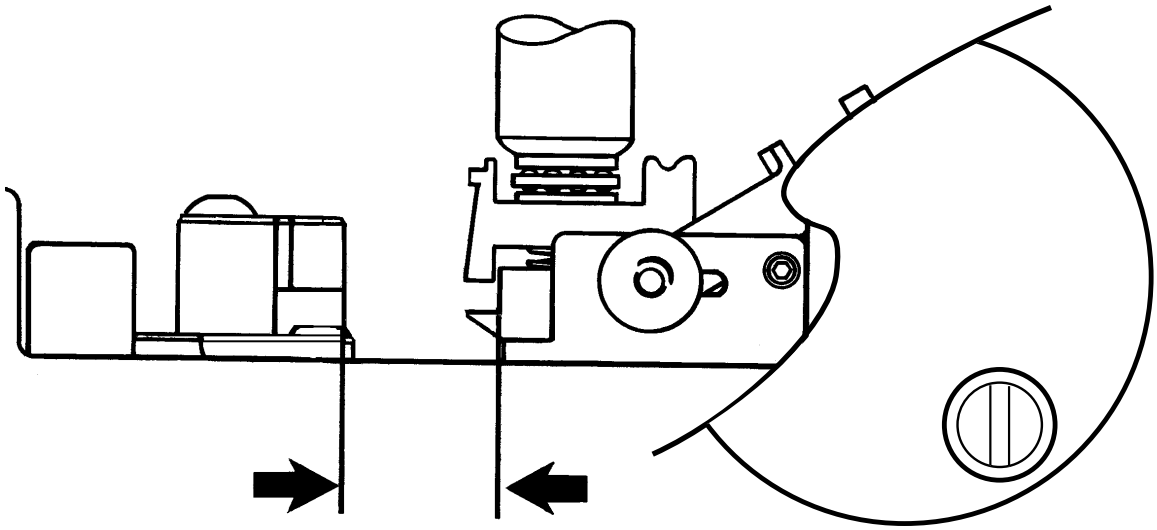


Fig. 2.7

The total spacing range of the machine is from the extreme right to the left side of the jaws and equals 1.200" (3 cm) maximum.



RANGE: .700" (1.75 cm) MAX.

Fig. 2.8

The total depth range of the machine is from the face of the punch to the back of the bottom jaw and equals .700" (1.75 cm) maximum.

3.0
Holding And Gauging Of Keys

Can This Blank Be Punched?

Not all key blanks are suitable for punching. To successfully punch the key, the blank must have a flat side. Some key blanks have a paracentric keyway, they do not have a flat side. This type of key would be distorted if it is punched. These keys must be cut on a milling machine, such as the HPC Original Blitz™, Switch Blitz™, CodeMax® or Tiger SHARK™.

For keys that can be punched, you need to determine from which side the blank should be inserted into The Punch Machine™.

To determine whether a key blank should be inserted from the left or right side, hold the blank by the bow and point the tip of the key toward you.

As you look down the blade of the key, from tip to bow, if the flat side of the blank is on the left it must be inserted from the right. If the flat side of the blank is on the right it must be inserted from the left. The flat part of the blade must be on the bottom when inserted.

Fig. 1

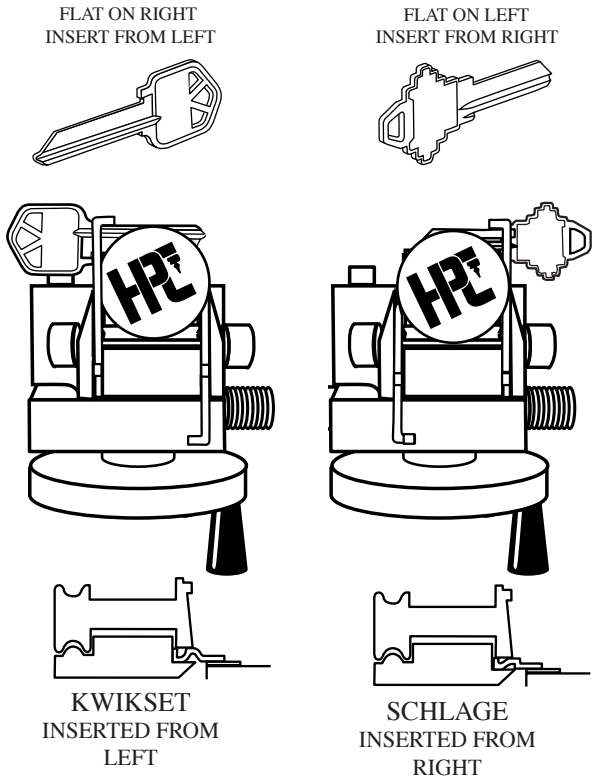


Figure 2 shows some examples of key blanks that can be cut on The Punch Machine™ when properly inserted.

Fig. 2

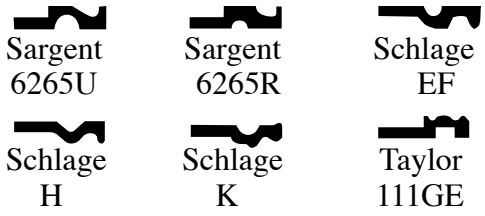
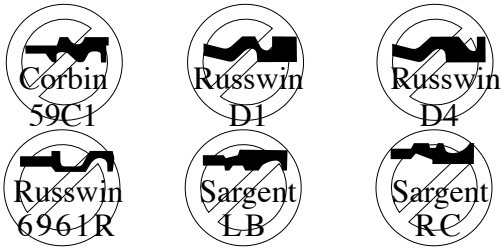


Figure 3 shows some examples of key blanks that should not be punched on The Punch Machine™. The blades on these blanks are either curved or in the center. The blade may become distorted if punched.

Fig. 3



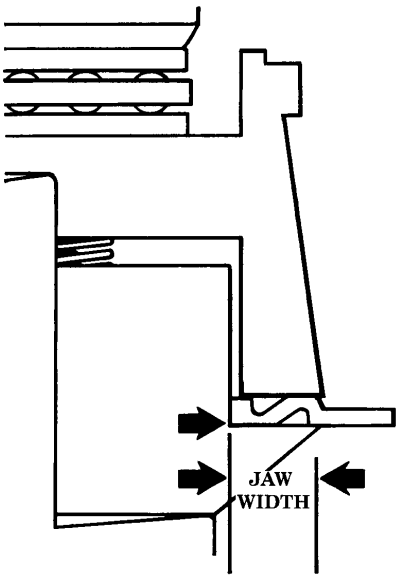


Fig. 3.1

Position the key at the back of the bottom jaw to satisfy most single-sided key holding situations.

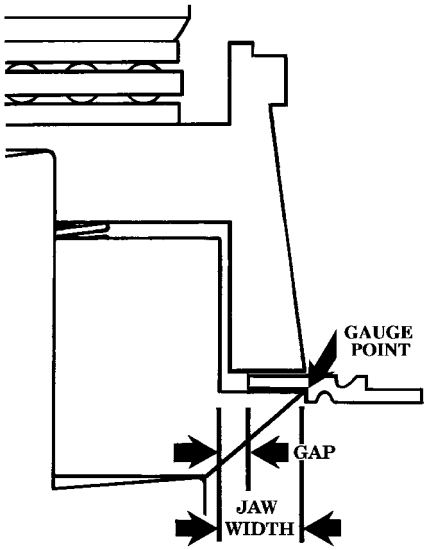


Fig. 3.2

Optional Method: Position the key at the front of the bottom jaw for double-sided symmetrical keys.

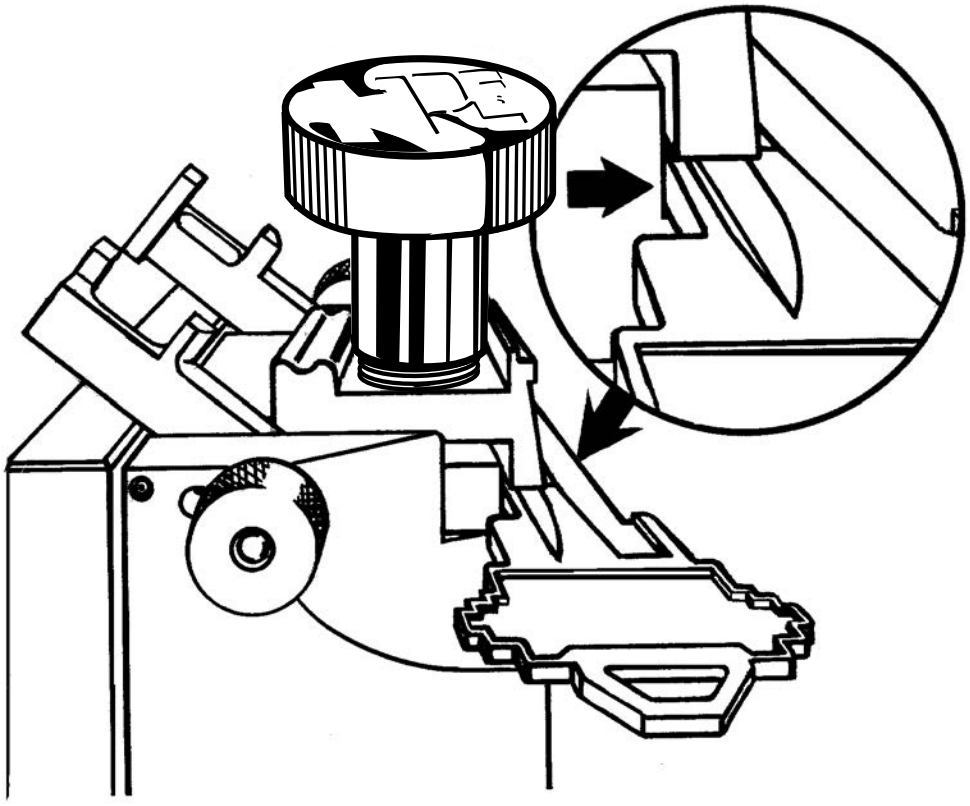
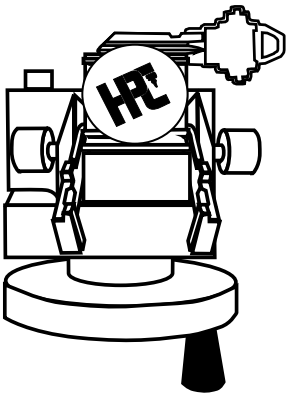


Fig. 3.3

NOTE: For single-sided keys the blank must be flush with the back of the Bottom Jaw.

CORRECT



INCORRECT

The bow is not flush with the back of the jaw

INCORRECT

The tip is not flush with the back of the jaw

Fig. 3.4

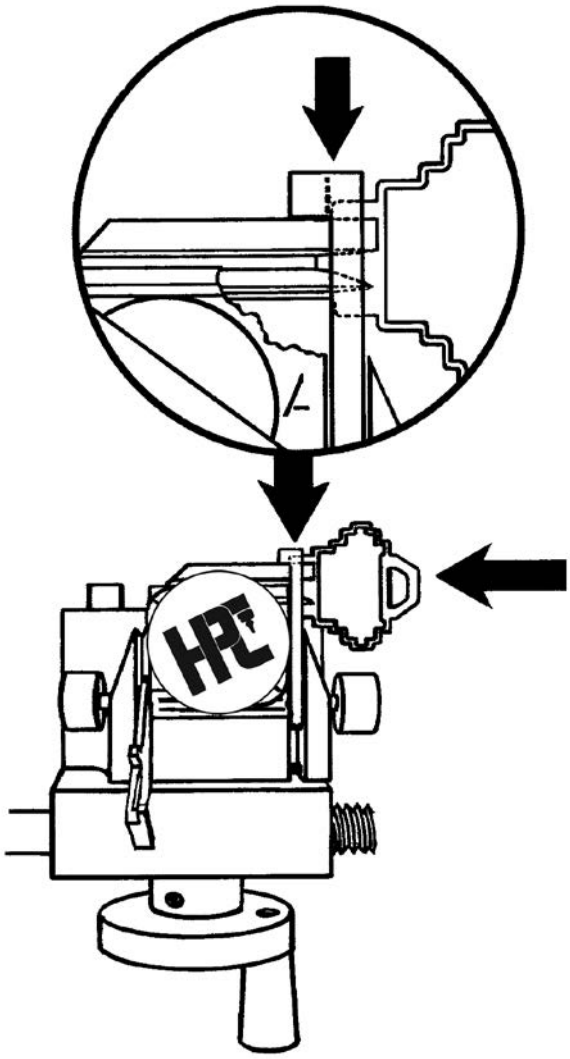


Fig. 3.5

Typical shoulder gauging.

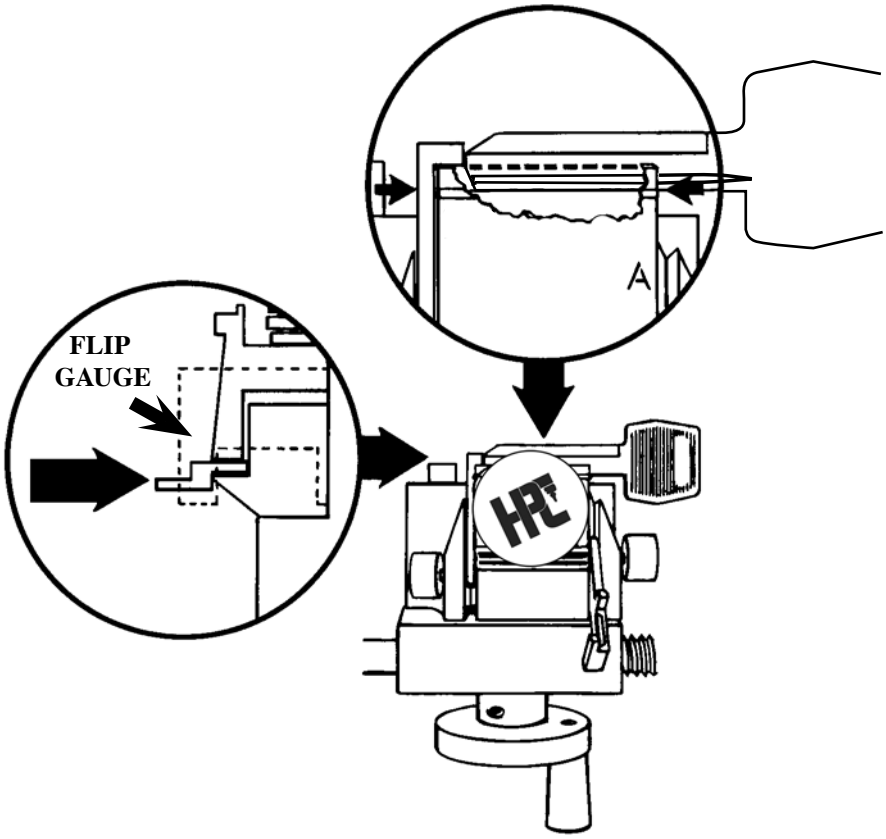


Fig. 3.6

Typical tip gauging.

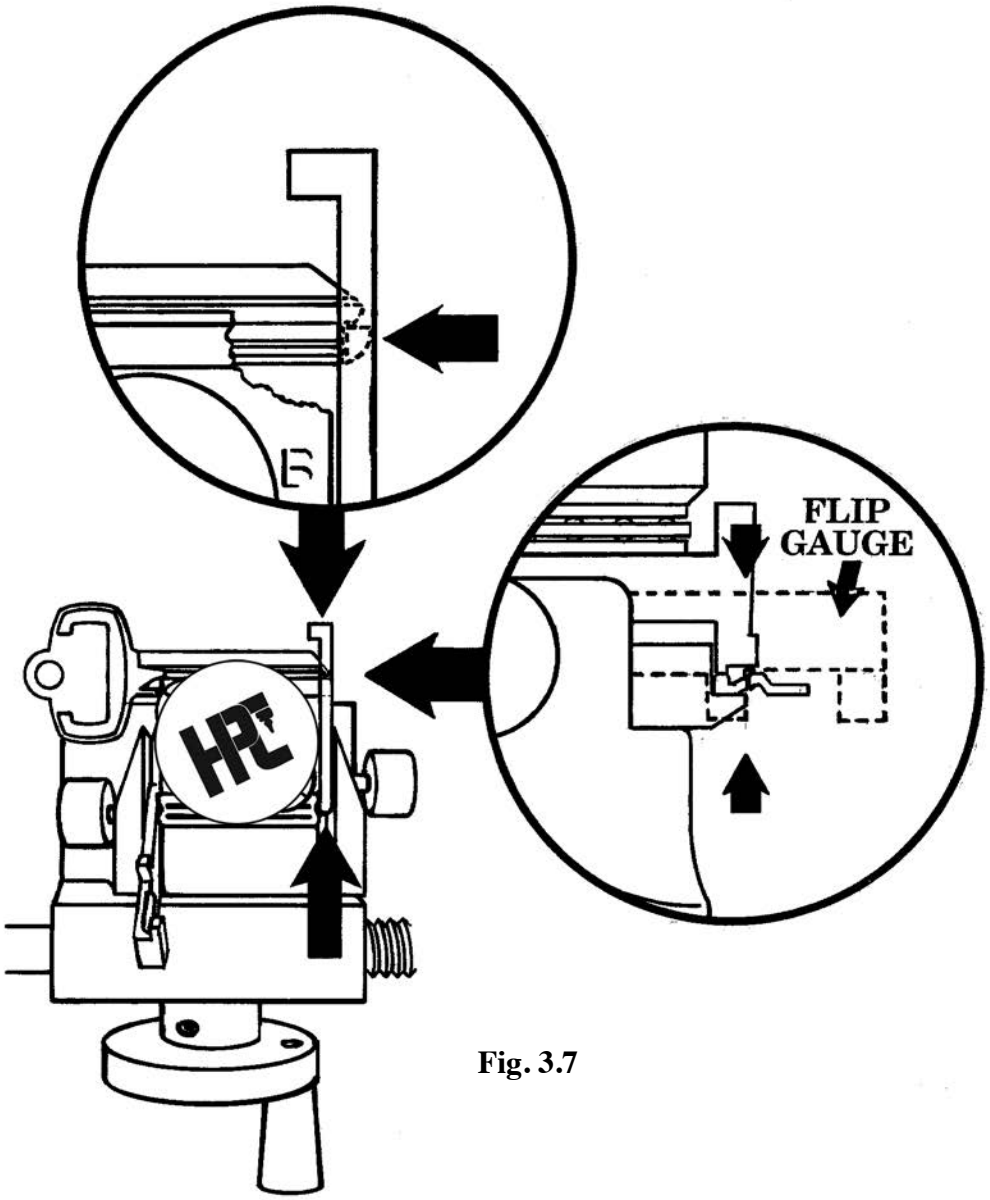


Fig. 3.7

Special Best tip gauging.

Alternate holding of keys for double-sided cutting:
Insert the key using the Tip Stop.

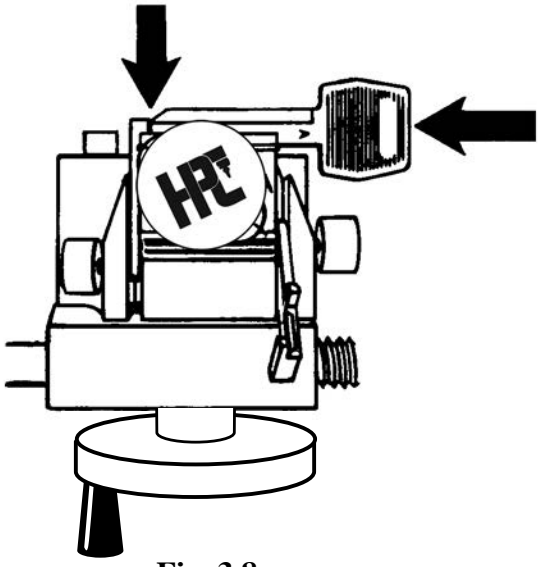


Fig. 3.8

Gauge the center ward of the key against the front of the Bottom Jaw.

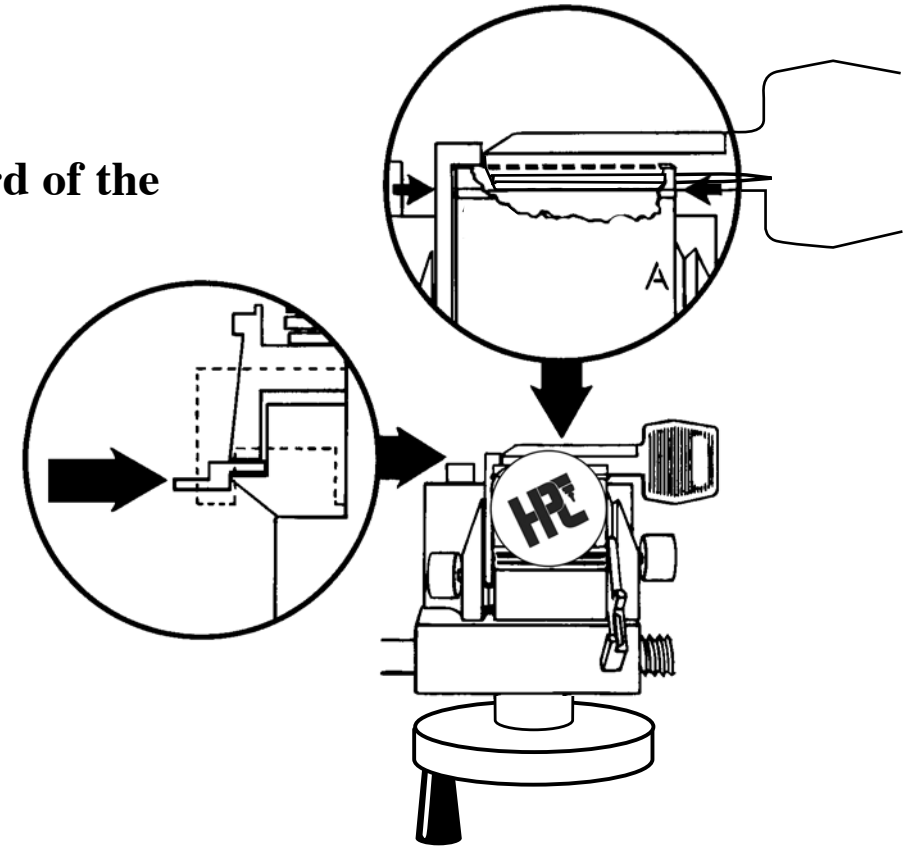


Fig. 3.9

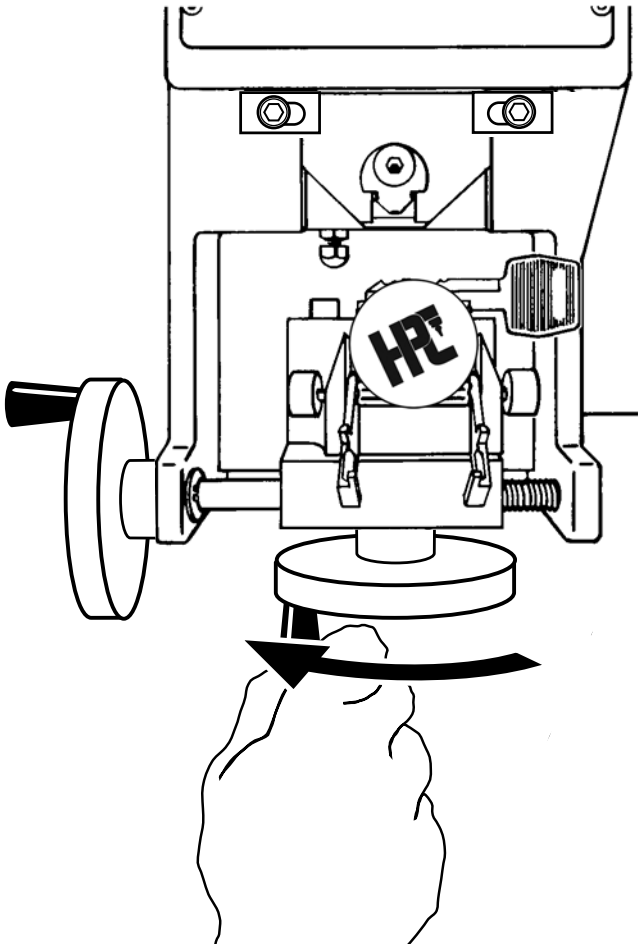


Fig. 3.10

Move the key in and punch all of the cuts on one side, then move out.

Take the key directly out, while maintaining position.

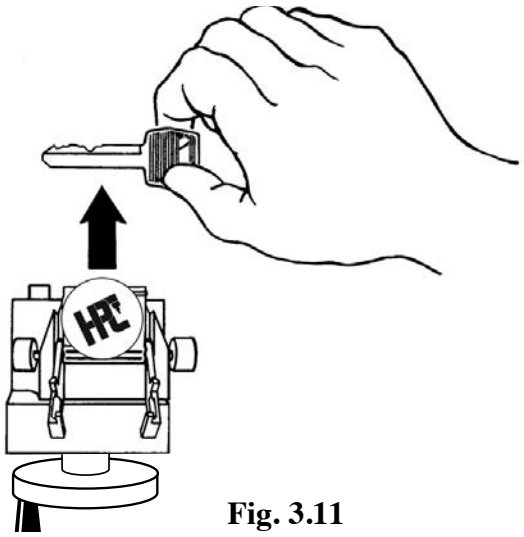


Fig. 3.11

Flip the key 180° so that the uncut side is now facing upward or toward the Punch.

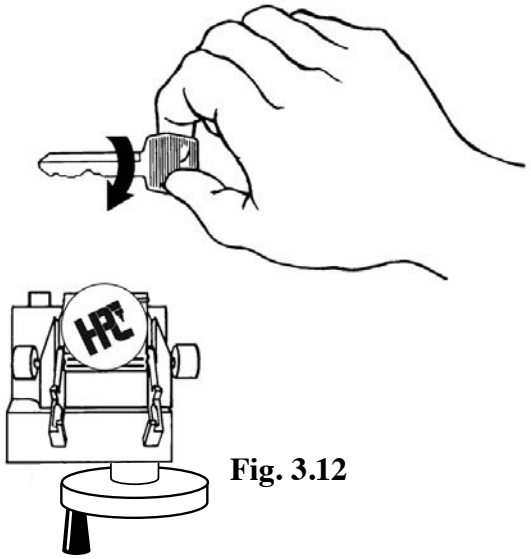


Fig. 3.12

Reclamp the key and punch all of the cuts on the other side.

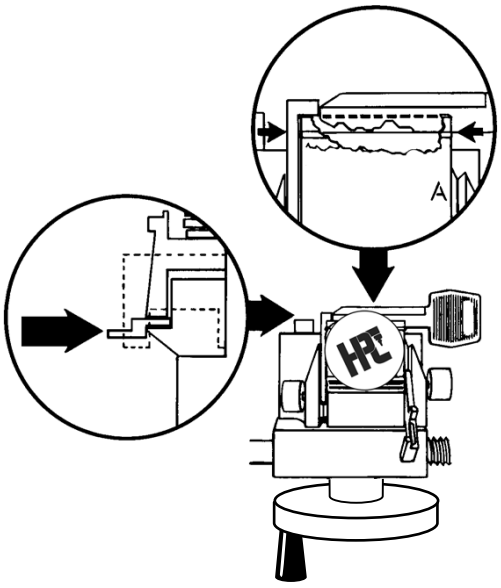


Fig. 3.13

Due to the profile of some key blanks they may not fit under the punch. Follow these steps to adjust for this:

1. **Load the particular key blank (that does not fit under the punch).**

2. **Loosen the 2 set screws on the Depth Crank and remove the Depth Crank (Fig. 3.14).**

3. **Loosen the set screw on the carriage to free-up the carriage (Fig. 3.15).**

4. **Replace the Depth Crank and tighten the set screws on the crank.**

5. **Turn the Depth Crank to move the carriage so the key blank engages the punch. Verify the blank now clears the punch.**

6. **Loosen the set screws on the Depth Crank and remove the Depth Crank.**

7. **Holding the carriage in the proper position, tighten the set screw on the carriage.**

8. **Replace the Depth Crank and tighten the set screws.**

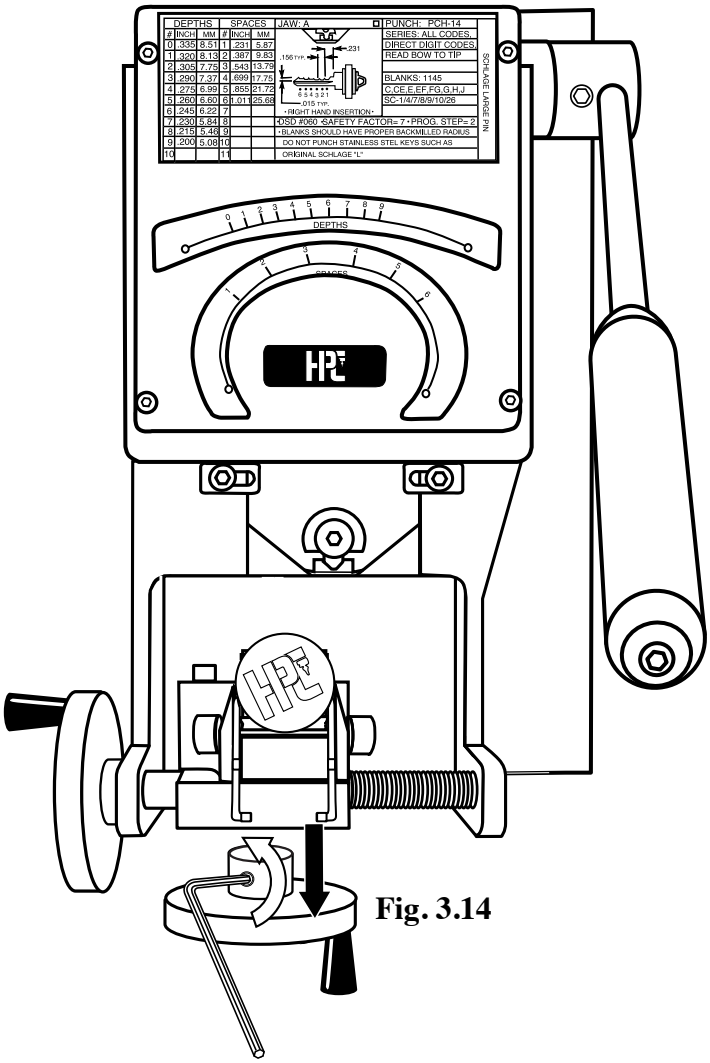


Fig. 3.14

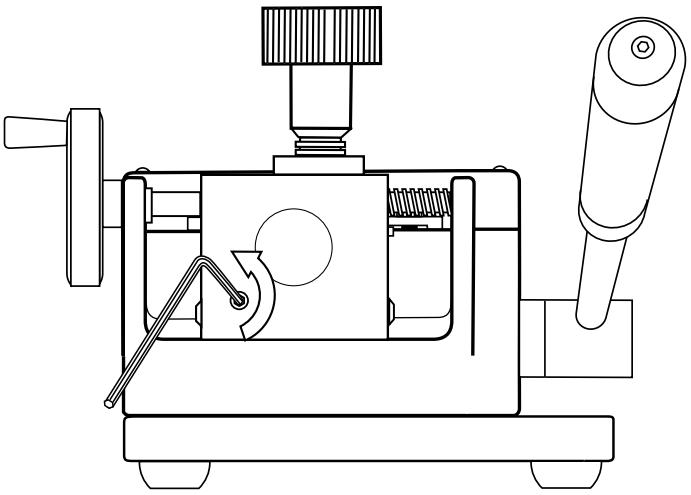


Fig. 3.15

4.0
Cutting The Key

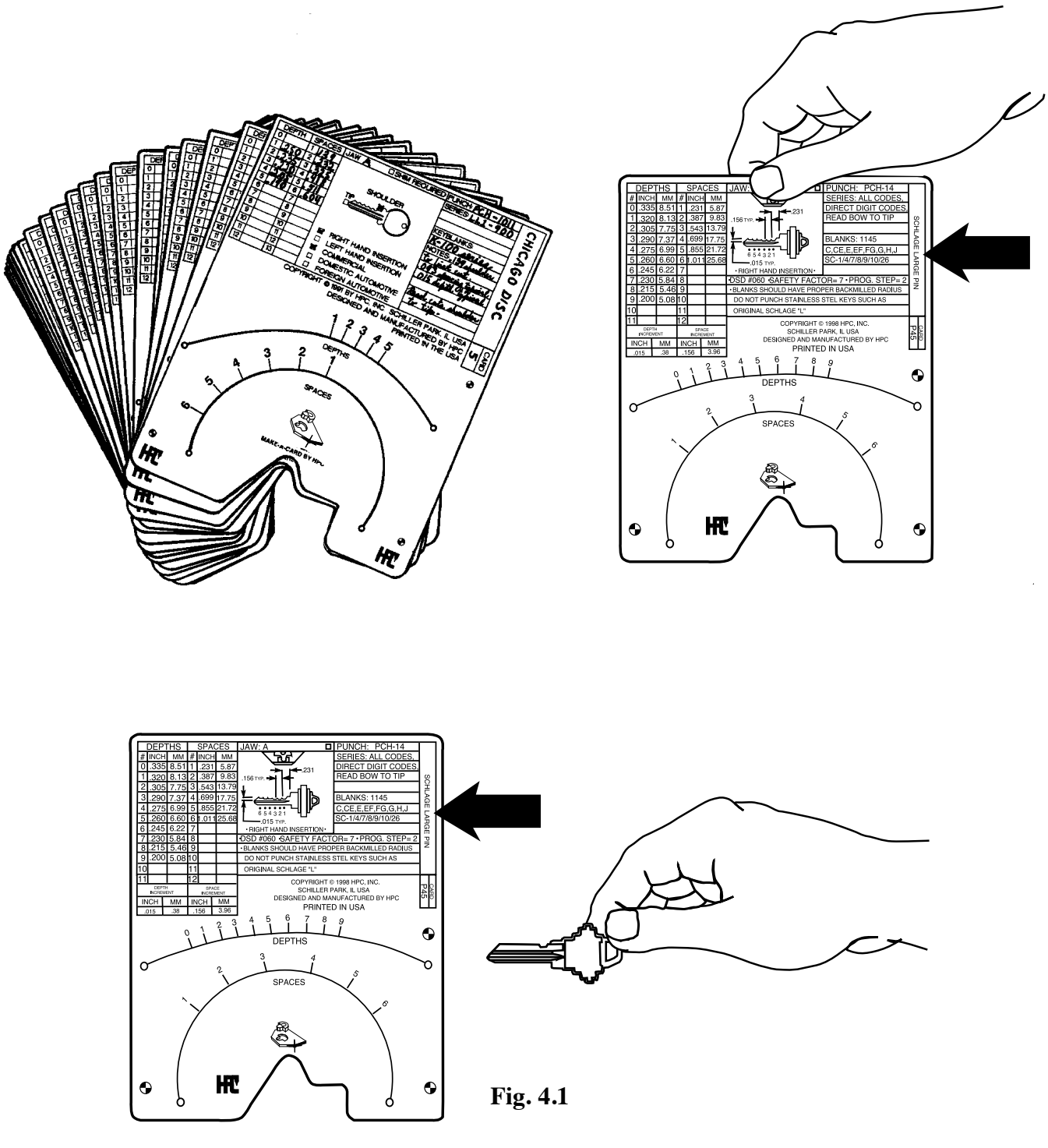


Fig. 4.1

Select the proper card and key blank to be used.

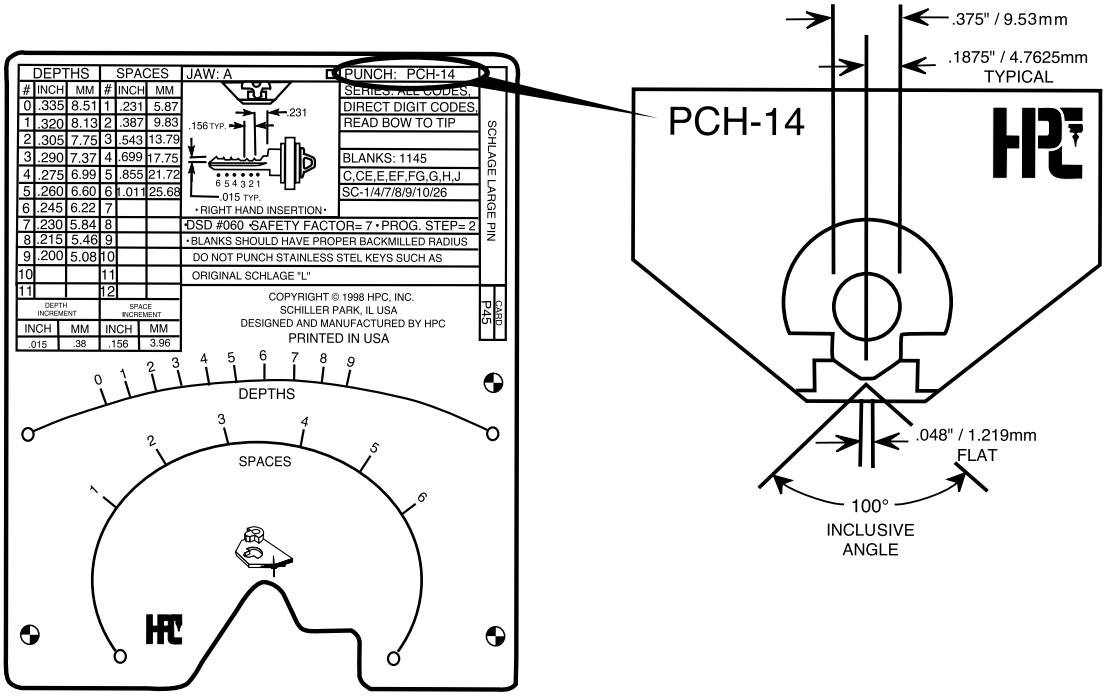


Fig. 4.2

Select the proper punch.

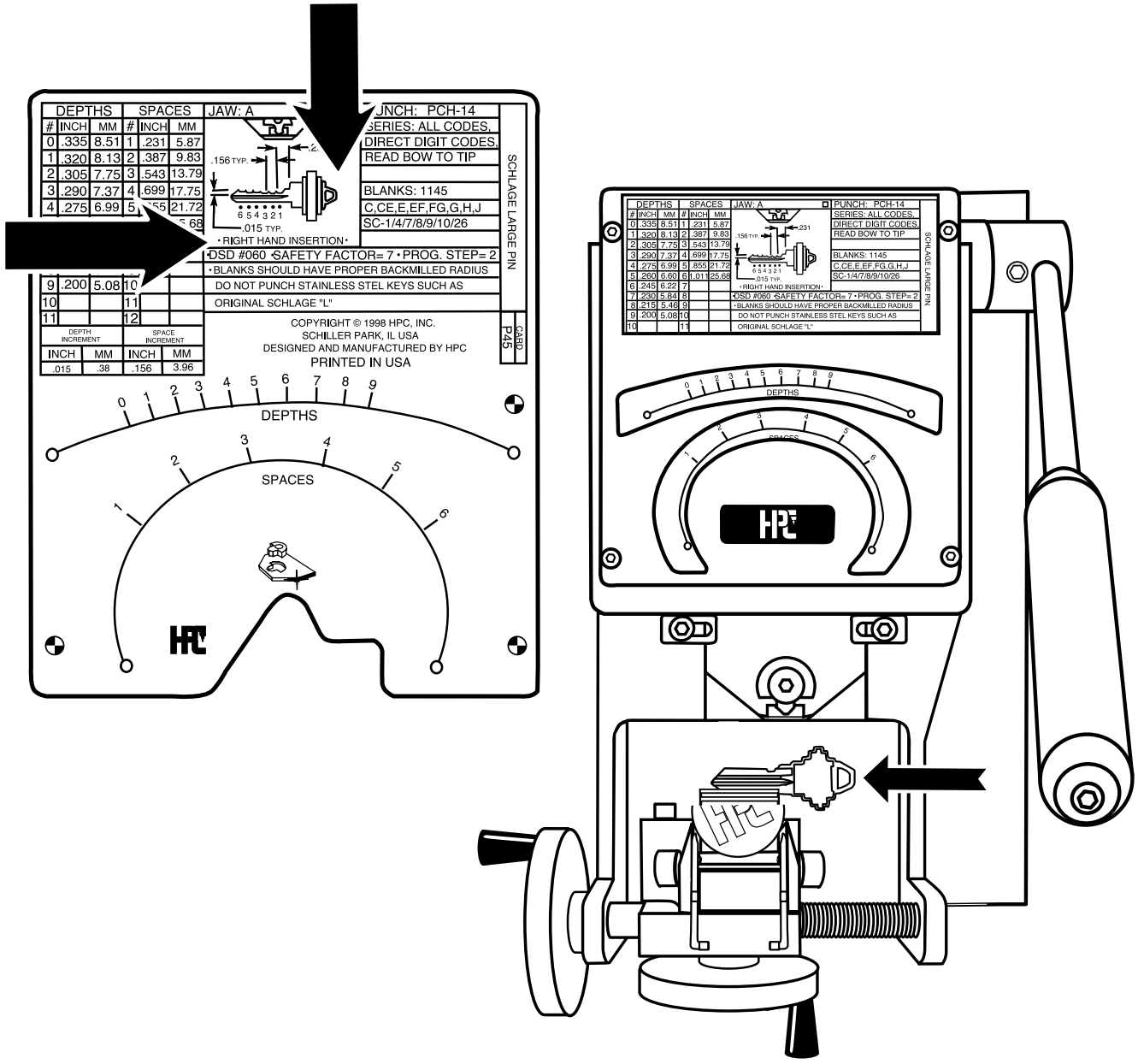


Fig. 4.3

Select the proper gauging and insertion direction for clamping of the key to be cut. Tighten wing nut to hold the key blank securely between the jaws.

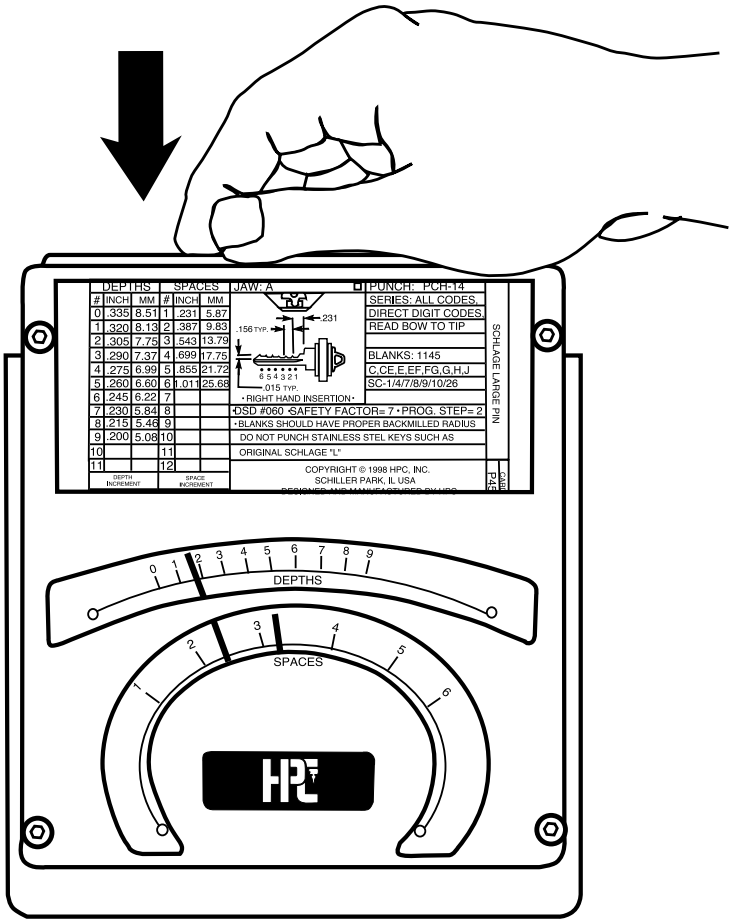


Fig. 4.4

Insert the card beneath the lens.
Be careful to place card under the needles.

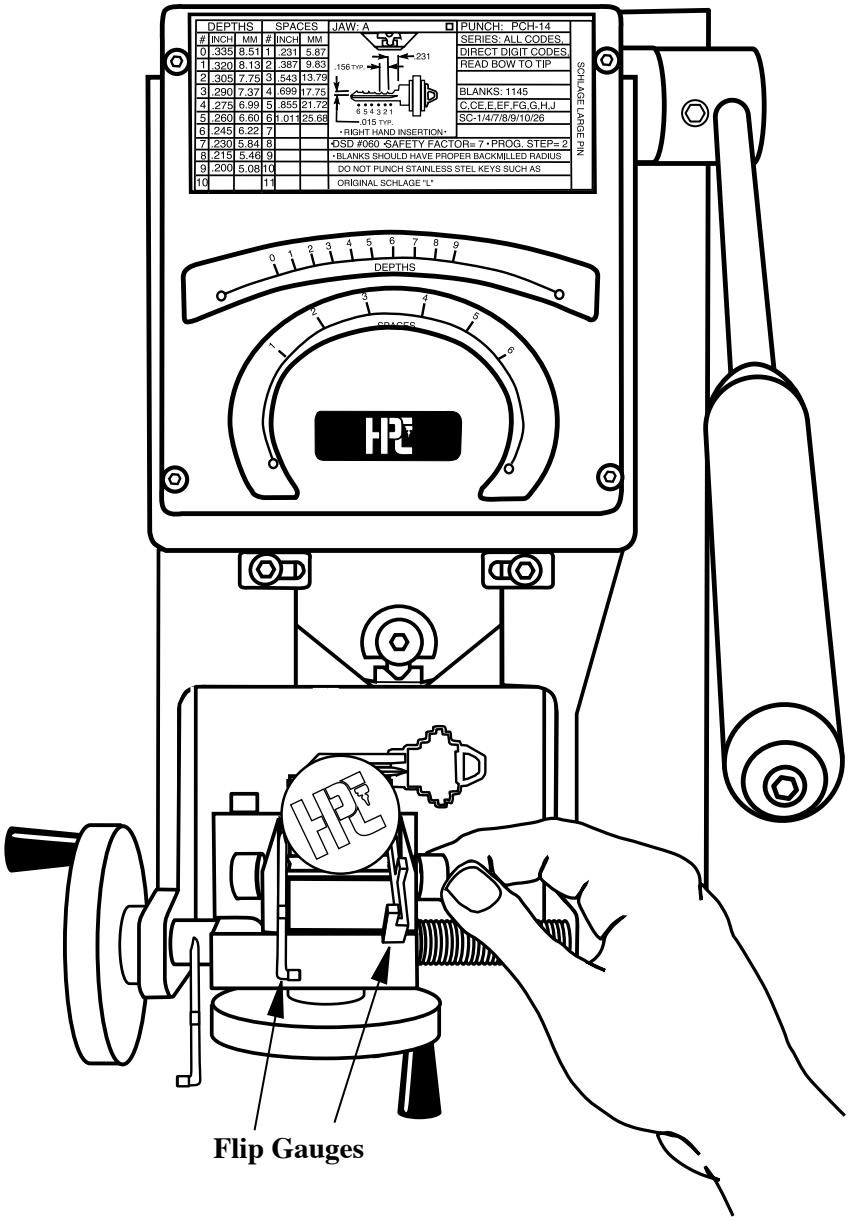


Fig. 4.5

Move the Flip Gauges out of the way.

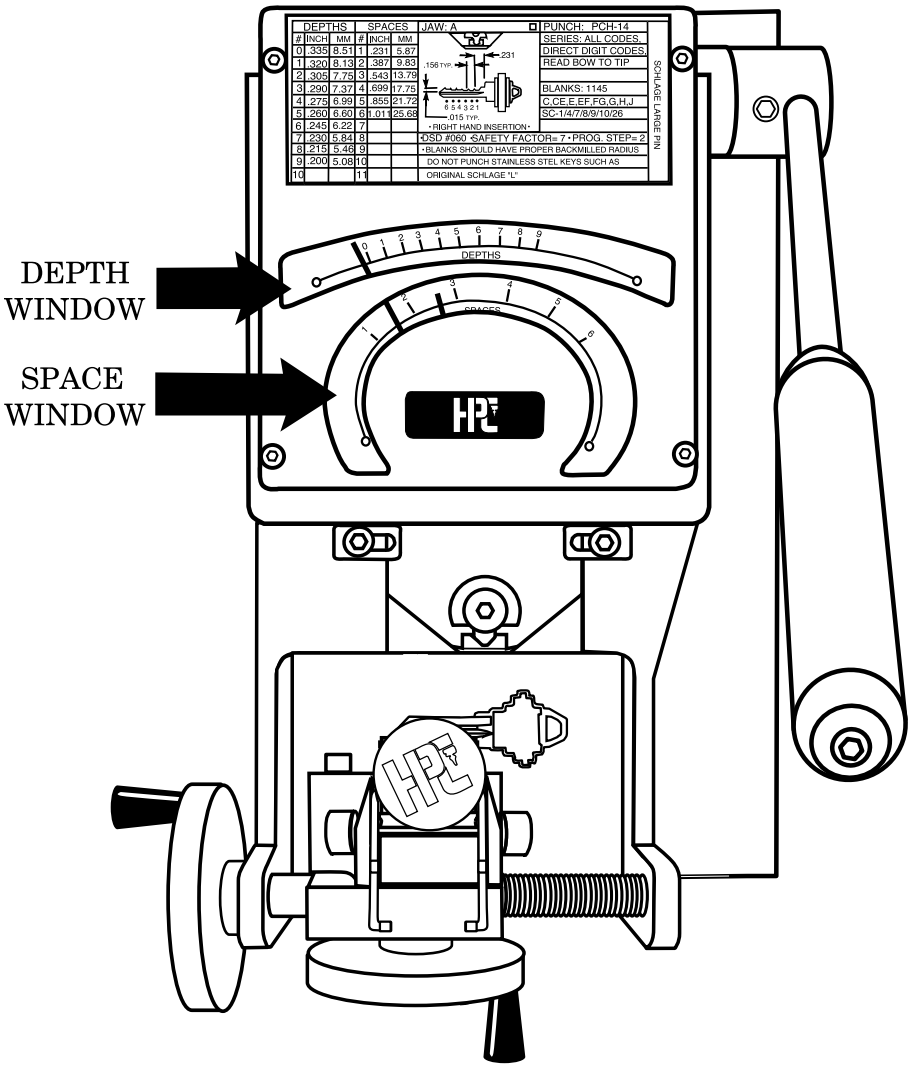


Fig. 4.6

Note: Depth and Space Windows.

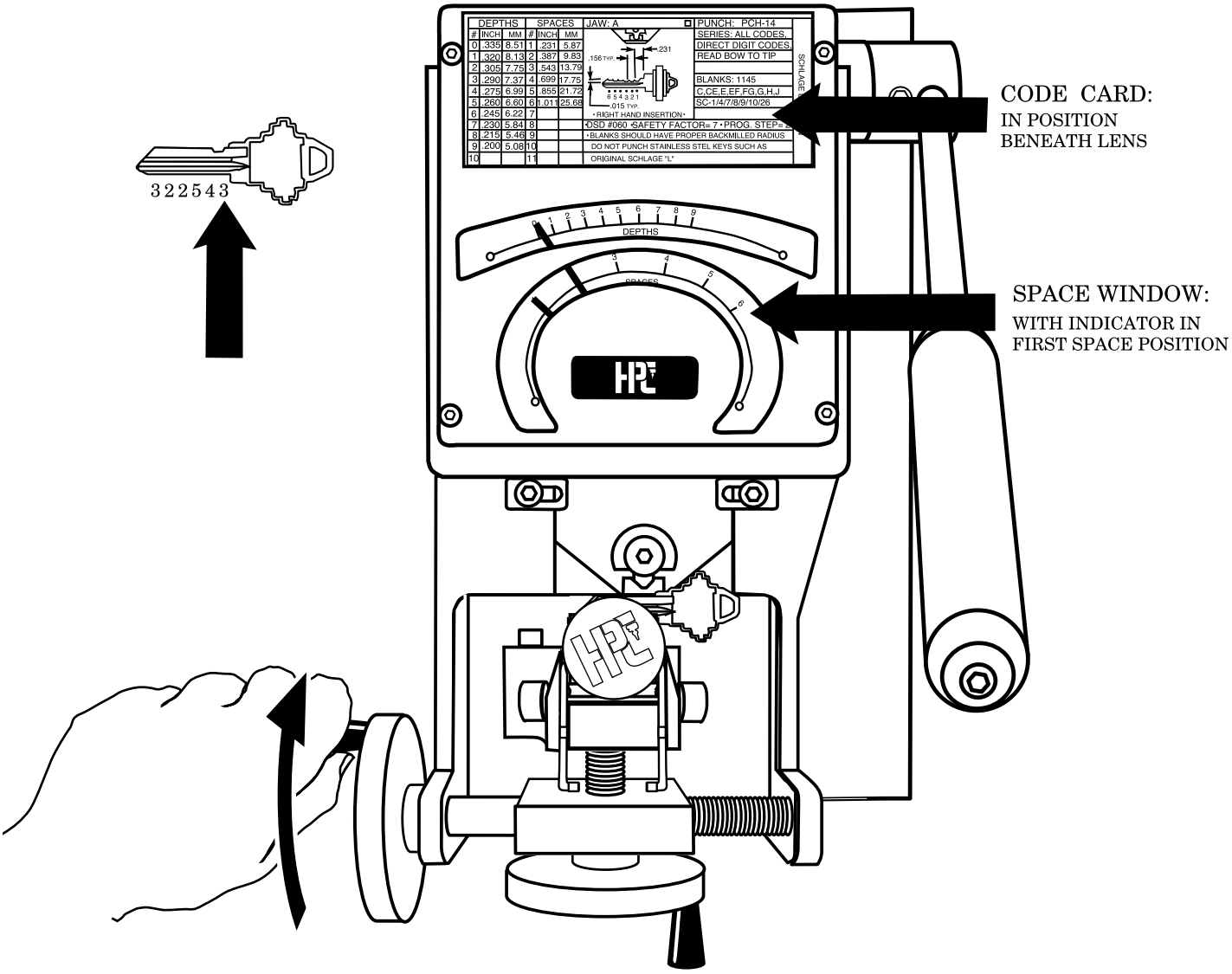


Fig. 4.7

Turn the Spacing Crank to move the Key Carriage to the first position.

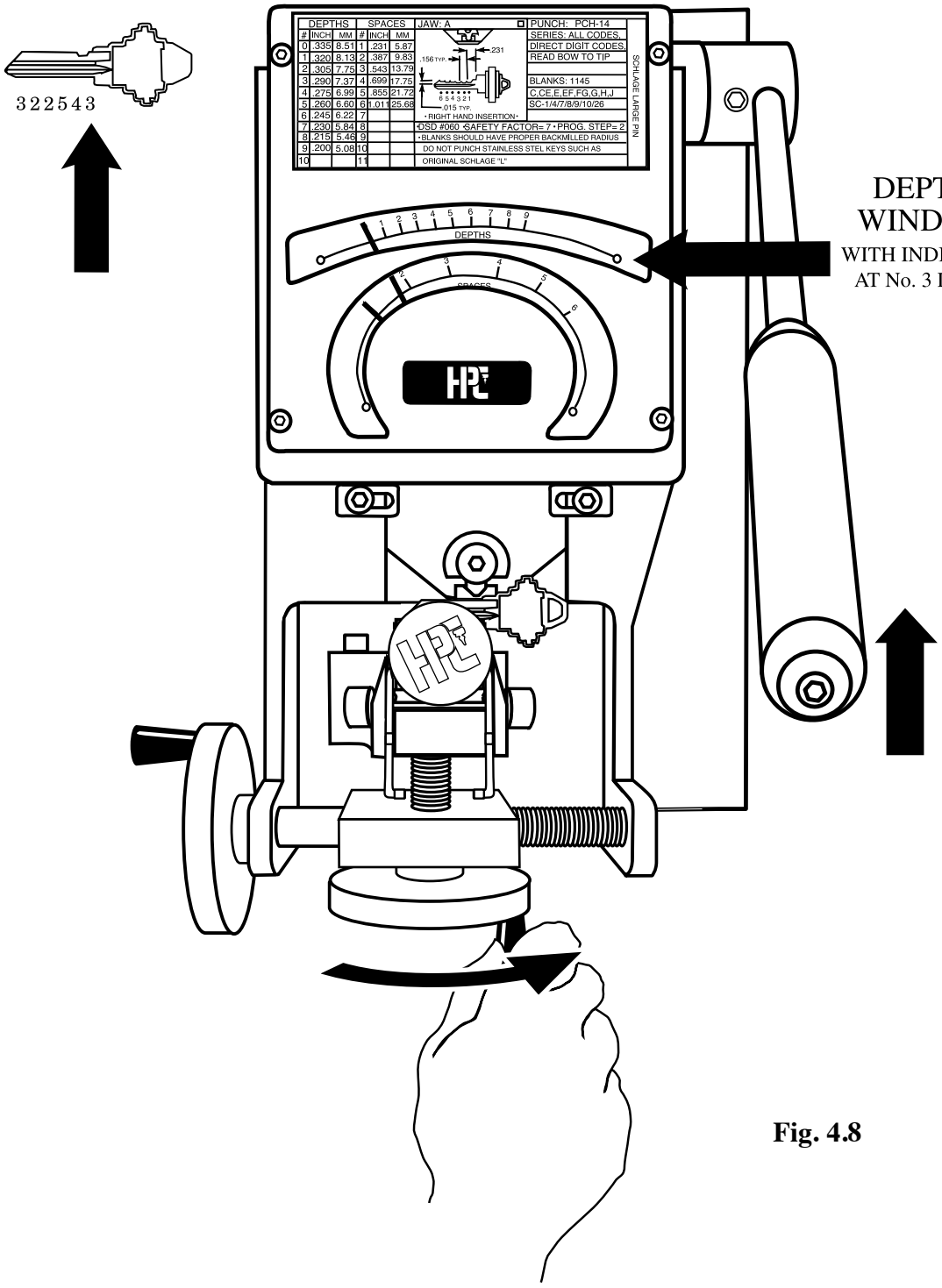


Fig. 4.8

Turn the Depth Crank to move the Key Carriage to the first desired depth position.

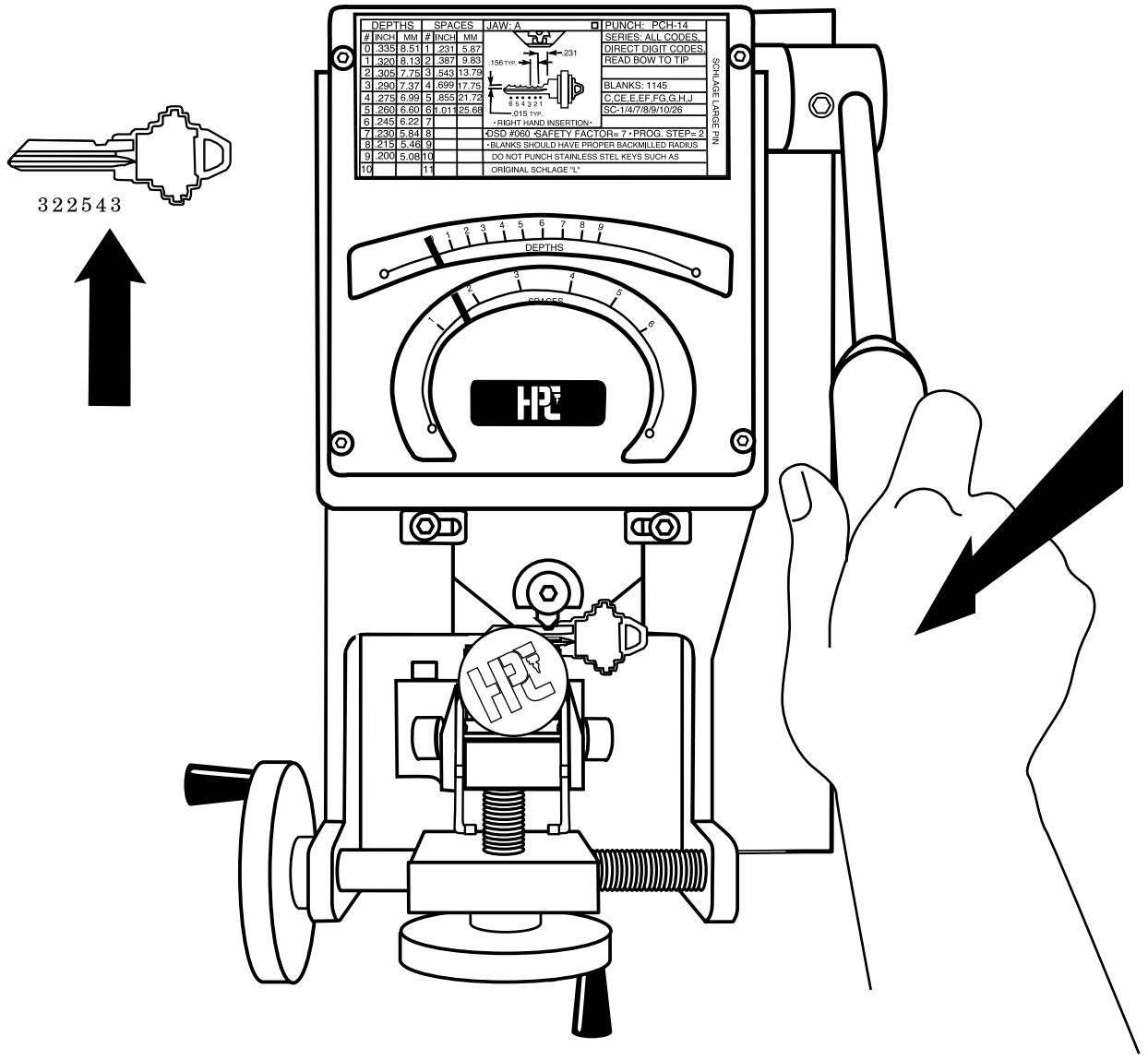
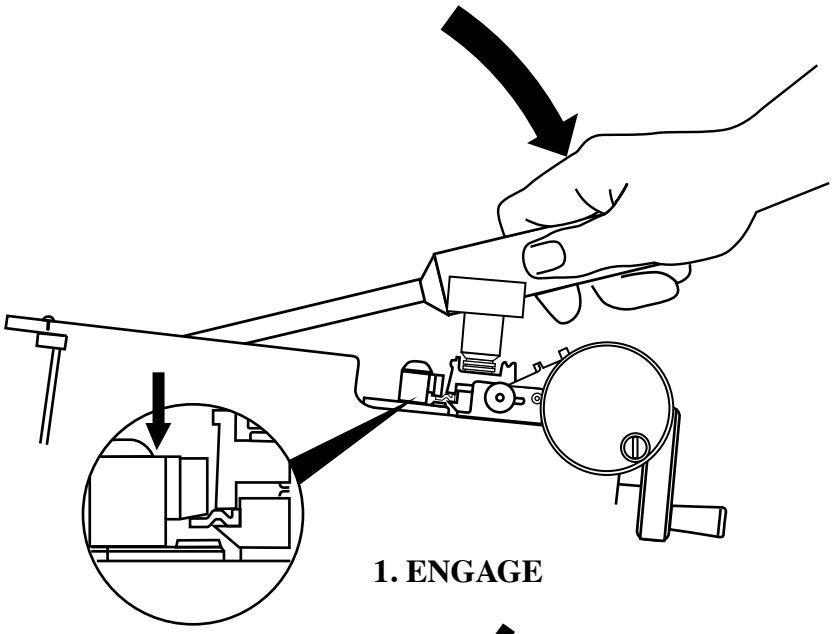
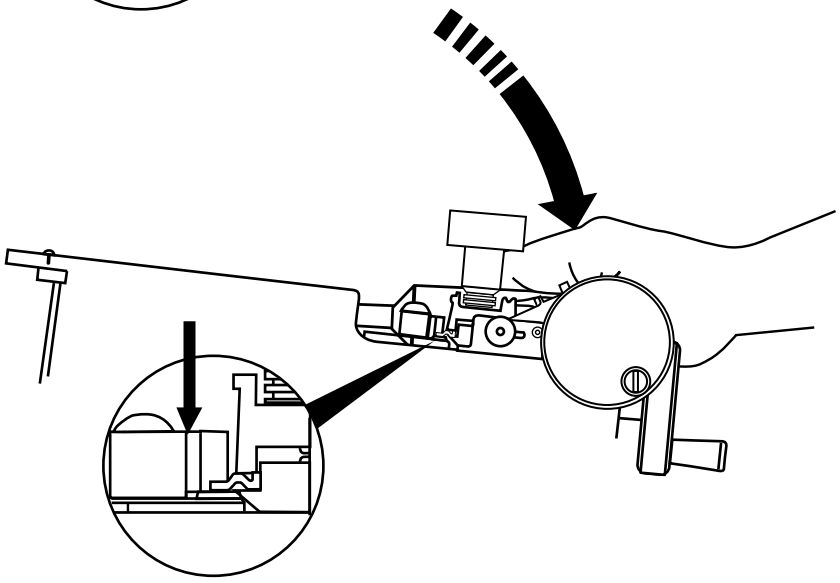

322543
DEPTHS
SPACES
JAW: A
PUNCH: PCH-14
SERIES: ALL CODES.
DIRECT DIGIT CODES.
READ BOW TO TIP
BLANKS: 1145
C,CE,E,EF,FG,G,HJ
SC-1/4/7/8/9/10/26
SCHLAGE LARGE PIN
• RIGHT HAND INSERTION •
•OSD #060 •SAFETY FACTOR= 7 • PROG. STEP= 2
• BLANKS SHOULD HAVE PROPER BACKMILLED RADIUS
DO NOT PUNCH STAINLESS STEL KEYS SUCH AS
ORIGINAL SCHLAGE "L"

Fig. 4.9

PUNCH!



1. ENGAGE



2. PUSH THROUGH

Fig. 4.10

A smooth, even movement ensures the best results.

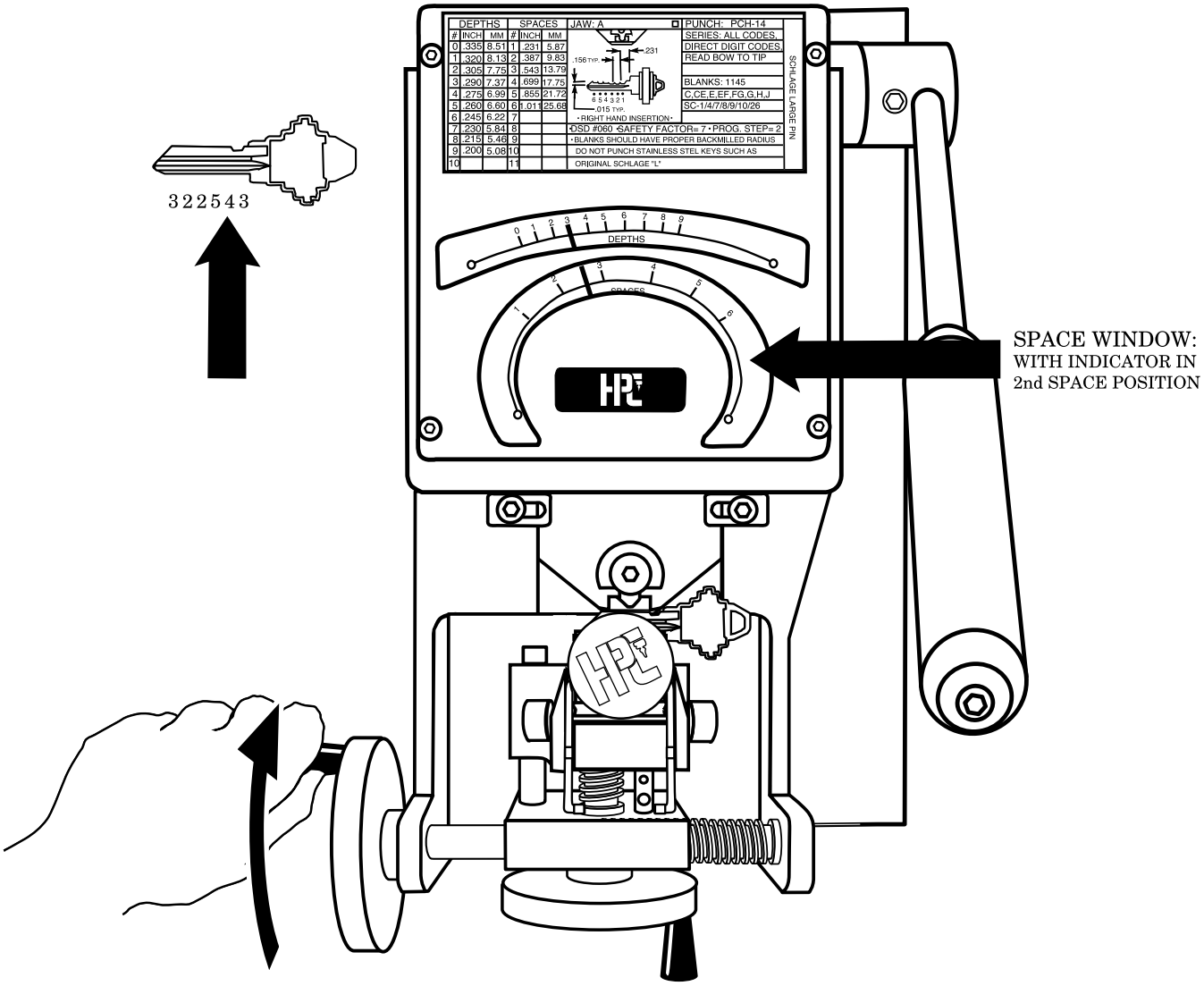


Fig. 4.11

After the first cut is made, move to the next space position.

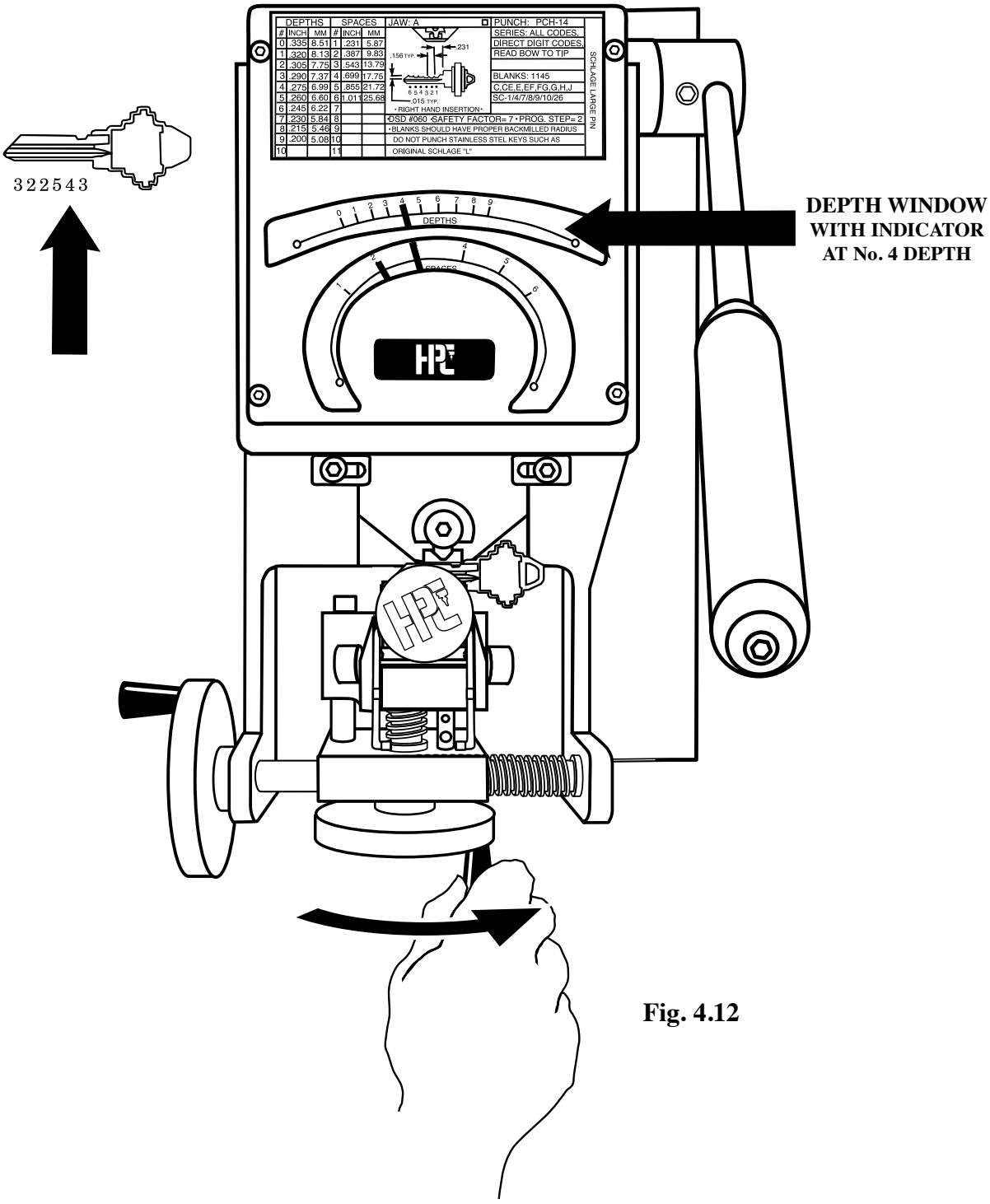


Fig. 4.12

Again, move to the next depth position.

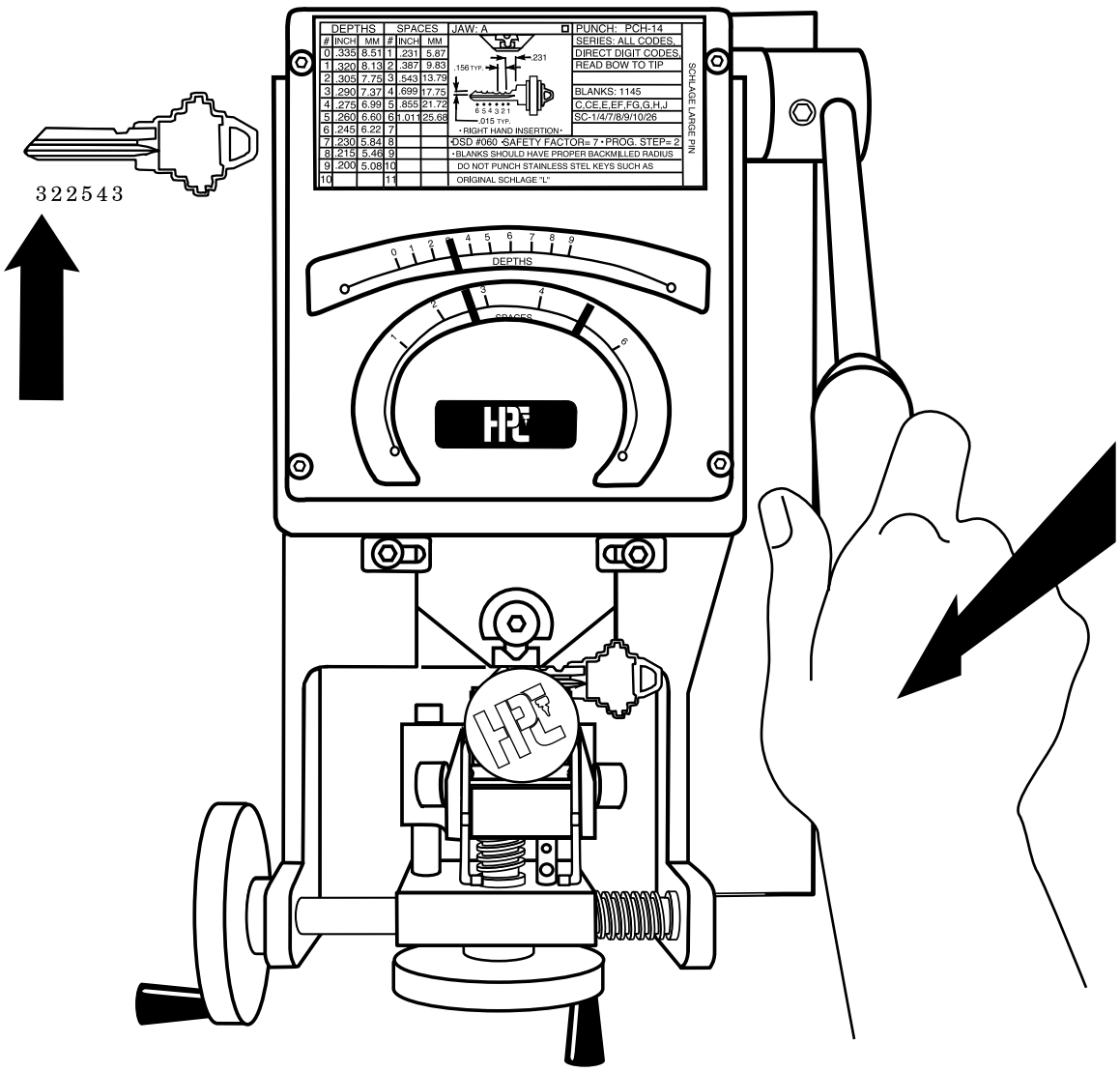


Fig. 4.13

PUNCH!
Repeat these steps until all of the cuts are made.

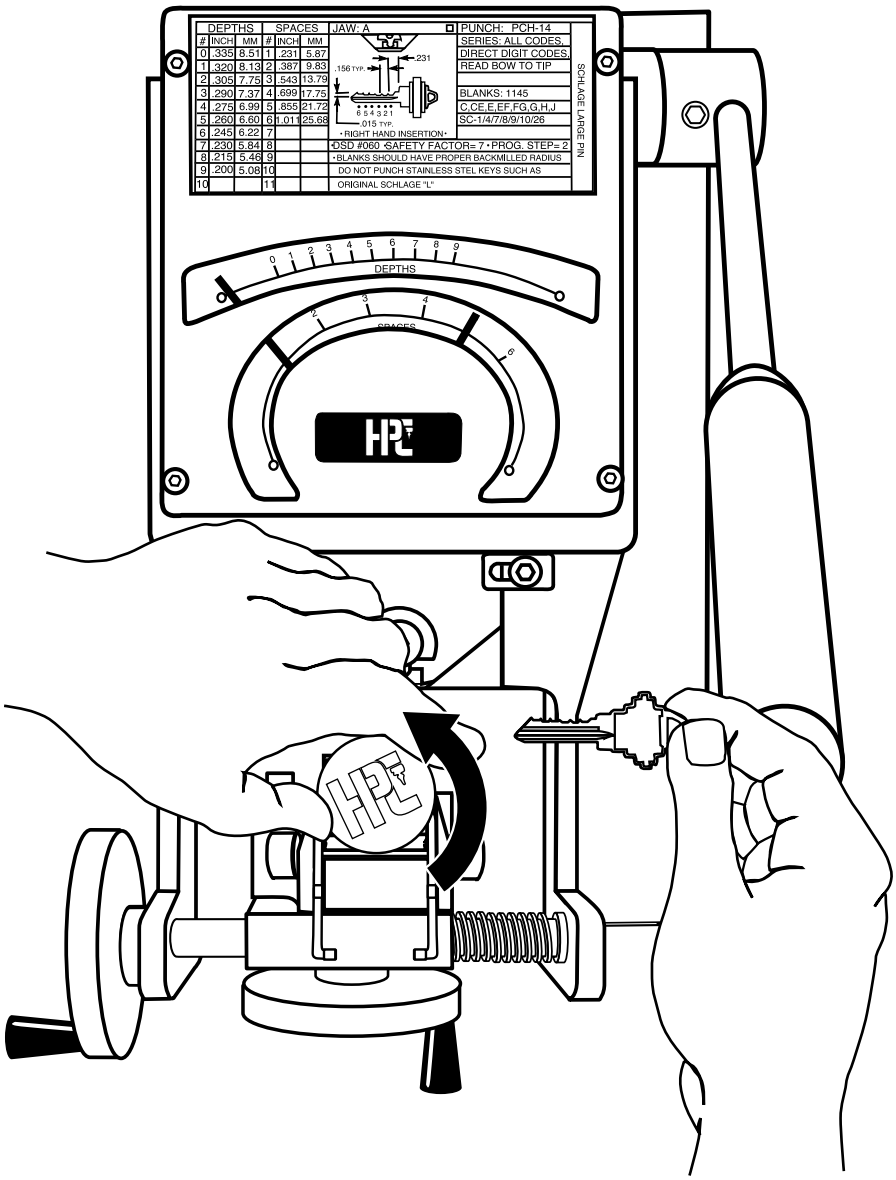


Fig. 4.14

After all of the cuts have been made, remove the key. There should be no need to deburr the key for it to work in the lock.

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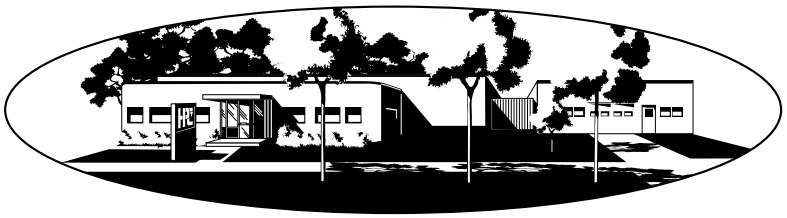


5.0
Changing the Punch

5.1
Removal of the Punch

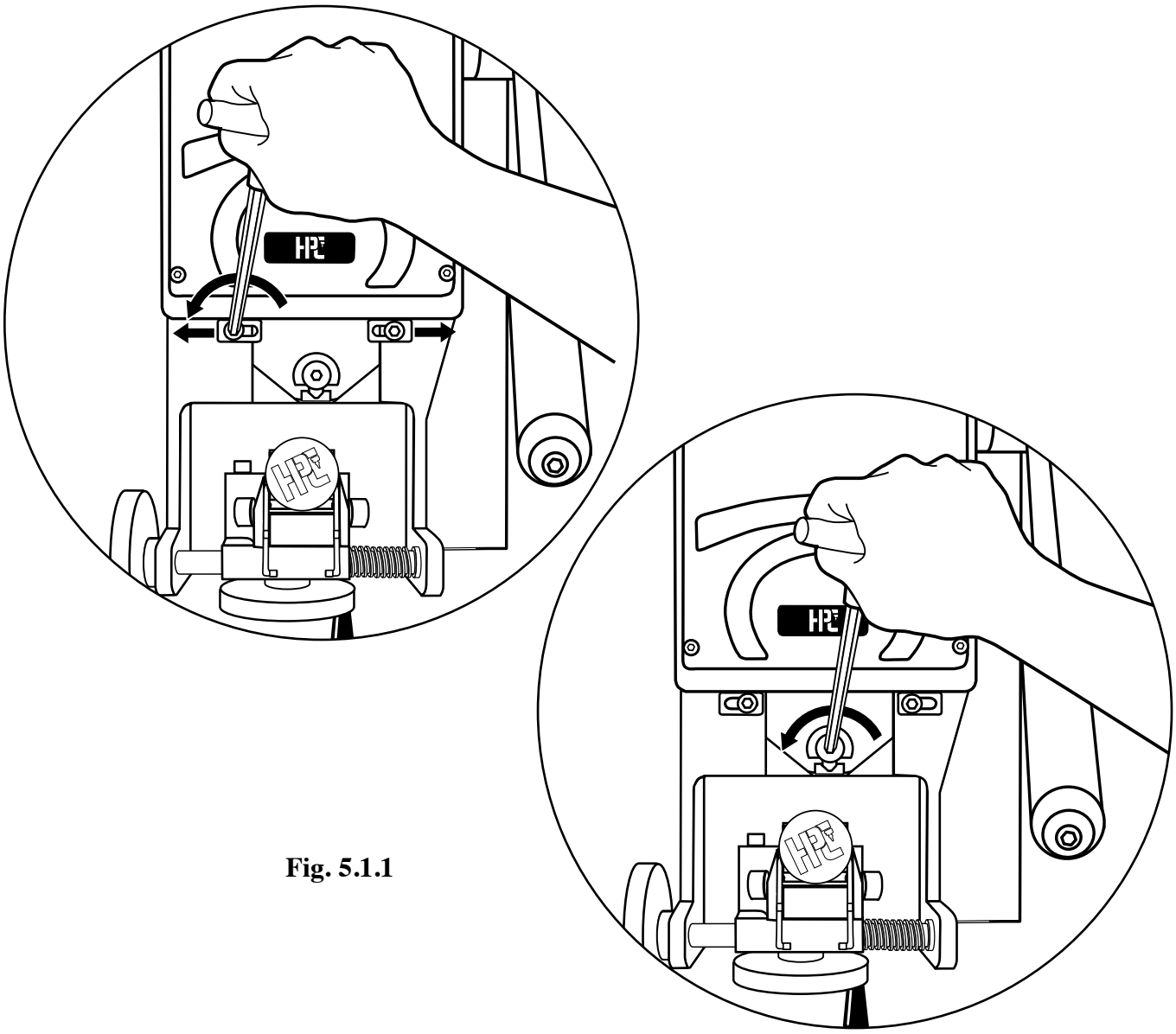


Fig. 5.1.1

Loosen both of the Toe Clamps and move clamps out of the way.
Loosen Punch Screw and remove it.

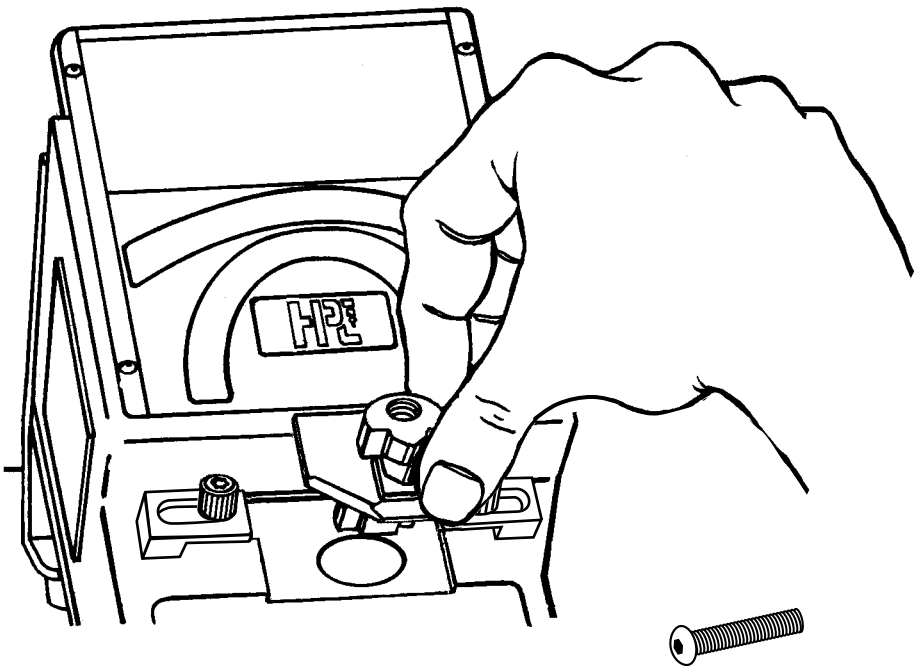


Fig. 5.1.2

Remove the entire Punch and Die unit from the machine.

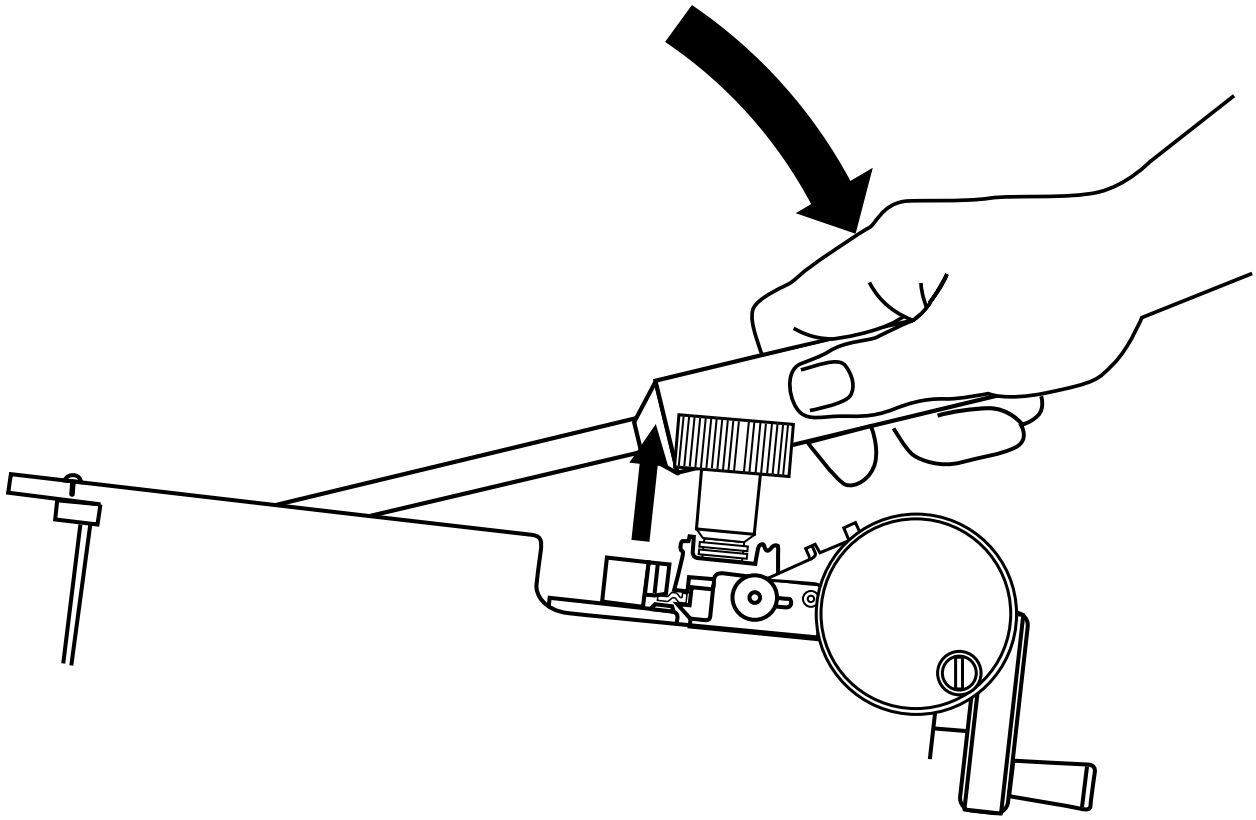
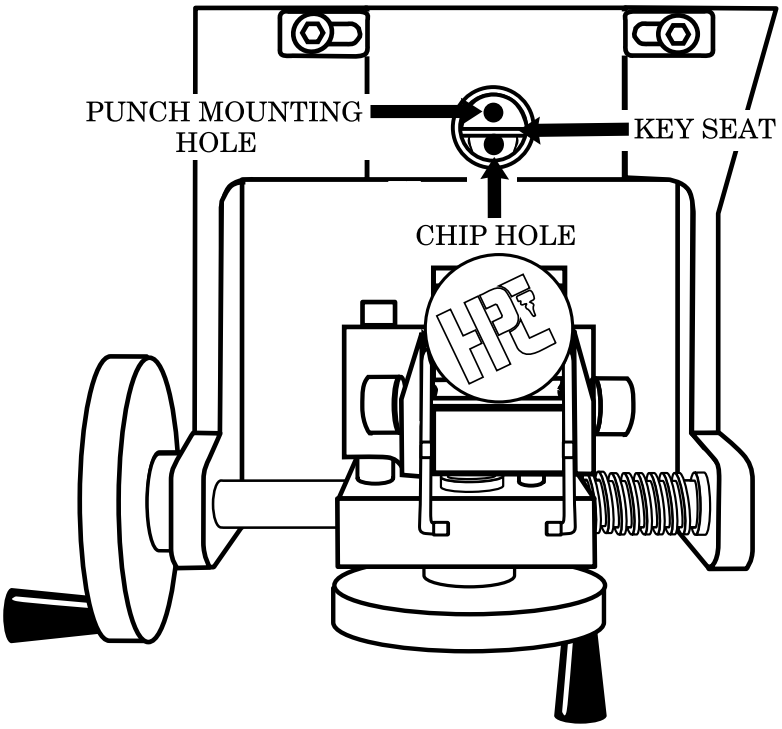


Fig. 5.1.3

NOTE: If the unit does not come out easily, push down on the handle. This will cause the unit to free itself for easy removal.

5.2
Replacing the Punch



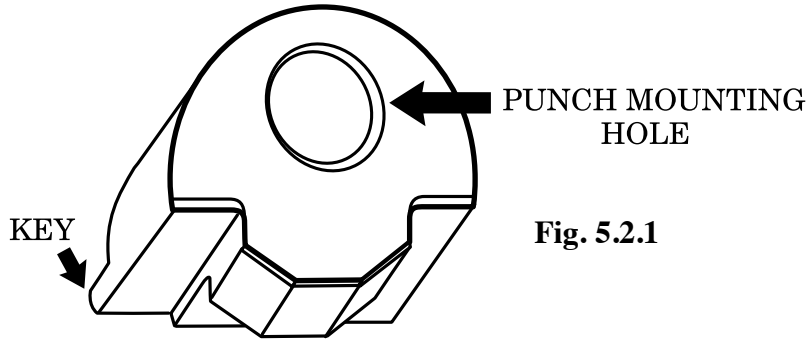


Fig. 5.2.1

These are critical areas to mate upon insertion of a new punch.

Note: Clean any brass chips from all of the critical areas.

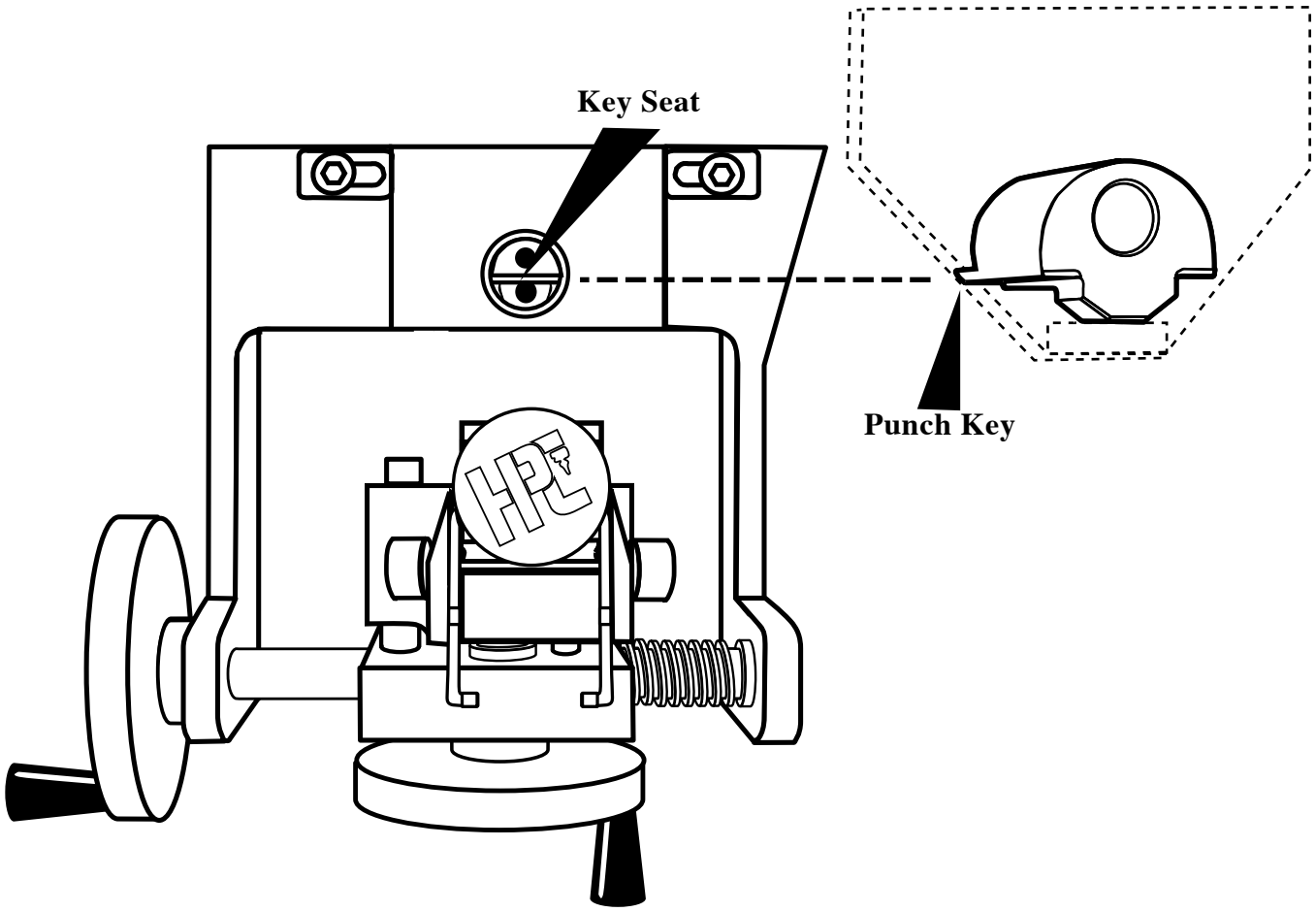


Fig. 5.2.2

Note: Punch Key should line up with Key Seat.

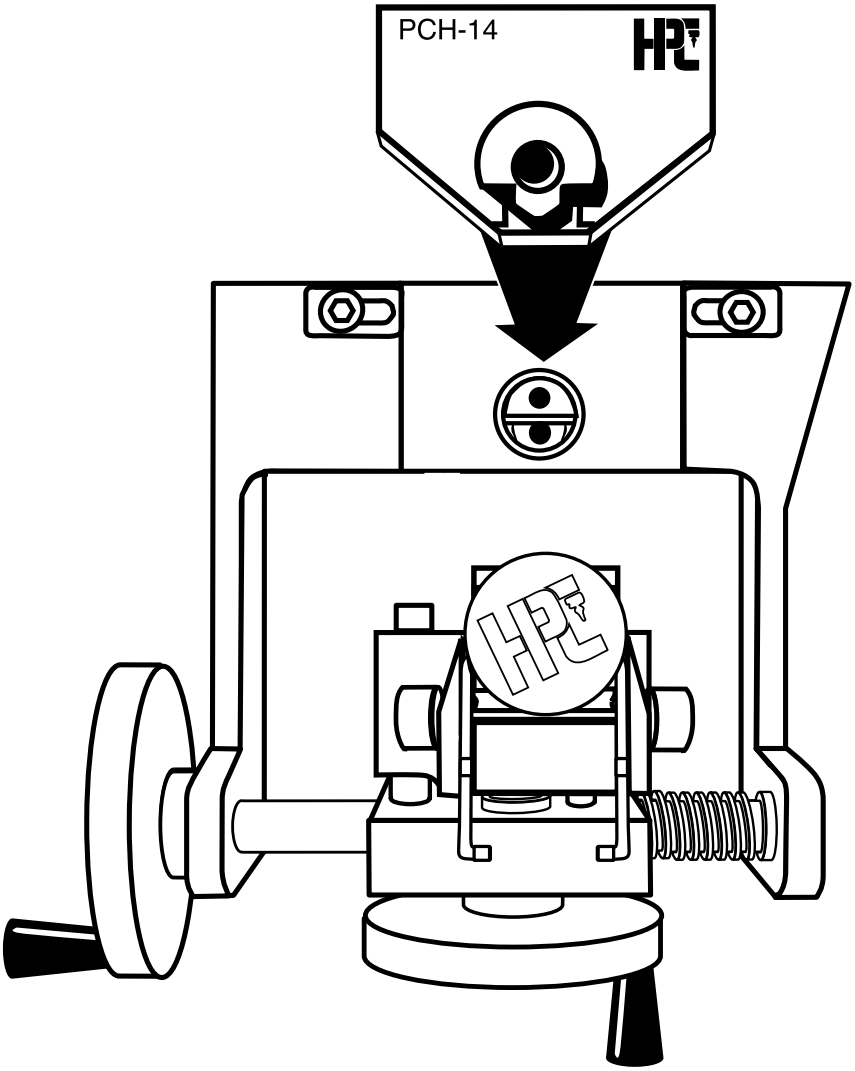


Fig. 5.2.3

Insert the Punch and Die unit into position. You can insert the triangular die unit first and then the Punch unit (making sure the Punch key lines up into key seat), or both pieces as one unit (as shown above).

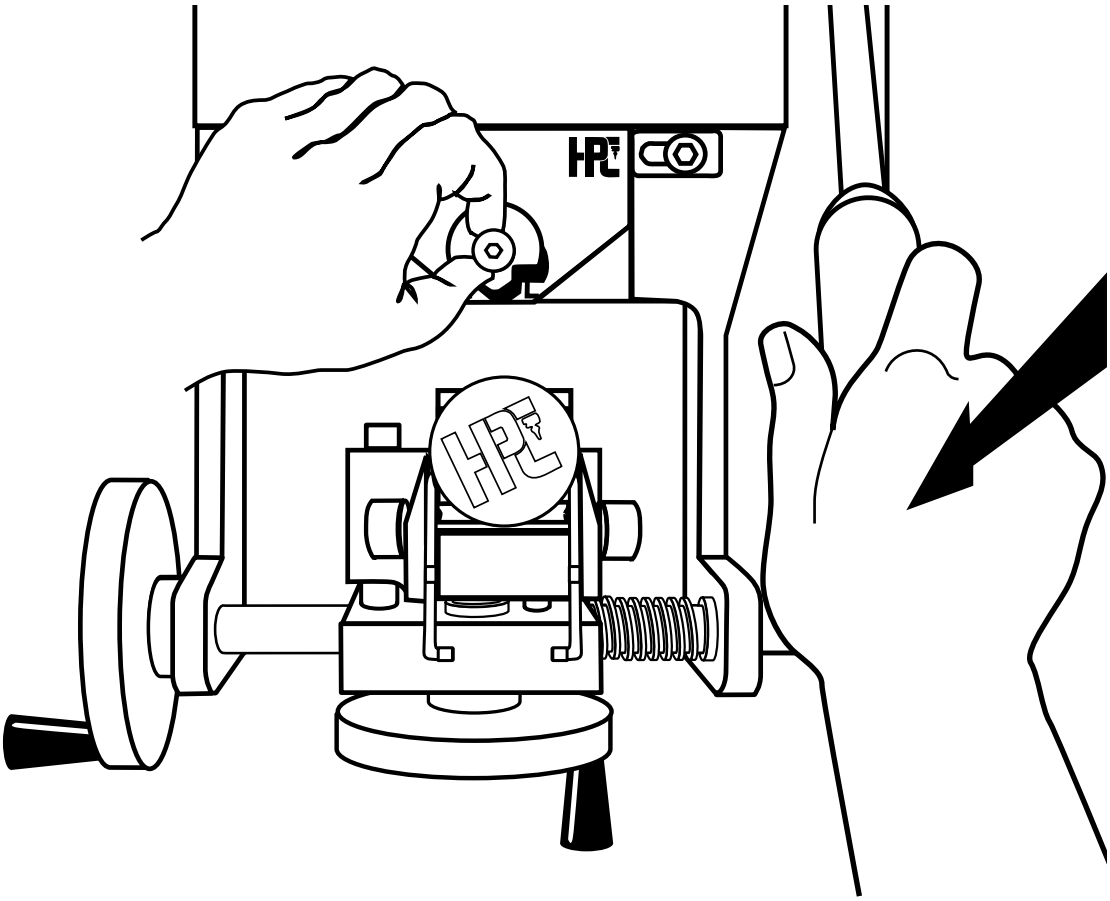


Fig. 5.2.4

Thumb-tighten the Punch Screw and depress the Punch Arm to line up the Punch and Die unit before the final tightening.

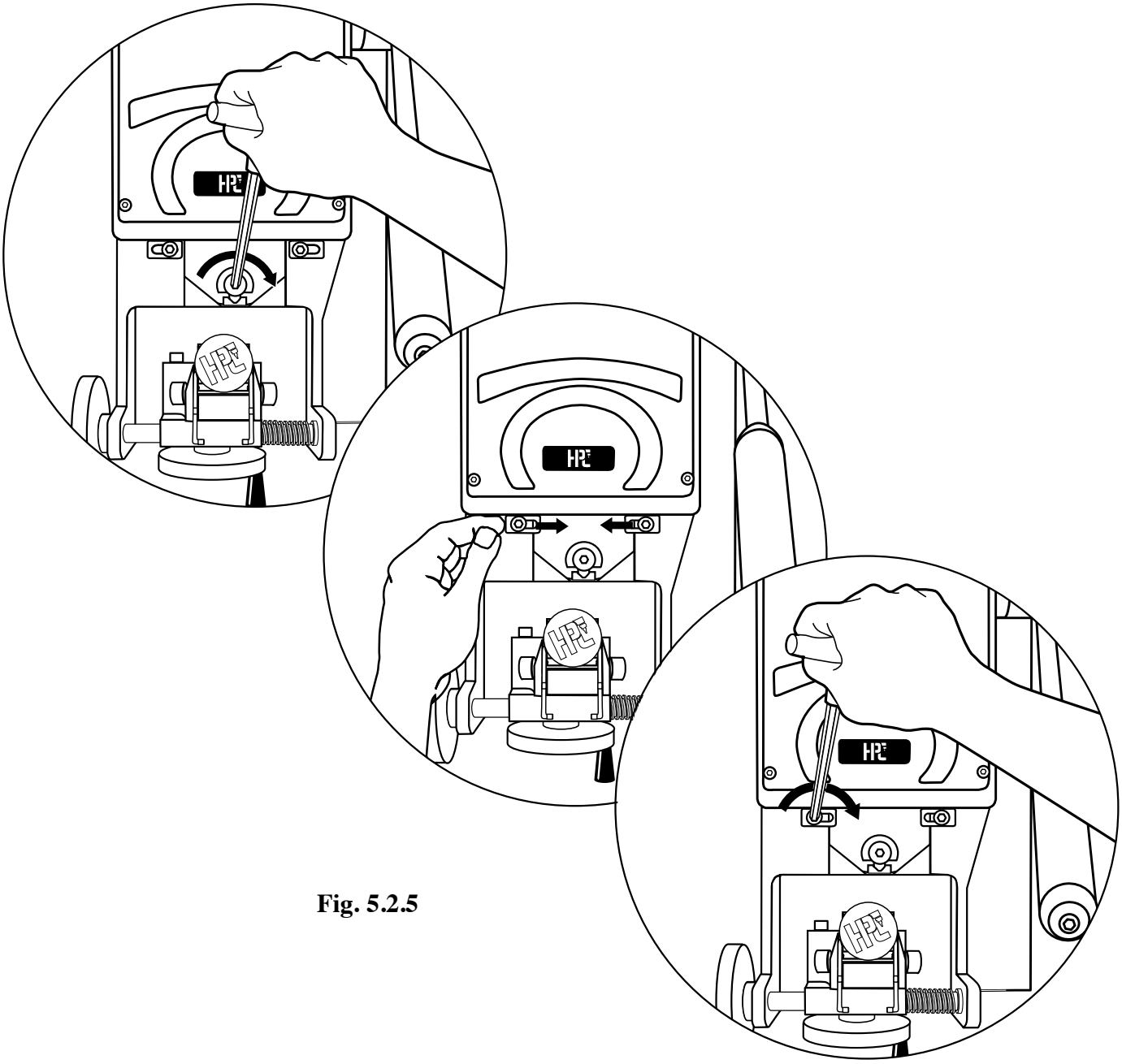


Fig. 5.2.5

Tighten the Punch Screw with the wrench. Do not overtighten! Move the Toe Clamps into position and tighten.

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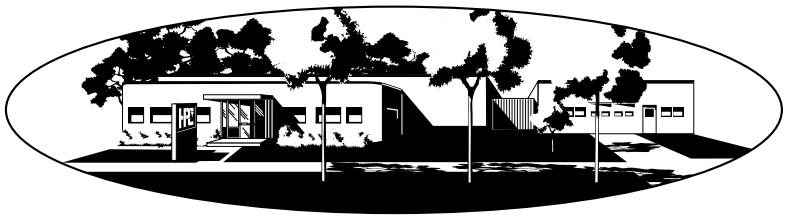

6.0
Depth Adjustment

Card No. MIAR

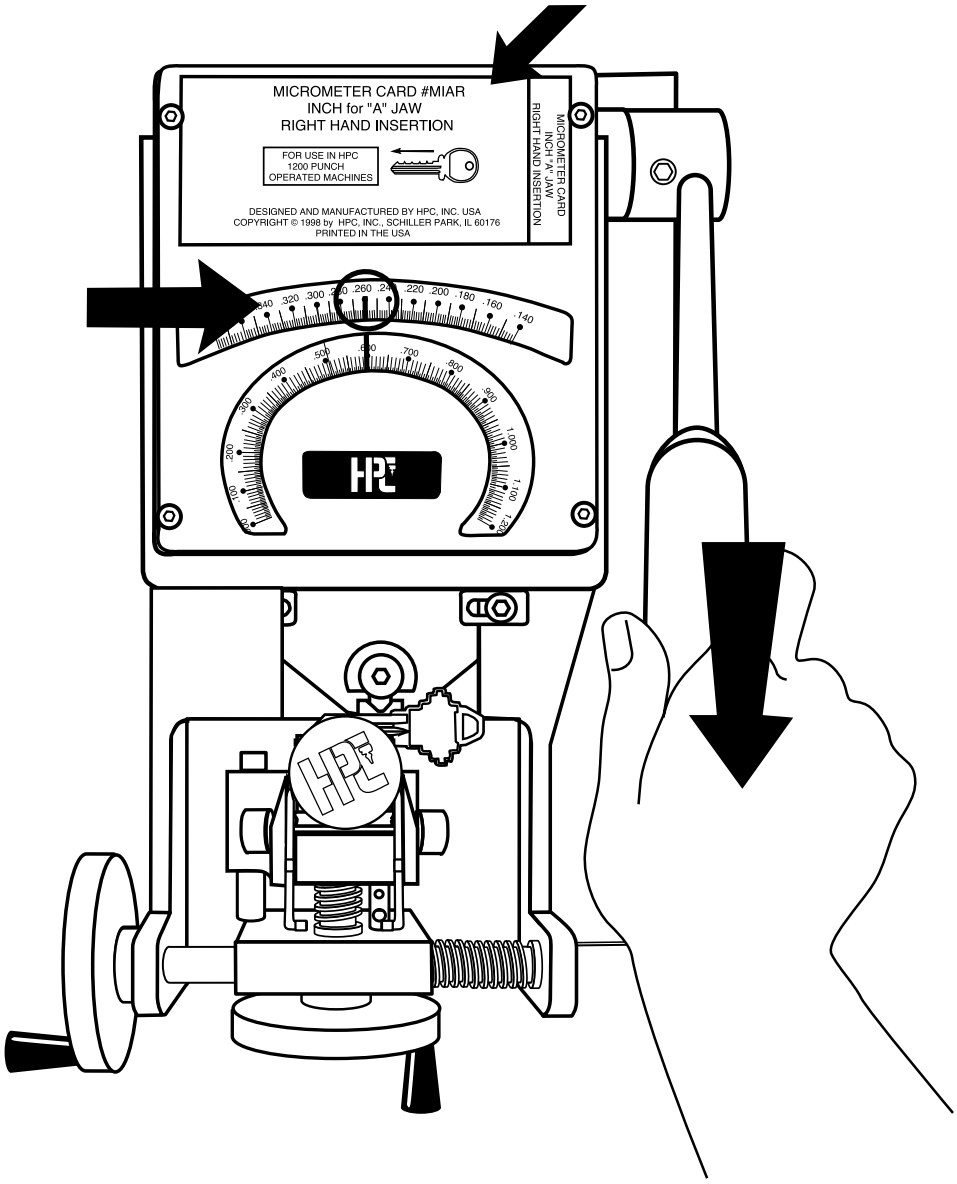

Fig. 6.1

1. **Insert Micrometer Card No. MIAR**
2. **Gauge and locate a single-sided key blank.**
3. **Move the depth needle to 0.260**
4. **Punch a cut into the key.**

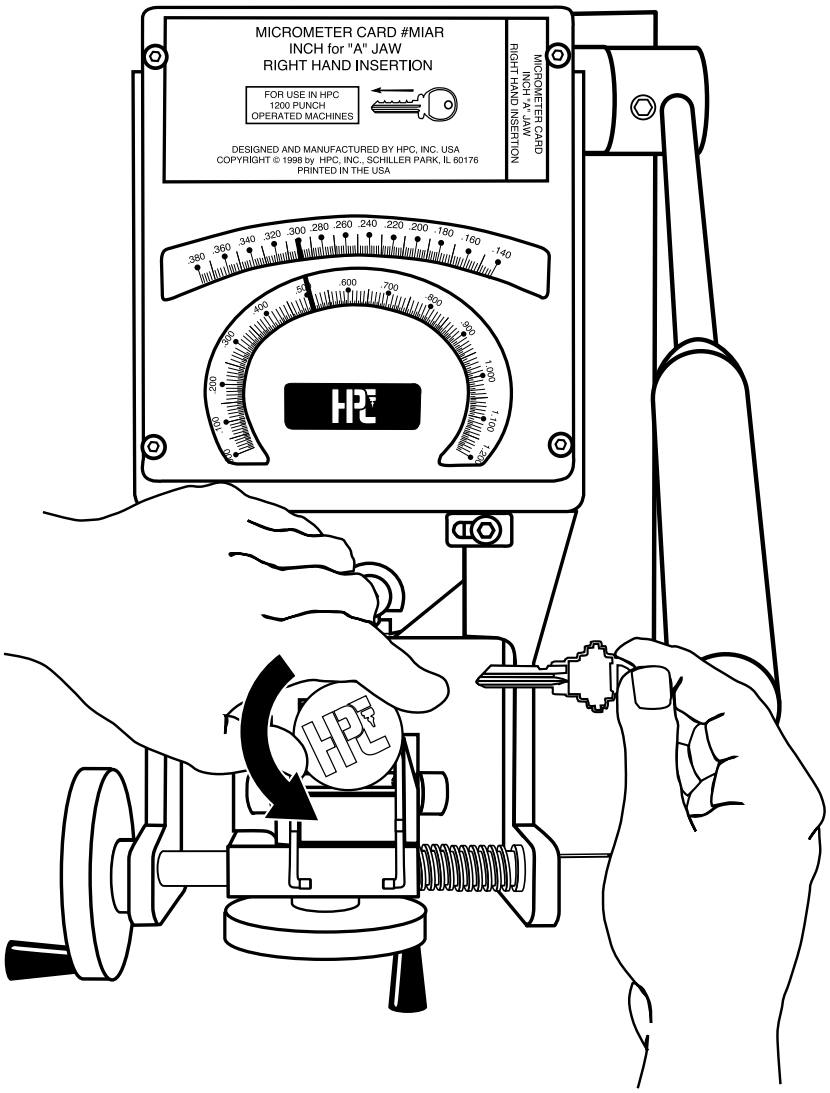

Fig. 6.2

Remove the key from the Carriage.

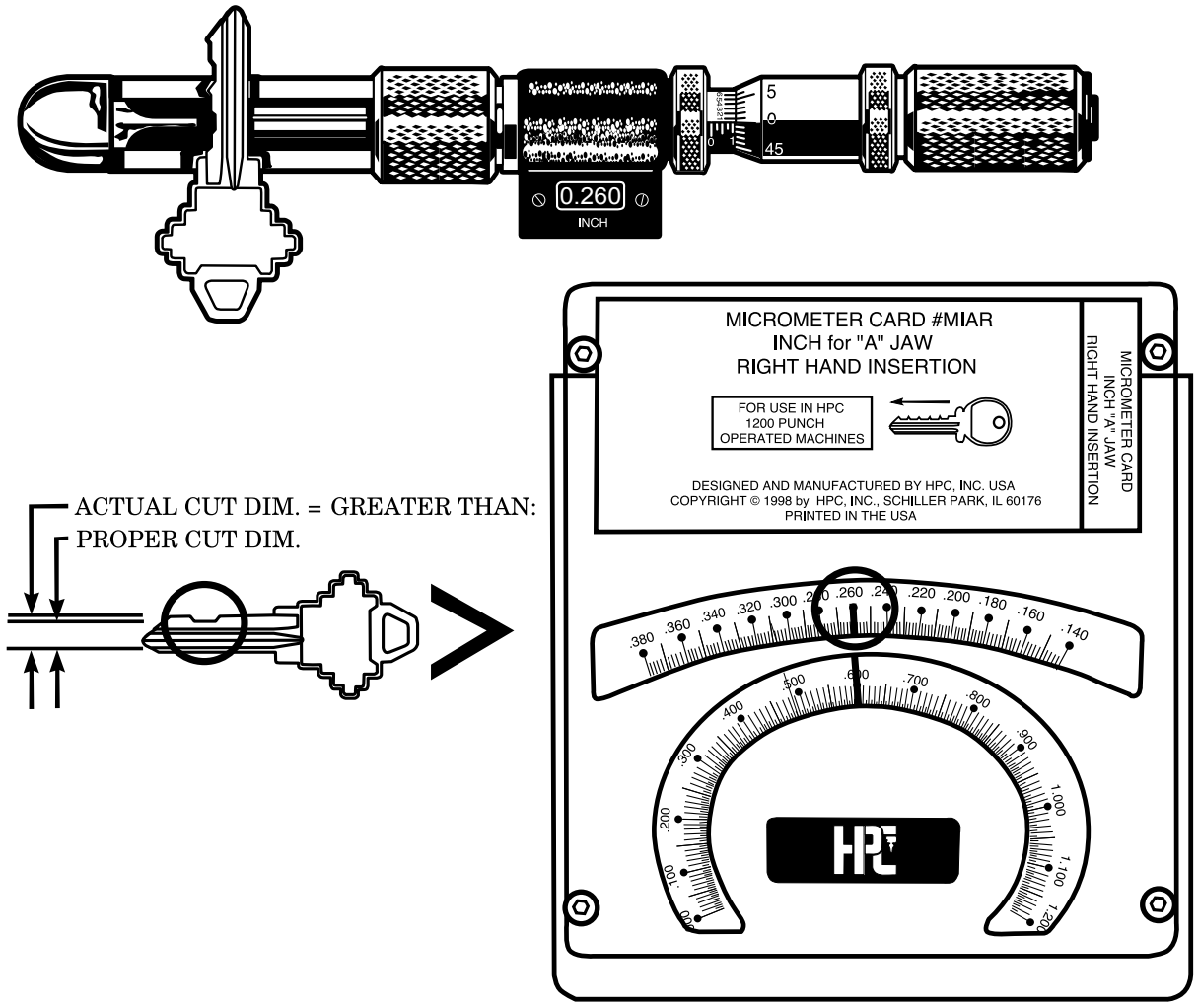

Fig. 6.3

Measure the key for the actual punch cut dimension. Note whether the key is equal to proper cut dimension or greater than.

Example: proper cut dimension = .260
actual cut dimension = .265
+ .005

The cut is greater than the proper cut dimension.

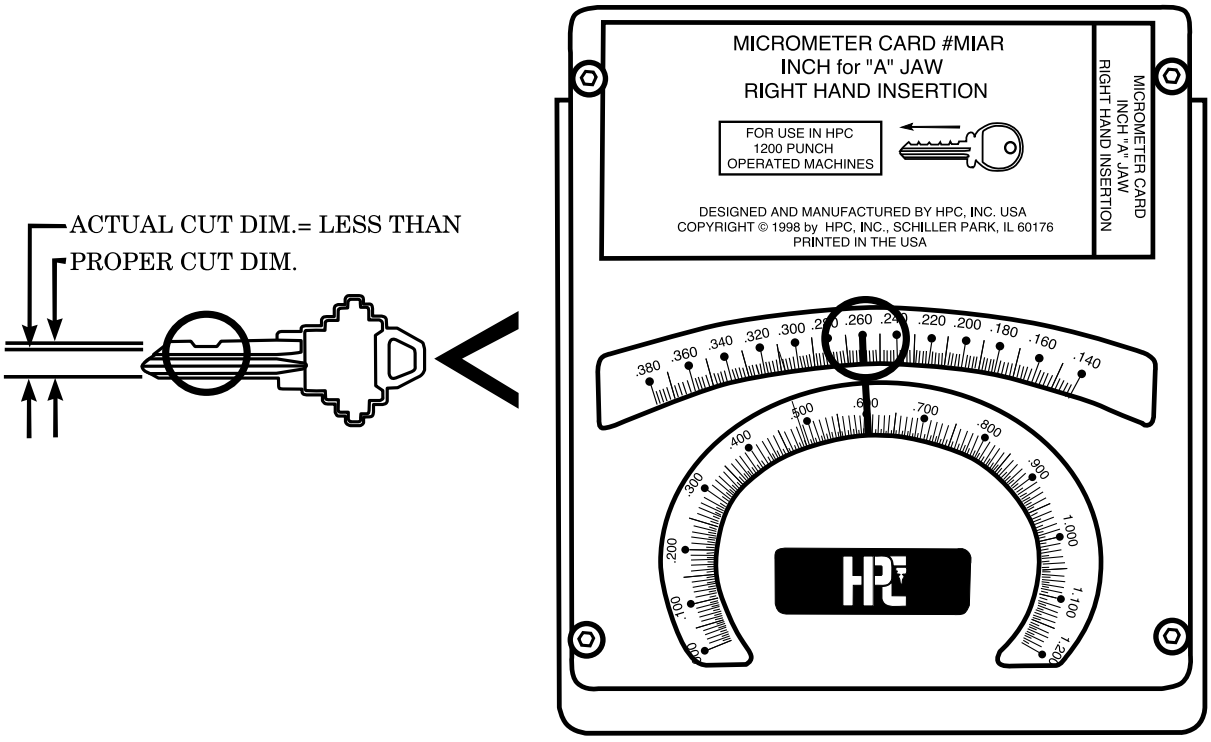

Fig. 6.4

The key may also be cut less than the proper cut dimension.

Example: proper cut dimension = .260
actual cut dimension = .255
– .005

The cut is less than the proper cut dimension.

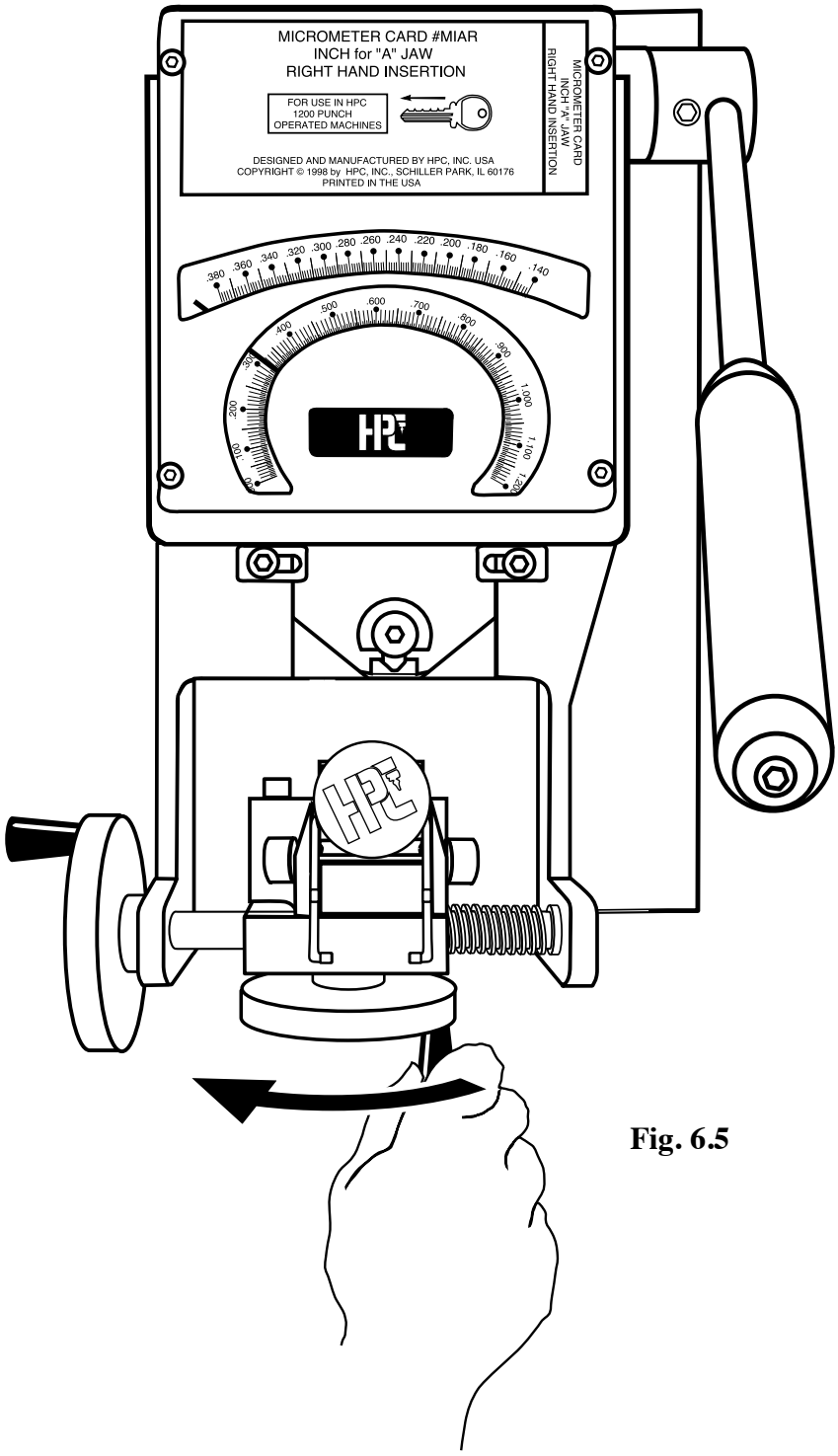

Fig. 6.5

Move the Carriage back to allow room for adjustment.

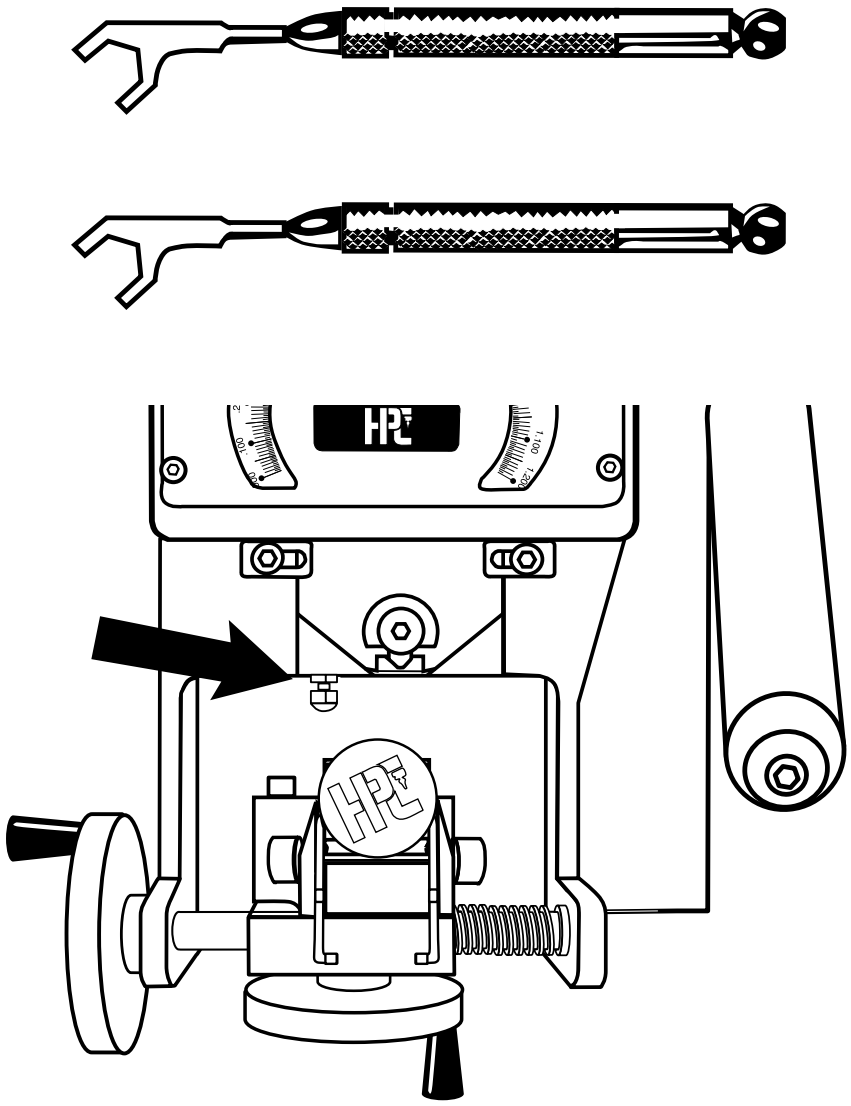

Fig. 6.6

Note Depth Plunger to be adjusted and Adjustment Wrenches to be used.

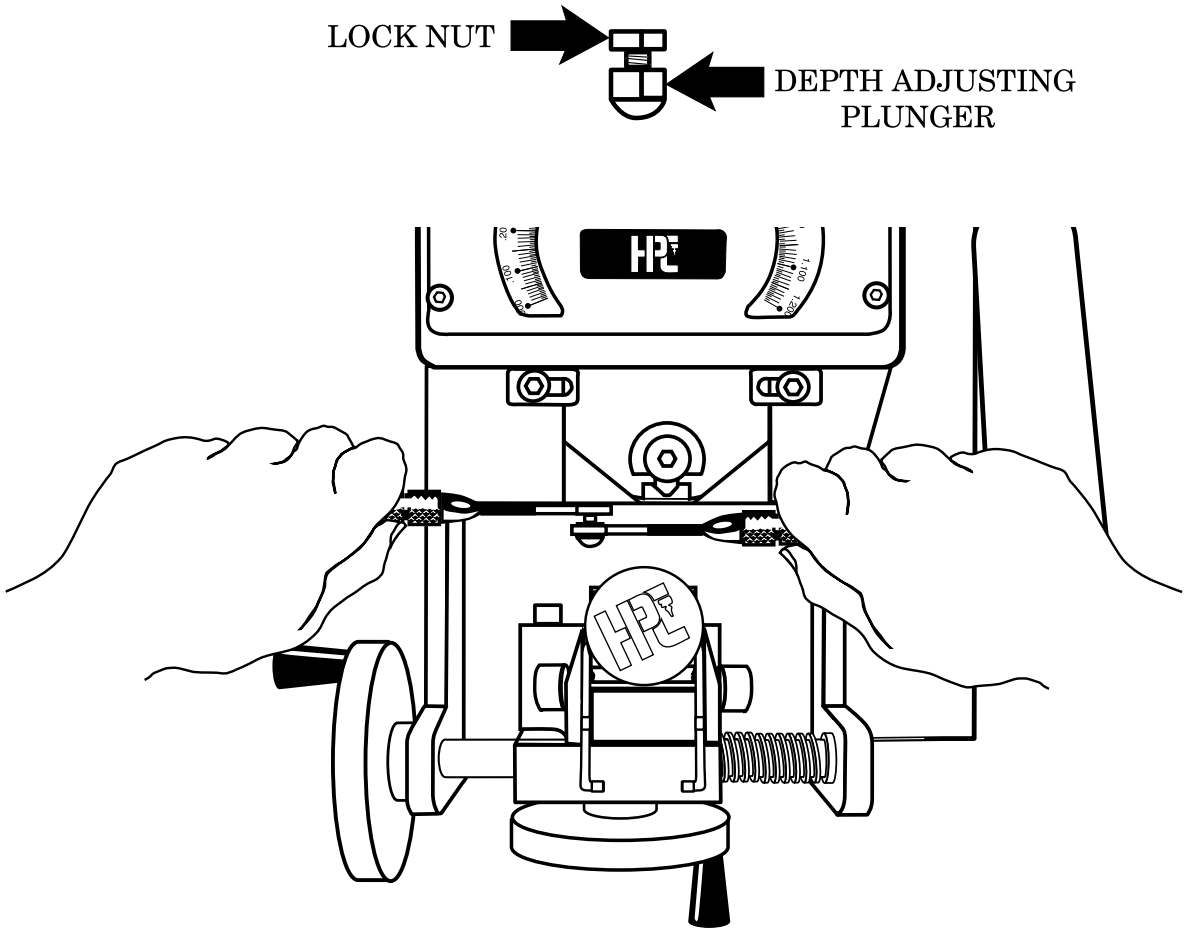

Fig. 6.7

Place the Wrenches on the Locknut and Plunger. Note: Do not loosen or turn unless you are certain of which movements are necessary!

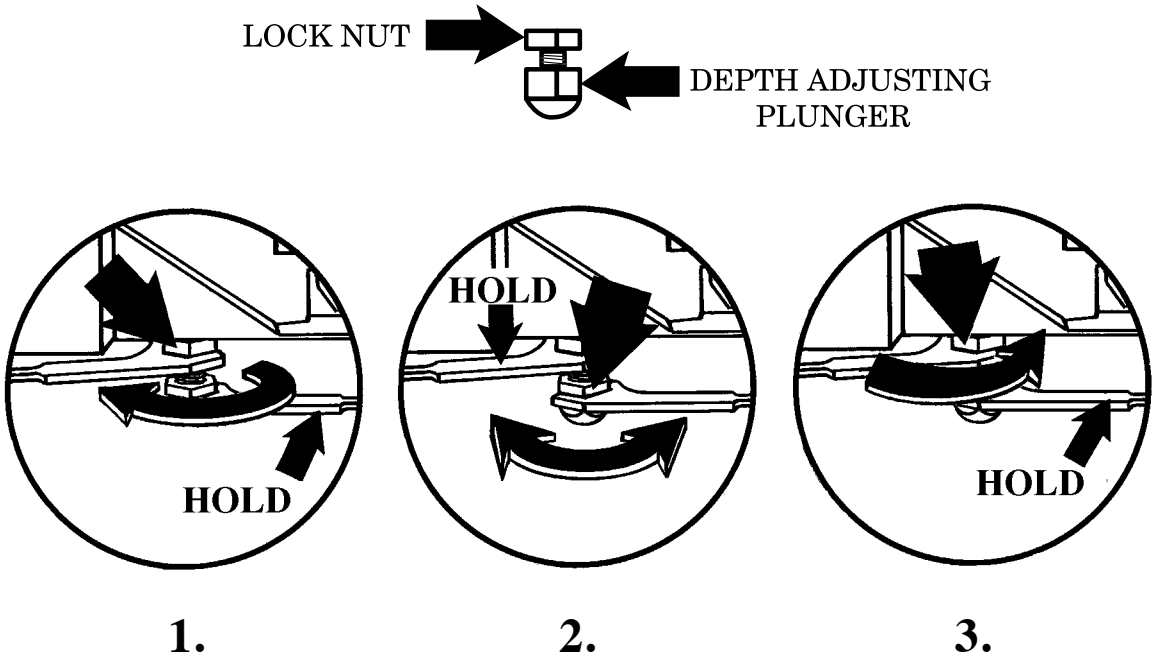

Fig. 6.8

Step 1:
Loosen the Lock Nut while holding the Depth Plunger still.

Step 2:
For a shallower cut, turn the Depth Plunger counterclockwise. For a deeper cut, turn the Depth Plunger clockwise.

Step 3:
Hold the Depth Plunger still and tighten the Lock Nut.

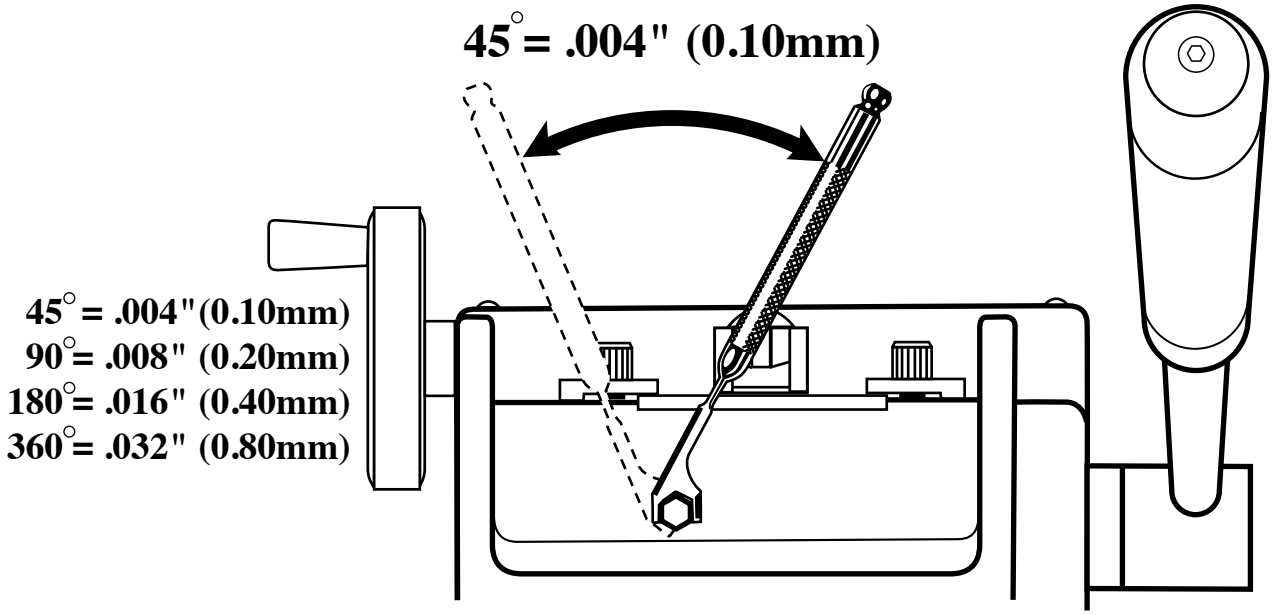

Fig. 6.9

Determine amount of movement necessary to make the appropriate adjustment.

7.0
Space Adjustment

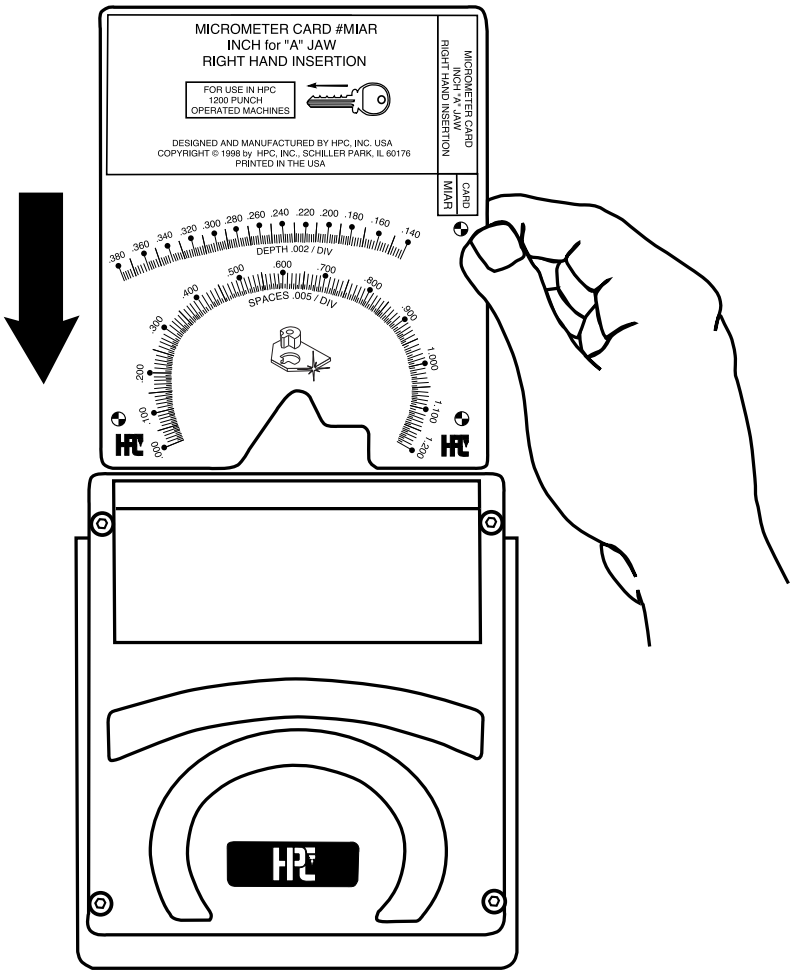

Fig. 7.1

Insert the Micrometer Card.

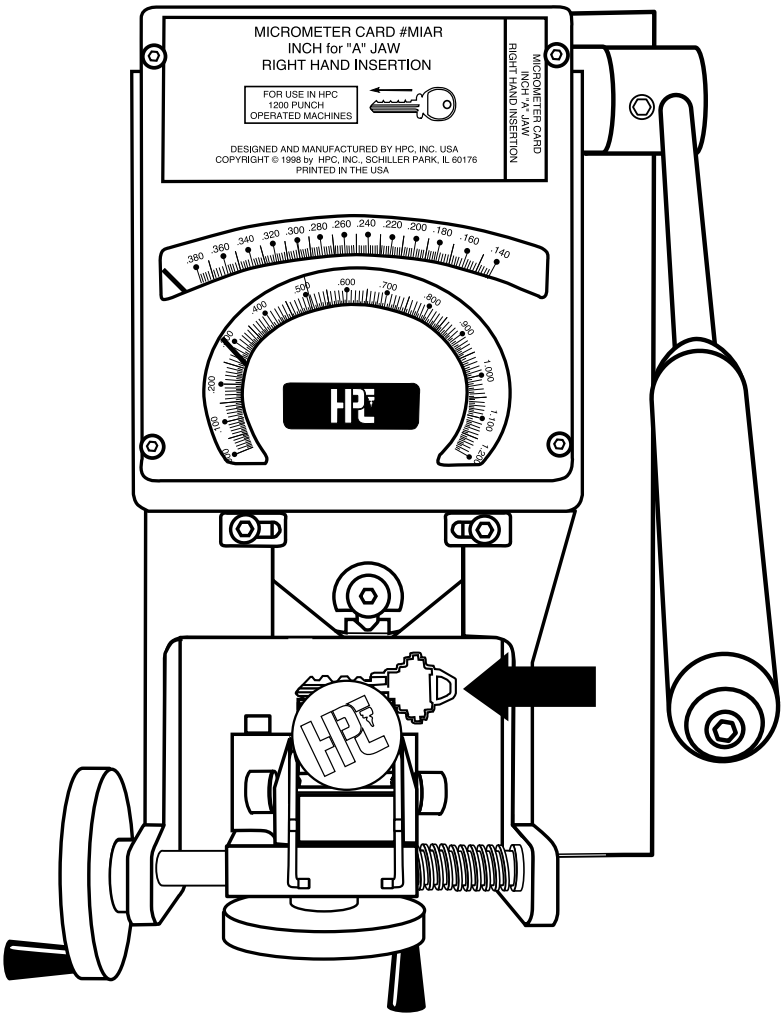

Fig. 7.2

Insert a key of known dimension (manufacturer original cut key) using the proper clamping procedure.

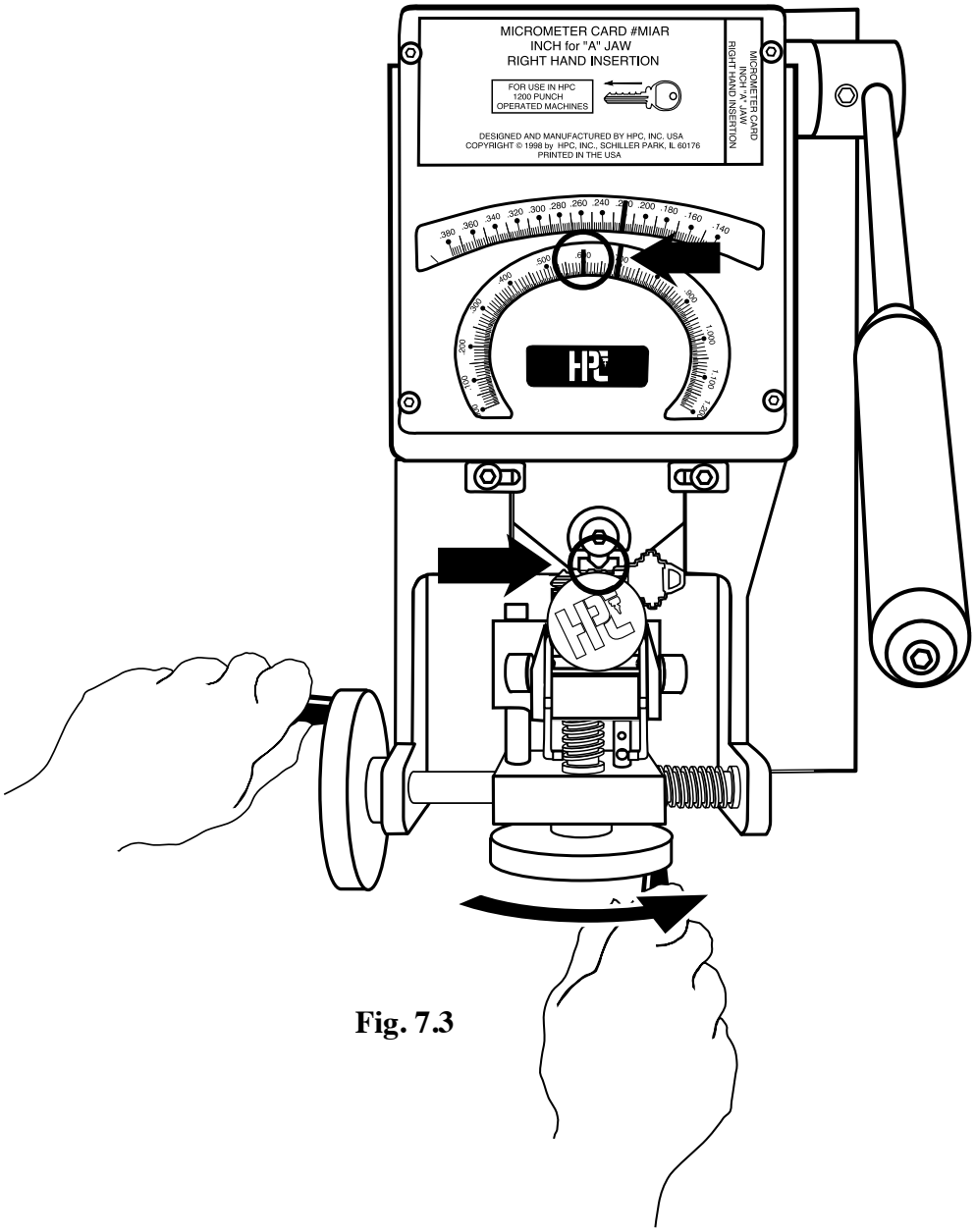

Fig. 7.3

Move the key as shown, to line up with the center of the cut, and check if the known dimension and the actual reading match. If not, proceed to Recalibration Of Space. As with any HPC product, if your machine is no longer functioning properly, please dial our toll-free number (1-800-323-3295) before attempting any adjustments to avoid further damage.

7.2
Recalibration Of Space

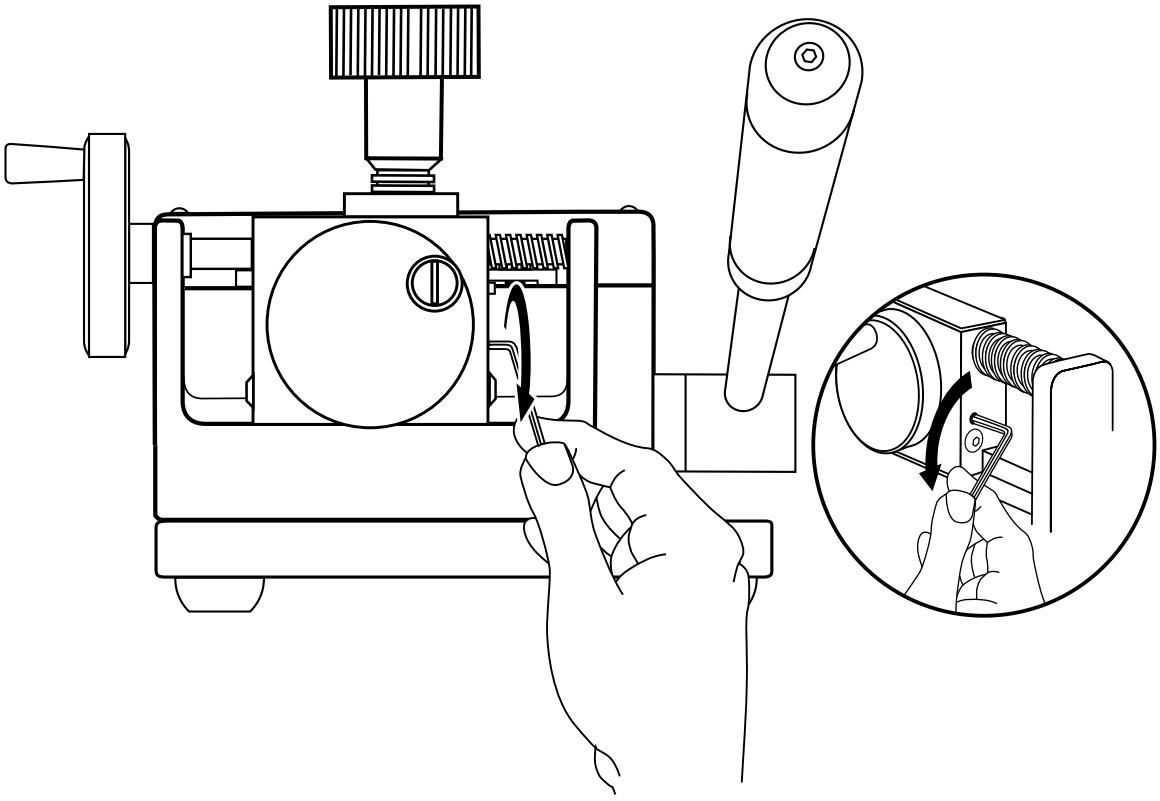

Fig. 7.2.1

Loosen the Space Adjustment Screw one-half turn (using the supplied wrench) as shown, but do not remove.

1. **Insert supplied wrench into the Space Adjustment Hole.**

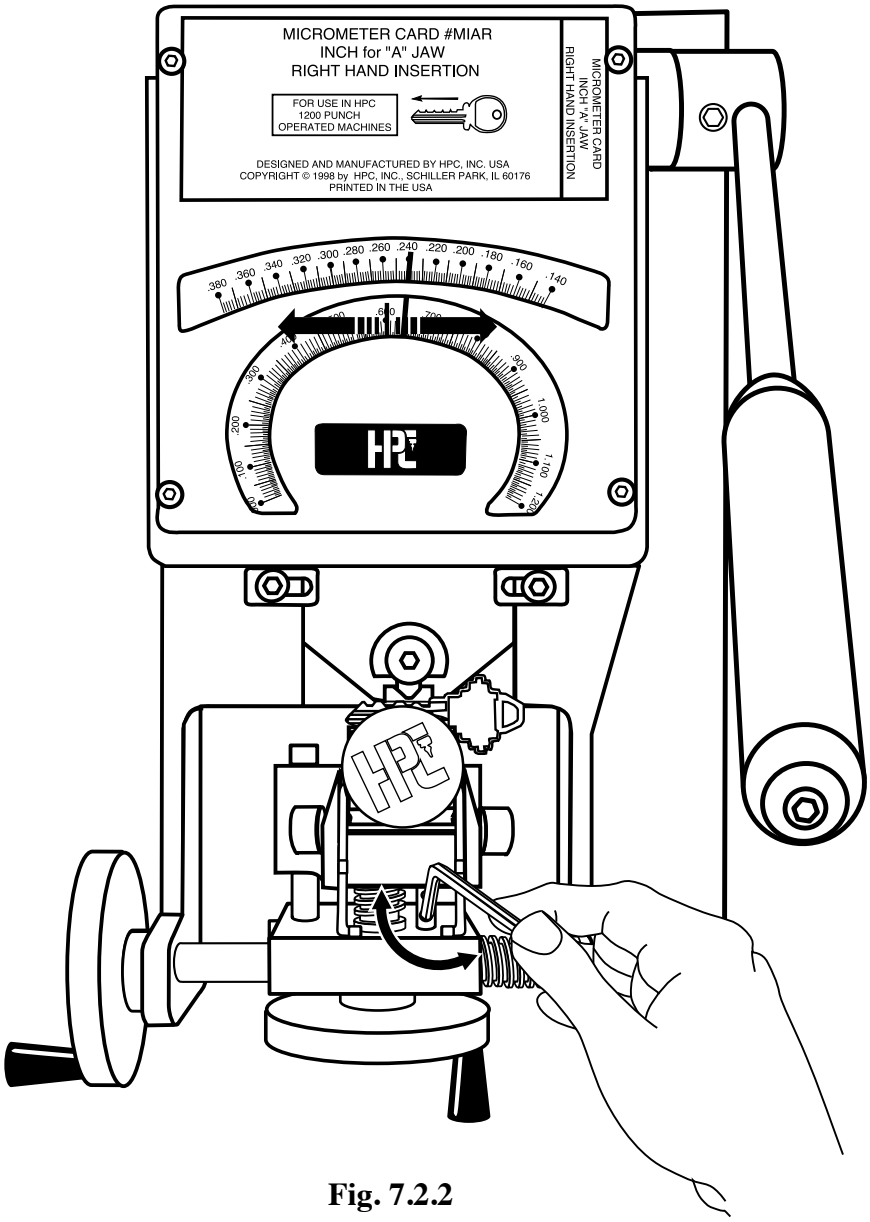

Fig. 7.2.2

2. **Move the wrench as indicated to set the needle at known space dimension. Turning the shaft counterclockwise moves the Spacing Needle to the right. Turning the shaft clockwise moves the Spacing Needle to the left. Do not force beyond full left or or right positions! (see page 14).**

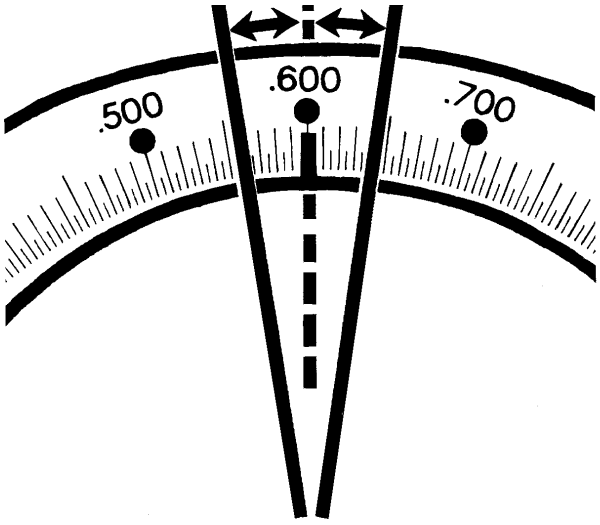

Fig. 7.2.3

Note maximum range of possible adjustment. Any further adjustment MUST be done by authorized factory personnel.

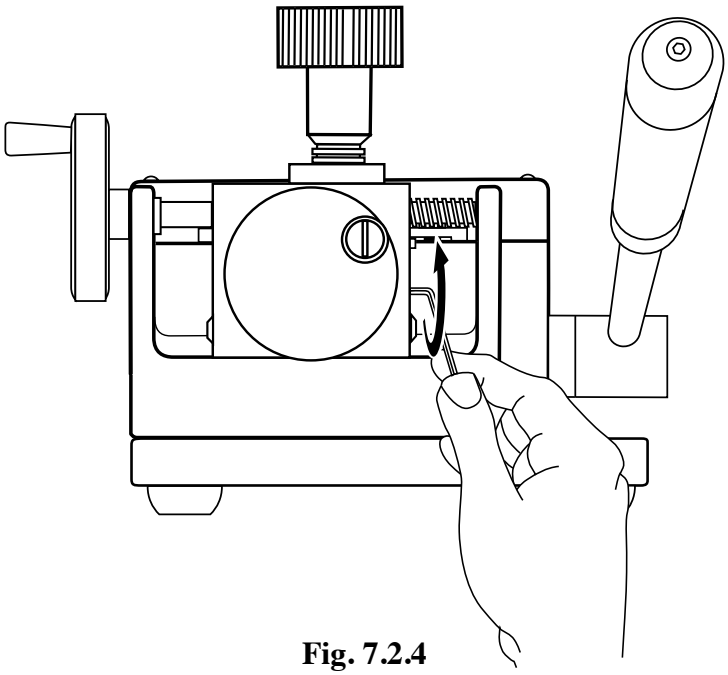

Fig. 7.2.4

After the recalibration of the needle is done, retighten the Adjustment Screw.

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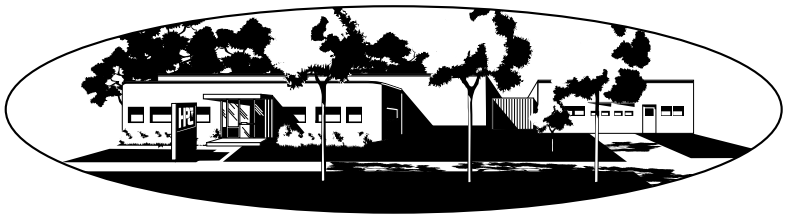

8.0
Preventive Maintenance

Preventive Maintenance, Lubrication, Repairs, and Warranty

1. WARRANTY — The Punch Machine™ is fully warranted for one year from the date of purchase, against factory defects in material and workmanship. Mail the Warranty Card and a copy of your invoice immediately to validate your warranty. Should your machine require factory repairs, please contact the HPC Service Department.

   During the one year warranty period, you will be billed for handling and shipping only.

2. BEARINGS AND SLIDING SURFACES — These are to be given a light coat of a light grease at least every six months.

3. EXPOSED STEEL SURFACES — All remaining exposed steel shafts, cutters, etc., should be sprayed with WD-40 or equivalent light oil at least every six months. Wipe off any excess.

4. CLEANING — Remove all brass chips, dirt, and grit from the surface of your machine daily, with a soft bristle brush. Take particular care in keeping the jaw area clean and free of all residue build-up.

5. CODE CARDS — The Code Cards are made of durable card stock and die cut to extremely close tolerances. Dirt is easily washed off with a mild, non-abrasive liquid detergent, such as dishwashing soap and lukewarm water. Dab lightly with a soft cloth until dry. Never use an abrasive or solvent-based cleaner to wash these Code Cards!

6. REPAIRS — The preventive maintenance and recalibration of space and depth, as fully outlined on previous pages are the ONLY REPAIRS or ADJUSTMENTS suggested.
   Internal operating mechanisms are FACTORY REPAIRABLE ONLY. Do not incur additional repair charges by attempting to fix the machine yourself.

HPC SERVICE DEPARTMENT: 1-800-323-3295

HPC SERVICE CENTER

If your HPC Key Machine should require service, please note the following information:

HOURS: The HPC Service Center answers questions involving key machine repair and replacement parts Monday through Friday from **8:00 am to 3:30 pm Central time**.
Please call **800-323-3295** (from the U.S. and Canada) or **847-671-6280** (from other countries).

REPAIRS: We recommend the replacement of cutters, brushes and external parts, the preventive maintenance and recalibration (as outlined in this manual) be the only repairs or adjustments that are done by the user. Internal parts and mechanisms should be factory-repaired only. Additional repair charges may be incurred by attempting to make these types of repairs by yourself.

FACTORY SERVICE: If you need to send your HPC key machine in for repair, first call the HPC Service Center to obtain a Repair Order number, then follow these instructions:

Include a letter explaining the problem you are having, as well as any other work you want done on the machine. Make sure your business name, address and phone number, as well as the name of the contact person are on the letter.

Your machine should be equipped with an HPC cutter when it is sent in for repairs. If you are sending in a Blitz™ or CodeMax™ machine also include the Black Horseshoe Tip Stop to insure proper tip gauge calibration. Please do not send in any other accessories (such as other cutters and code cards).

Pack the machine securely in a box strong enough to prevent damage during shipping (preferably the original box).

The Repair Order Number should be marked on the outside of the box.

All machines must be shipped prepaid. Collect shipments will not be accepted.

Our shipping address is:

Hudson Lock, LLC
81 Apsley Street
Hudson, MA 01749

HUDSON LOCK, LLC

1-800-434-8960
1-800-323-3295
fax: 978.562.9859
sales@hudsonlock.com

REPAIR CHARGES & ESTIMATES: Upon receipt and evaluation of your machine our technicians will provide a written estimate (by fax) of the repair charges. Some problems may be detected only while the repair work is being done. If after informing you of the repair estimate it becomes apparent that the cost will be higher, you will be notified of the additional charges before any additional work is done.

REPLACEMENT PARTS: Key machine parts can be purchased through an Authorized HPC Distributor or directly from the HPC Service Center. When ordering parts over the phone, please have the part numbers and descriptions ready to expedite the ordering process. A parts listing and an exploded view drawing is included in this manual. If the parts are needed urgently, express processing is available at an additional charge.

PAYMENT: Payment for parts and repair is required at the time of repair and before the parts are shipped. We accept payment by credit card (Visa, Mastercard or Discover) or by check. Repaired machines and parts can also be sent C.O.D. with an extra charge. If you wish to have your Authorized HPC Distributor billed for the parts or repairs, the distributor must call us with approval of the billing and provide a purchase order number for the parts or work being done, before the machine is repaired or parts are shipped.

Unless otherwise specified, key machines that are not under warranty will be shipped C.O.D. with an extra charge after the repairs have been made.

LOANER MACHINES: Sorry, but we do not have loaner machines available.

9.0
Exploded View
and Parts List

1200PCH Parts List

#	Description	Stock #
1.	Card Lens	PCH-2001A
2.	Screws-Lens	PCH 2002
3.	Punch Handle	PCH-ARM ASSY
4.	Punch Handle Mounting Screw	CM-50185
5.	Screw-Punch	PCH-2011
6.& 7.	Punch & Die Set	Sold Separately
8.	Screws-Clamp	PCH-2013
9.	Clamp-Die Plate	PCH-2014
10.	Spring-Clamp	PCH-2015
11.	Easy Grip Wing Nut	EGN-1
12.	Ball Bearing Washer	BBW-2
13.	Top Jaw	PCH-TJAW
14.	Spring- Jaw	PCH-2017
15.	Bottom Jaw	PCH-BJAW
16.	Screw- Jaw	PCH-2018
17.	Stud- Jaw	CM -1019MA
18.	Gauge Knob	PCH-2021
19.	Screw-Gauge Knob	PCH-2022
20.	Gauge-RH	PCH-2025
21.	Gauge-LH	PCH-2026
22.	Screw-Gauge Rest	PCH-2027
23.	Ball- Main Block	PCH-2036
24.	Screw-Ball Adjustment	PCH-2037
25.	Washer-Crank	PCH-2041
26.	Crank	PCH-2042
27.	Screw-Crank	PCH-2043
28.	Handle-Crank	CM-1046
29.	Snap Ring-Lateral Shaft	PCH-2034
30.	Rubber Foot	CM-50133MA
31.	Screw	CM-50134
32.	Plunger Stud	PCH-2059
33.	Plunger Nut	PCH-2060
34.	Pin-Plunger	PCH-2061

Exploded Parts View