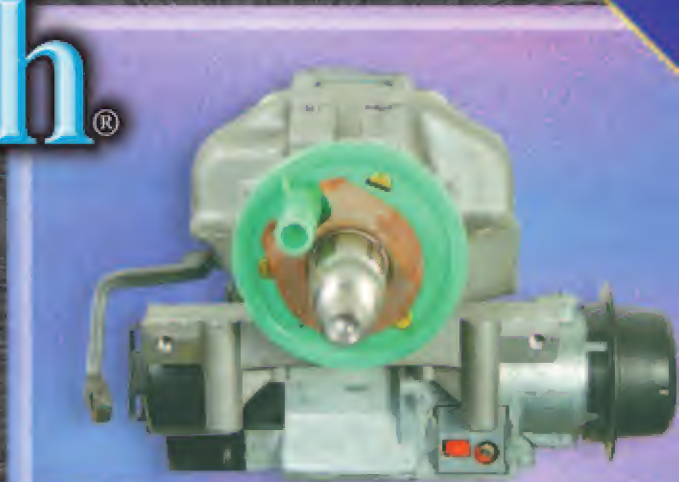


# The National Locksmith<sup>®</sup>

September 1999  
Volume 78  
No. 9  
\$5.00

**CODERS!**  
GM 5000A-5711K- Part 3  
page 120



**Conquering**

***a nightmare!***

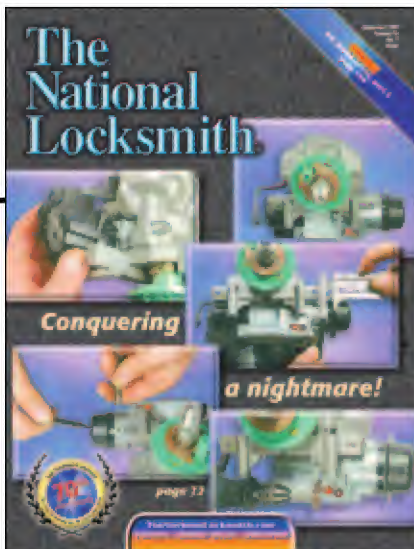


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**TheNationalLocksmith.com**  
**Forums...Online Store...Editorial!**

Hillman Exhibit 1023  
Page 0001



There are few ignition locks with a reputation that precedes them, but the Alpha Tech is one. Learn how to defeat it and what tools can ease the pain.

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# COMMENTARY



## Time to clean house... Throw away your old magazines!

**D**o you save your issues of *The National Locksmith* too? I'm just about ready to throw away an entire shelf of copies. And I do mean a whole shelf. I'm gonna trash every issue I have from January 1988 to December 1998...all eleven years, all 132 issues, all 12,000 or so pages.

I can hear you gasping now! "Don't do it Marc! Think of all the articles on cars, safes, locks, installations, to say nothing of the tens of thousands of codes in those issues!" Well too bad. Out they go, over 100 pounds of paper, with the old coffee grounds and carpet sweepings.

And guess what? You can throw yours away too!

We now have something a lot better than paper copies of those magazine. We have placed all of them on CD. That's right, now you can read the articles and instructions, and see the photos. Heck, you can even zoom in on the photos for a better view.

Best of all, you can do all that right on your computer screen using our new five CD set that takes up no room on your shelf, and no room on your hard drive. Here's the deal. *The National Locksmith* on CD is a set of five compact disks. You must have a computer with Windows95 or later and a CD drive.

**J**ust pop in a CD and look in the Article Index for information you want to view. All eleven years are indexed by both subject and article title. Subjects include Automotive Domestic and Foreign, Access Control, Codes, Electronic Security, Safe, plus dozens and dozens more. You can browse the topics in the 56 page index, or you can search the entire index in seconds using the key word search feature.

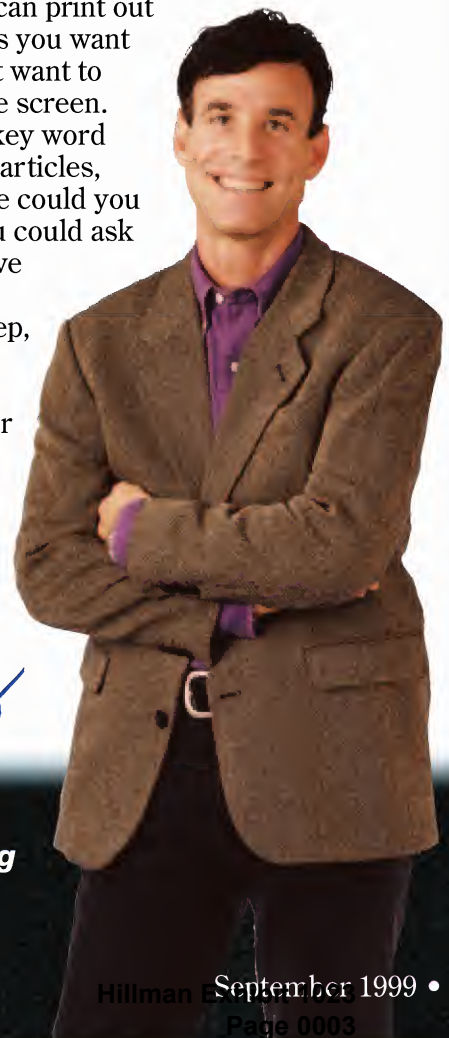
Once you locate the article or information you want to read, the index tells you which of the five CDs contains it. Just pop in that CD,

go to that issue by clicking on the link. You'll find that all the magazines' table of contents are linked directly to the articles. Just click on the article you want to read, and instantly, you're there.

**Y**ou'll never be lost when using *The National Locksmith* on CD. That's because no matter which part of the set you're using at the moment, you always have access to the entire Article Index. That way you are always just seconds from locating the facts you need, when you need them.

Also on the the CDs you'll find cool locksmith related web site links. Almost all of the original articles appear on *The National Locksmith* on CD. Dave McOmie's articles are not on the CDs, but will appear later as a separate set. But the good news is scads of other safe articles do appear on the CD set.

And yes, you can print out whatever articles you want in case you don't want to read them on the screen. Print any page, key word search, indexed articles, links...what more could you ask for? Well you could ask for an inexpensive price. How does \$99.95 sound? Yep, you can have all 12,000 pages on CD for just under a hundred bucks. See page 27 for more information.



**Have questions? Want free technical help?**  
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[www.TheNationalLocksmith.com](http://www.TheNationalLocksmith.com)

**Marc Goldberg**  
Publisher

# Mango's Message

*Greg Mango*

**Greg Mango**  
Editor



**F**or years, insurance companies as well as the general public, have been applying tremendous pressure on the automobile manufacturers to improve vehicle security to reduce auto theft. In 1986, General Motors catapulted to the forefront of vehicle anti-theft system designs with the introduction of the Vehicle Anti Theft System (V.A.T.S.) on the 1986 Corvette. Since that time we have seen the advent of a number of anti-theft system designs, such as: Passlock I, PASS-KEY III, Smart Key Immobilizer System (S.K.I.M.), Passive Anti Theft System (P.A.T.S.), P.A.T.S. 1, P.A.T.S. 2, Nissan Anti-Theft System (N.A.T.S.) and Drive Authorization System (D.A.S.), to name just a few.

There is no argument that transponder technology will, and is, greatly reducing the number of automobile thefts. That's the good side. The introduction of V.A.T.S. alone drastically reduced the number of stolen Corvettes, christening the program a staggering success. The bad side is, with every vehicle anti-theft system featuring properties unique to the given manufacturer, equipment costs to service such vehicles is staggering, and even then, many systems are proprietary dealer only items. All this technology and inherent limitations has sent the locksmith industry into a bit of a quandary.

Members of the locksmith industry, however, are not the only ones in a quandary. Recently, Dave Krofel, a production assistant here at *The National Locksmith*, purchased a used 1998 Honda Prelude SH. Unbeknown to him, this shiny red Prelude featured a transponder and Dave was about to experience the underbelly of transponder technology, which the general public is not yet aware of.

When Dave purchased the car, he received only one key. He was unaware there should have also been a Valet key, and most importantly, a red headed master/programming key. A couple of days later, Dave visited a Honda dealer to purchase some touch-up paint. While there he inquired about the cost of getting a couple of duplicate keys made. He was told it would be \$15.00 per key. Not in any hurry to get it done, he thought he would just do it another time.

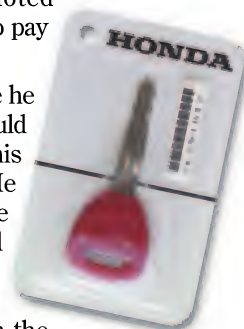
Thinking that \$15.00 for a duplicate key was expensive, he asked me if a locksmith would be any less expensive. I informed him that his sporty pride and joy featured a transponder

## Transponder Trap

and if the dealer was only charging \$15.00 (which didn't seem right to me) he had better get it done, because a locksmith would not be any less expensive. In hindsight, I'll bet the dealer only gave him the cost of a new transponder key blank and didn't include the programming charges.

A few days later Dave was shopping at a mall and noticed another Honda dealer across the street and decided to have his duplicate keys made. When he arrived, this dealer told him the cost would be \$70.00. After being quoted \$15.00 from another dealer he wasn't about to pay \$70.00 so he left.

Finally Dave called the Honda dealer where he purchased the vehicle and was told that he would need to make an appointment, bring in all his keys and leave the car for about an hour. He made the appointment and when he arrived the service technician asked for his keys and told him it would be about \$70-\$80.00 which included the key and programming labor. Dave handed him the one key he had when the technician asked, "Where's the red headed master key?"




"What red headed master key?" Dave responded.

Dave was soon informed that without the master/programming key, they could not make a duplicate key and therefore would instead need to replace the Immobilizer Control Unit, which would include a new Master key and Valet key for the mere price of \$1,000.00!

After recovering from the initial sticker shock of replacing the Immobilizer Control Unit, Dave decided to speak with the used car salesman from whom he purchased the car to see if the previous owner still had the master key and valet key. Fortunately for Dave, they did. I would venture to say that if someone else was given the same scenario, they would not be so lucky.

As time goes on and more and more transponder equipped vehicles are circulating and being sold off used car lots, this is a scenario that will surface again and again. With the introduction of transponder duplicating/cloners recently (Jet, Ilco/Silca, Curtis) this problem will be circumvented. But what about those who lose all their keys? I believe there will be enough customer dissatisfaction that something will be done to ease the pain and eliminate the irate customer service calls that the dealers and manufacturers are sure to receive.

Just what that something is, however, only time will tell. 

# Letters

*The National Locksmith* is interested in your view. We do reserve the right to edit for clarity and length.

## Looks Good To Me

Regarding the phone call and e-mail message that the both of you (Marc and Greg) received about your "appearance" in the magazine, I think you guys look pretty sharp. There is no need for a \$1,500 Versace suit.

I'm sure you guys put out a better image than I did a few weeks back. I worked on five cars in a row under very hot and humid conditions. The last car was a 1990 Mazda Protégé, dark blue, windows all up and parked in the sun. There were no keys. When I left I sure needed clean clothes and a shower. I guess I blew my image that day.

As for Mango's Message about "Lifetime Warranties," (June '99) I have little luck with them. They will lure you with phrases like "100% money back, no questions asked," "Satisfaction Guaranteed." Just try and get it! There are a few that will honor their claim, but very few.

I was preparing a TV Dinner recently, (my wife went to Alaska) and the package said, "Guaranteed,"

and that's all. Guaranteed for what? That guarantee had more holes in it than 100# of Swiss Cheese.

A radio broadcast I listen to regularly has two of the most ludicrous claims I have heard. One is for golf clubs that "Guaranteed to lower your golf score or your money back."

The minute I drop my check in the mail I am risking my money.

The other "Guarantee" is a carbon copy only a different product. An educational game "Guaranteed to raise your child's marks a full letter grade or a full refund." I don't think so.

I'm very cautious in my dealings. Yes, I've been stung in business, however, I do have a supplier in Detroit whom I buy 90% of my supplies from. If I have a problem with their products, they take care of it. In fact, they will go the extra mile.

The only real success I have with guarantees is at the super dooper mega store. If I am having a legitimate complaint about a product the manager is quick to satisfy me. He/she doesn't want an angry customer at the service desk. It's not good for business.

The community I live in is small compared to metro areas and relatively safe. I don't give my customers guarantees per say. I tell them if there is a problem with my workmanship contact me and I'll take care of it. It has worked well for me the 14 years I have been in practice locksmithing. I found that if there is a problem and you take care of it quickly, then the customer is happy and very unlikely to get irate with you. A promise kept carries



much more punch than a promise made.

*Tom Seager  
Michigan*

## No Pay No Play

I have been opening locked cars and trucks for over 30 years now and consider myself an expert in this field.

Recently I was contacted by Geico Insurance to service their customers in my area and open locked cars with keys inside, and if possible, make keys for them if lost.

I thought I would give them a try and did one job for them for which I am still waiting for payment after two months.

I called several times, sent photocopies of the invoice and the only response I got was that they did not receive the copy.

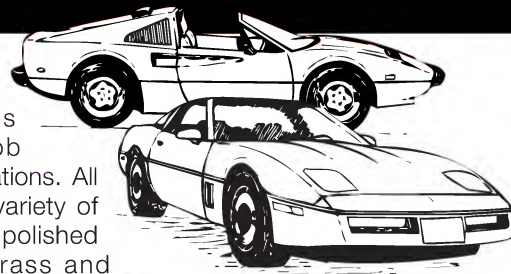
I consider myself lucky that I didn't do any other jobs for this group, considering what other locksmiths have had to go through with similar companies trying to get their invoices paid.

*Bob Galcik*

**The National Locksmith**  
**1533 Burgundy Parkway**  
**Streamwood, IL 60107**  
**Attn: Editor**

# Security Café

**DROP IN FOR  
TOOLS, TECHNOLOGY  
& EQUIPMENT**



## Gator Tool

**CIRCLE NUMBER  
262**

## The Gator Tool

Sievekings Products Company is proud to distribute the new Gator Tool. This unique tool can quickly remove the cap from most auto-motive lock cylinders, without damage. The Gator Tool will uncrimp the rim of the cap, without destroying it. This allows the cap to be reused, in most cases. The same tool will recrimp the cap onto the lock cylinder. Made of the finest hardened steel.

Nickel plated for rust resistance. The uncrimp tool bit is replaceable. The Gator Tool will easily stake the tumbler spring retainer on most GM sidebar cylinders. Gator Tools are available for immediate delivery.

These new traditional and ornate designs include both knob and lever configurations. All are available in a variety of finishes, including polished and lacquered brass and polished chrome. Some models can be ordered in additional finishes including shaded bronze and satin chrome or nickel.

## Corby's 6500 Programmable Keypads

**CIRCLE NUMBER  
265**



The new 6500 Series Programmable Keypads from Corby Industries, Inc. are available in eleven different styles including indoor, outdoor, heavy-duty, spy-proof and parking lot models. These keypads provide an array of sophisticated access control features. Operating at 12 or 24 VDC a door (or other relay-controlled devices) can be activated for up to 165 users, it can be programmed, from the keypad, using a three to six digit code length.

The keypad provides up to four input conditions, supporting Request-To-Exit, a silent panic input, and with the addition of a magnetic door contact, it will report a door ajar and or forced entry condition.

## National Locksmith Automobile Association

**CIRCLE NUMBER  
266**

Do you work on cars? Then you know how difficult it can be to stay on top of the thousands of details involved in over 440 makes and models of foreign and domestic cars found on the road right now.

If you would like to make bigger profits in the field of automotive locksmithing, you should join the National Locksmiths Automobile Association (NLAA). The NLAA will provide you with a special newsletter every month called The Automotive Edge. This publication is a special car report each month taking difficult and common cars with which we service.

We show you step by step how to perform every function on the cars, from opening, to dealing with airbags and transponders. You'll learn and see how to get the locks out, how to dismount the columns if necessary and you will build a reference library, perfect for bringing with you to the job.

If you have ever once had to pass up or waste time on a car job, the NLAA is for you! The first job you do successfully with help from NLAA pays for your entire year's membership. **TNL**



## The Deadbolt Anchor

**CIRCLE NUMBER  
263**

The Deadbolt Anchor™ is a totally concealed door jamb reinforcement device designed to provide maximum security against the most common type of forced entry.

The Deadbolt Anchor™ is unique in that it is hidden from view, behind the doorjamb. The Deadbolt Anchor's™ pocket extends through the jamb, to just behind the deadbolt strike

plate. Instead of just a wood frame and strike plate for the deadbolt latch to fit into, the deadbolt latch will fit directly into the Deadbolt Anchor's™ steel pocket. When an attempted break-in does occur, the pocket will protect the jamb from being destroyed by the deadbolt latch and transfer the force directly to the wall framing. Three 3" screws secure the jamb and Deadbolt Anchor™ to the center of the wall studs.

## Omnia Offers Seven New Interior Latchsets



**CIRCLE NUMBER  
264**

Omnia Industries has introduced seven new interior latchsets to further expand their extensive line of solid brass locksets.

# THE ALPHA TECH

## C O L U M N

by Tom Seroogy & Tom Mazzone

Introduced in the 1991 Chevrolet Cavalier (J Body), the Alpha Technologies equipped column was GM's first attempt at a column not following the standard Saginaw column design. This ignition is also included on the 1992 and 1993 N Body vehicles (Pontiac Grand Am, Buick Skylark, and Oldsmobile Achieva), and continued through the 1994 Cavalier.

### Introduction

Made by Alpha Technologies, a subsidiary of Nissan, the AlphaTech ignition (as it has become to be known) is probably best known for the service problems that constantly plagued this lock.

Utilizing the first double-sided key to be used on a domestically produced GM vehicle, the loose and inconsistent tolerances and non-serviceability of this lock made even key generation by code unpredictable.

The first generation model used a grooved keyway that was notorious for key breakage. Despite moving to a non-grooved keyway to eliminate the key breakage problem, other maladies caused the early retirement of this lock design.

This lock utilized the same 00J0-99J9 and 00K0-99K9 code series as its single sided key predecessor, placing the cuts onto a double-sided laser cut key. During first key

generation, laser cutting the key helps increase the success rate by helping to offset any spacing inconsistency the lock may have, as well as decreasing the amount of wear to the tumblers and key during use.

In short, this lock was not designed to be a serviceable item, and should not be taken apart or disassembled unless necessary. Because key codes are not stamped on this lock, only three options are available should a key need to be generated.

First, and generally recommended, is to replace the lock. Second, the lock, once picked, can be impressioned. Finally, by using the AlphaCracker depth finding keys by Saber Tool Company, a working set of keys can be made without any disassembly or drilling.

Although there are methods for key generation requiring the disassembly of the lock, the design of the lock and the liability using such methods are not worth the trouble or risk.



1. Hidden beneath the steering wheel are two T15 screws.



2. Remove the tilt lever arm.



**3. Use a T20 Torx driver to remove the shroud screws found at the bottom of the column.**



**4. Lift the top shroud half up and out from the bottom shroud.**

#### Method A - Replacement

NOTE: Factory procedure recommends complete column removal before proceeding. The purpose for this is to assure that metal shavings developed while drilling and removing the ignition's mounting screws don't fall into and short out the wash/wipe and turn signal switches attached to the ignition housing.

If factory procedure is not followed, care must be taken to remove both the switches from the housing area during its removal.

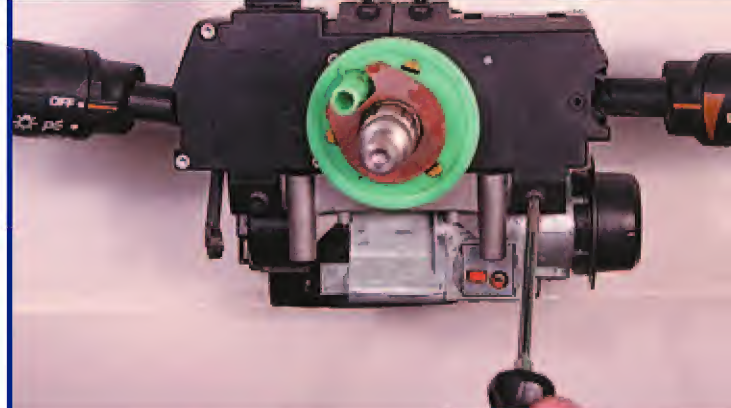
Be aware, however, that should a wash/wipe or signal switch failure occur due to metal shaving penetration, any factory warranty is void and the technician may be held liable for failing to follow factory service procedures.

**1.** Remove the hornpad and the steering wheel. Despite having a two piece clamshell column shroud, two screws fastening the upper and lower shroud together are placed directly behind the steering wheel, requiring the wheel's removal before the shroud can be removed.

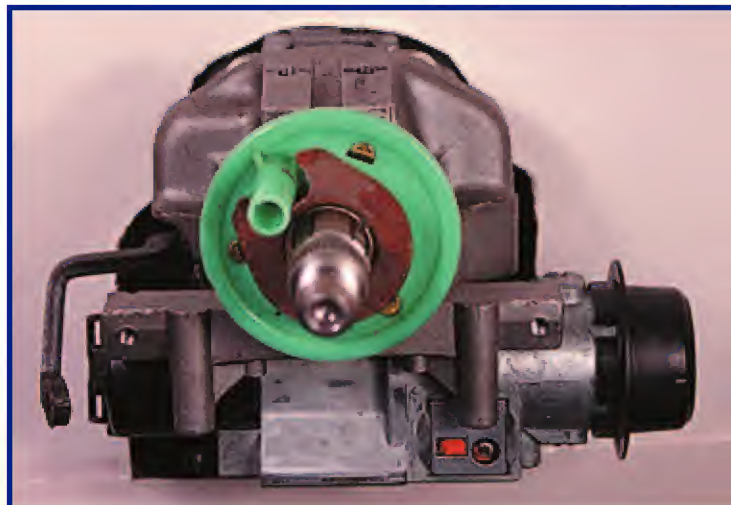
After removing the steering wheel, use a T15 Torx driver to remove these screws. (See photograph 1.)

**2.** Before removing the bottom shroud screws, it is generally easier to remove the tilt lever arm at this time. This arm simply unscrews.

If the arm cannot be removed by hand, wrap the base of the stalk with a strip of leather or piece of rubber vacuum



**5. Remove the four screws holding the wash/wipe and turn signal switches.**



**6. The switches are removed leaving access to the lock body.**

line. If these are not available, use masking or electrical tape to thickly wrap the bottom portion of stalk. Then, gently, but firmly, grasp the arm with a vice grip to unscrew.

It is sometimes difficult to remove this arm without causing some minor damage. Be prepared with some fine emery cloth and satin black spray paint for touching up any scratches. (See photograph 2.)

**3.** After removing the two screws on the face of the column and the tilt lever arm, use a T20 Torx driver to remove the three screws at the bottom of the shrouds. (See photograph 3.)

Then tilt the top shroud up and pull out to separate the shroud halves. DO NOT use force.

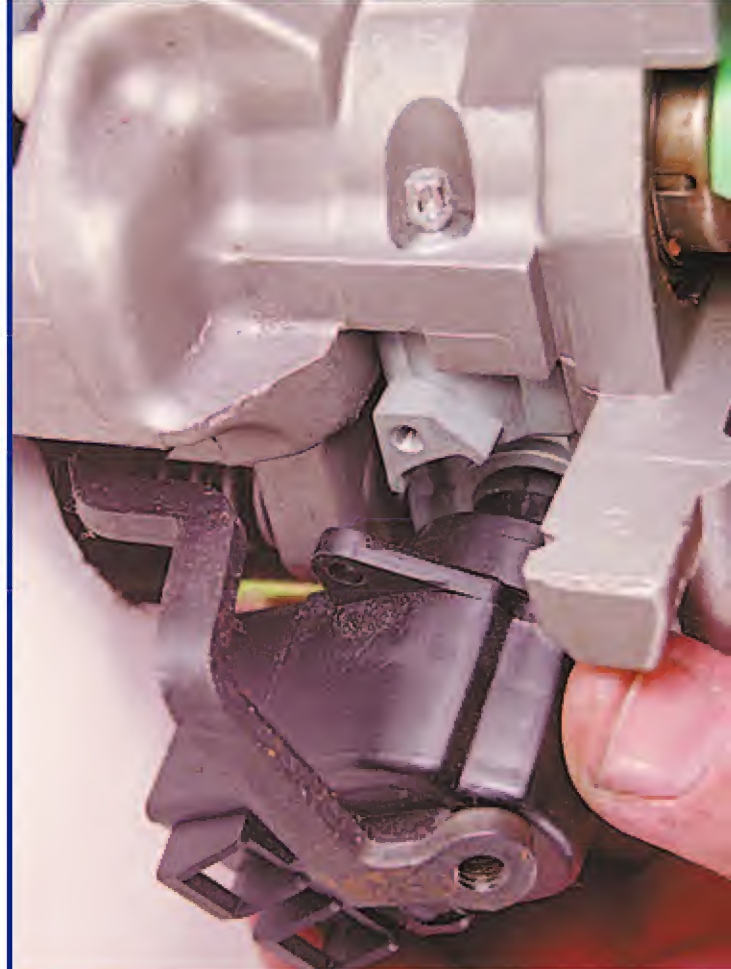


**7. Remove the top and bottom screws that hold the ignition.**

Even after removal of all the screws, the top shroud is attached to the bottom half via a tab and slot at the back of the column. Lifting and pulling the top shroud disengages the tab of the top shroud from the slot on the bottom shroud. (See photograph 4.)

4. Using a T25 Torx screwdriver, remove the screws that fasten the wash/wipe switch and turn signal switch to the steering column. There are two screws per switch, one on the lower part of the face of the switch and one at the top. Once detached, let the switches hang by their wire looms.

Remember, extreme care must be taken to prevent metal chips from entering the switches. As a precaution, cover the switches with a shop rag or plastic bag. (See photographs 5 & 6.)



**8. Maneuver the switch around the tilt arm and away from the lock. Carefully mark the outside of the housing for drilling.**

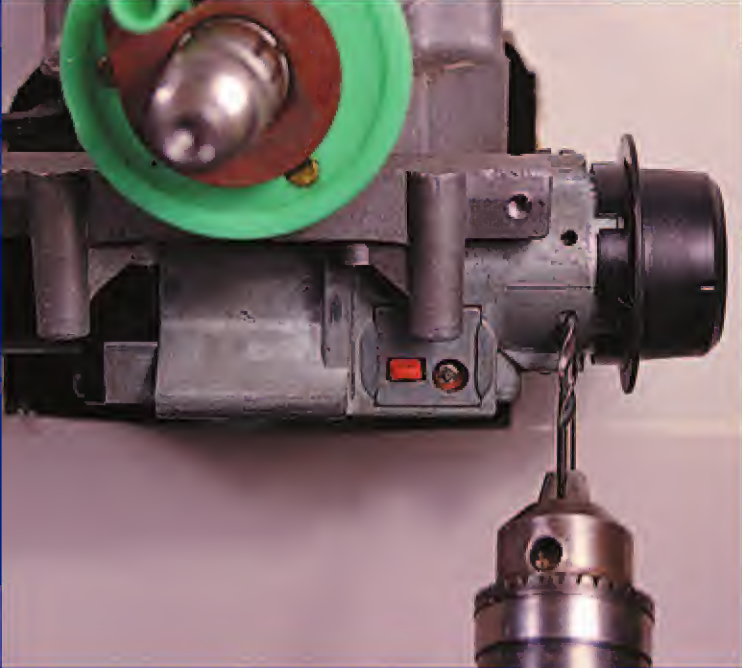


**9. Carefully mark the outside of the housing for drilling.**

5. Use a T15 Torx driver to remove the two screws holding the ignition switch on the back of the housing. (See photograph 7.)

Gently maneuver it out and around the tilt lever arm and let it hang by its loom. (See photograph 8.)

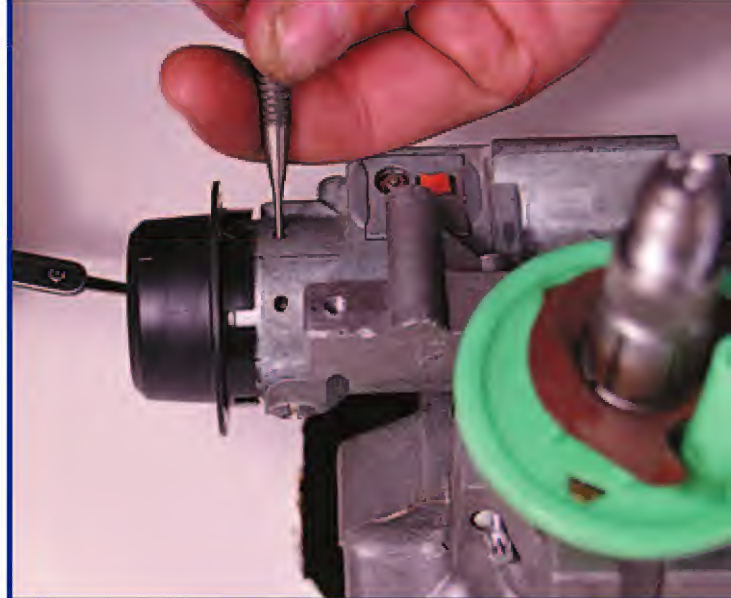
6. On vehicles equipped with an automatic transmission, during normal removal procedure, a key is available to turn the key to the ON position. This is necessary in order to remove the shift interlock cable.



**10. Drill through both the housing and cylinder wall to reach the sidebar.**

Unfortunately, the locksmith typically becomes involved when no key is available. Therefore, an alternate means of turning the lock to the ON position is necessary. In this method, we will pick the ignition.

Because this is a sidebar lock, it is necessary to first locate and depress the sidebar for picking. To reach the sidebar, measure and mark for drilling a hole. Make the mark at 3/8" back from inside facecap flange and 1/4" down



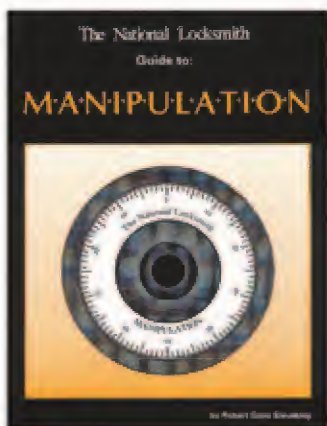
**11. Once the hole is complete, use a probe to place pressure on the sidebar while raking the tumblers.**

from the casting line visible on the housing. (See photograph 9.)

Before drilling, there are two walls to penetrate: the outer housing wall, and an inner cylinder wall. Be careful not to over drill as this will destroy the sidebar, further complicating ignition removal.

7. After marking, use a 1/8" diameter drill to drill through the housing and the cylinder wall. Because the lock is to be replaced, a larger drill bit may be used if desired. (See photograph 10.)

## Manipulation Home Study Course

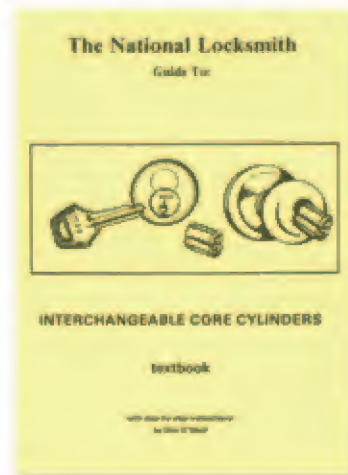


Our home study course guides you on step-by-step process, teaching you everything there is to know about manipulation.

[CLICK HERE TO LEARN MORE](#)

#MAN - 1

## Interchangeable Core Cylinders



[CLICK HERE TO LEARN MORE](#)

#ICB - 1

8. Then use a thin probe to exert pressure on the sidebar. With pressure applied, rake the top and bottom wafers of the ignition. When the sidebar drops and seats into the sidebar notches of the wafers, the lock is picked. Turn the lock to the ON position. (See *photograph 11.*)

9. Using a small flat blade screwdriver, depress the shift interlock cable connector and remove the cable. (See *photographs 12 & 13.*)

10. Then use a 1/4" drill bit to drill off the heads of the ignition retaining clamp bolts. Be careful not to let any of the metal shavings get into the wash/wiper and turn signal switches. (See *photograph 14.*)

11. Thoroughly clean up all metal shavings from inside the vehicle.

12. Install the new ignition lock. In order to reinstall the shift interlock cable it is necessary to turn the lock to the ON position.

13. Tighten the shear head bolts until the fluted head portion of the bolts break away (approximately 97 in. lbs.). (See *photograph 15.*)

14. Reverse remaining procedure.

#### Alternate to Method A

As an alternative to drilling and picking the lock in order to remove the shift interlock cable, complete steps 1 through 5 of Method A and the use the following procedure:

1. Use a Dremel or other hobby tool with a cutting wheel to carefully cut through the staked area holding the saddle in the lock housing. (See *photograph 16.*)

2. Work the saddle loose and pull it out from the housing as far as possible. Then use a small flat blade screwdriver, depress the shift interlock cable connector and remove the cable. (See *photograph 17.*)

3. Finish by completing steps 10 through 14 of Method A.

#### Method B -Impressioning

Complete steps 1 through 8 of Method A before starting this procedure.

1. File knife edge on both sides of a Strattec (formerly Briggs & Stratton) #322046 (Ilco P1099) keyblank and insert into the ignition.

2. Use a probe to depress the lock's sidebar.

3. Rock the key up and down following standard key impressioning techniques.

4. Remove key and check for impression marks. Remember that this lock has opposing wafers with the even space tumblers (2, 4, and 6) coming down from the top and the odd space tumblers (1, 3, and 5) coming up from the bottom. File or use a code machine to cut at the impressioned spaces.

5. Continue impressioning until a working key has been generated. Transfer the cuts to a fresh blank. The key is complete.

6. Reverse order for reassembly.

#### Method C - AlphaCracker

Probably the fastest method for generating an Alpha Tech key is through the use of the AlphaCracker depth finding keys by Saber Tool Company. (See *photograph 18.*)

Although this tool does take some practice, not having to do any disassembly of the lock or column is an added benefit that shouldn't be overlooked.



**12. After turning the ignition to the ON position, use a small screwdriver to depress the shift interlock cable release tab.**



**13. Pull the shift interlock cable out from the housing.**

For a set of the keys and full instructions contact Saber Tool Company, 2511 W. Schaumburg Rd., Ste 213, Schaumburg, IL 60194, 708-843-1017.

To give the locksmith some understanding on the use of this tool, the following abridged edition of the instructions follow:

#### **Working Overview:**

The AlphaCracker depth finding tool consists of four keys for determining the depths of each wafer in the Alpha Technologies ignition found on 1991 through 1994 Cavaliers and 1992 through 1993 Grand Ams, Skylarks, and Achievas.

In its simplest terms, the shallowest cut key to slide below a wafer, indicates that wafer's depth.

For example, if key #1 is inserted into the ignition's keyway and passes below the wafer, the depth of this wafer is 1. (See photograph 19.)

If the key is inserted into the keyway and is stopped by the wafer, the depth of that wafer is deeper than the key being inserted. (See photograph 20.)

For example, if the #1 key is inserted into the ignition's keyway and the wafer drops below the wafer contact point and prevents the key from being inserted any further into the keyway, then the correct depth is deeper than a 1 depth. It is either a 2, 3, 4 or 5.

Remember, the correct depth for the wafer is determined by the shallowest key to slide below the wafer.

#### **Alpha Tech Ignition Overview:**

The Alpha Tech ignition is a six position, true double-sided lock, incorporating wafer tumblers with sidebar.

When a key is inserted into the lock, tumblers 2, 4, and 6 are located on the top and tumblers 1, 3 and 5 are located on the bottom.

There are 5 possible depths for each tumbler.

All General Motors/Strattec (Briggs & Stratton) rules apply.

Both sides of the key must be cut for the key to operate the lock.

#### **Using the AlphaCracker Keys:**

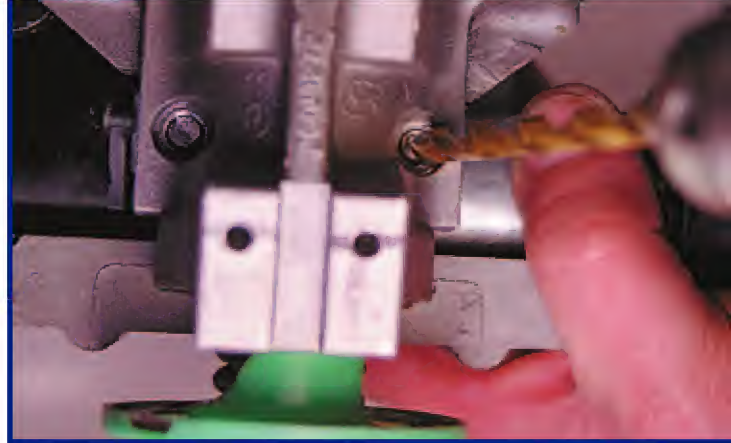
Before you start

- Always make certain the keys are inserted perpendicular to the keyway. Tilting keys up or down may allow them to bypass wafers, rendering an incorrect reading.
- Press on the key such that the uncut or bottom edge of the depth key's blade comes into contact and rests flat within the plug.
- Start with the #1 key and work progressively towards the deeper #5 key
- Each key is marked with a Key Number, indicating its depth.

An Odd/Even Wafer Indicator designates what set of wafers are being read (E designates that even, or top, wafers 2, 4, and 6 are being read. The Odd side is unlettered to avoid confusion, and reads bottom wafers 1, 3 and 5);

A Position Index mark indicates the space being read.

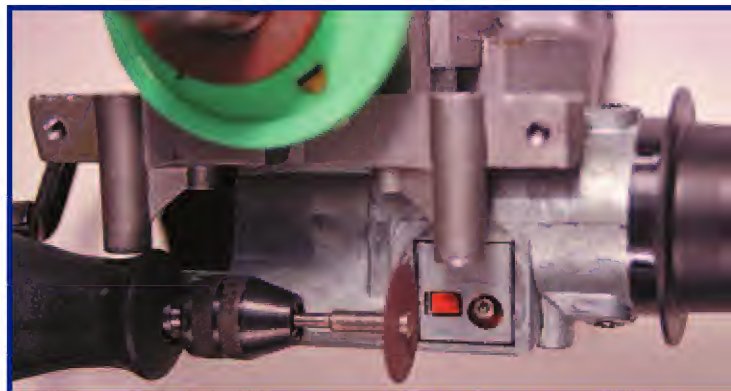
- Due to the construction of the Alpha Tech ignition, the #2 and #3 wafers share the same depth key (marked 2/3). When this key is used, the wafer may be either a 2 depth or a 3 depth. To determine the correct depth see special instructions.



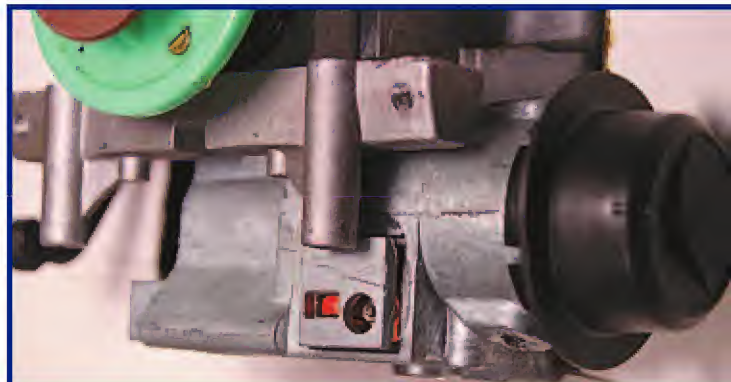
**14. Locate and center punch the shearhead bolts found at the top of the column.**



**15. Remove the old lock and reinstall a new lock.**



**16. Use a cutting wheel to remove the staked area holding in the saddle.**



**17. Use a small screwdriver to pry the saddle out.**

### Starting:

1. Insert Key # 1 into keyway with the E facing towards you. You will be determining the depths for spaces 2, 4 and 6.

2. Push the key into the keyway until the first Position Index mark is aligned with the face of the ignition lock. This is wafer #2. (See photograph 21.)

3. Push the key into the wafer. If the key slides past the #2 Position Index mark to the next Position Index mark, position #2 is a 1 depth.

4. If the key stops at this position, wafer #2 is deeper than a 1 depth. Insert the next depth key, the 2/3, up to the #2 Position Index mark.

5. Push the key into the wafer. If the key slides past the #2 Position Index mark to the next Position Index mark, position #2 is either a 2 or a 3 depth.

6. If the key stops at this position, wafer #2 is deeper than a 2 or a 3 depth. Insert the next depth key, the 4, up to the #2 Position Index mark.

7. Push the key into the wafer. If the key slides past the #2 Position Index mark to the next Position Index mark, position #2 is a 4 depth.

8. If the key stops at this position, wafer #2 is deeper than a 4 depth. Insert the next depth key, the 5, up to the #2 Position Index mark.

9. Push the key into the wafer. If the key slides past the #2 Position Index mark to the next Position Index mark, position #2 is a 5 depth.

10. Once the depth for position #2 has been determined, insert key #1 up to the #4 Position Index mark using the Wafer Slide to lift and bypass wafer position #2. Once position #2 has been passed, remove slide. (See photograph 22.)

11. Repeat steps 2 through 10 to determine the depth of position #4 and move on to position #6. If the user finds difficulty reading position #6, progression the depth for that space is recommended after completing step 12.

12. Turn the keys over to read the odd wafers 1, 3 and 5. Repeat steps 2 through 10 for each wafer. Progression position #6 after positions 1 through 5 have been determined. Using GM rules will help.

### Special Instructions - The 2/3 Key:

Due to the nature of the Alpha Tech ignition, it is not possible to use the AlphaCracker depth finding keys to determine whether a wafer is a 2 depth or a 3 depth.

Once a wafer has been determined to be a 2/3 depth, three methods can be used to determine the actual depth of these wafers.

1. Following the GM key biting rules, use the process of elimination to determine the correct depth for each 2/3 wafer.

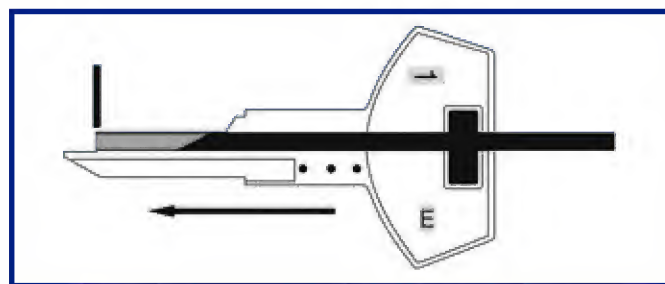
- The key biting must add up to an even number.
- MACS factor of 2.
- No more than 3 of the same depths can be next to each other.
- No more than 4 of the same depths can be used in the same biting.

2. Starting with all cuts at 2, progression all 2/3 cuts until the correct key is found.

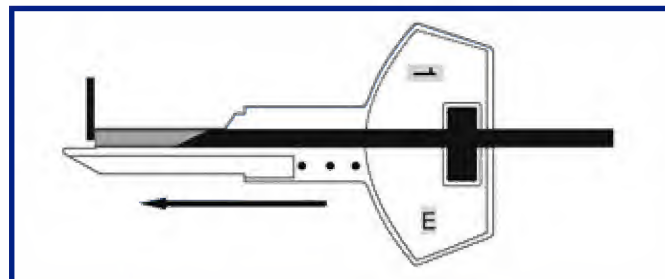
3. Cut all 2/3 wafers to a 2 depth and file to a 2-1/2 depth.



**18. The AlphaCracker by Saber Tool Co. is a fast method for generating working keys for the Alpha Tech ignition.**



**19. If key #1 is inserted into the ignition's keyway and passes below the wafer, the depth of this wafer is 1.**



**20. If the key is inserted into the keyway and is stopped by the wafer, the depth of that wafer is deeper than the key being inserted.**

Insert the key into the ignition, using an impressing tool or vise grips to apply slight turning pressure on the key.

Gently rap the bow of the key on the top and bottom using a small mallet until the key turns.

A secondary sidebar broach may cause the plug to catch in the "ON" position. This is not desired, as impression marks cannot be obtained. If the ignition has turned too far and the sidebar has fallen into this second broaching, simply apply pressure and turn the key back towards the "OFF" position.

With the ignition between the "ON" and "OFF" position, bump the key up and down to obtain impression marks.

Cut a new key. In the 2/3 positions that did not yield an impression mark, cut these to a 2 depth. In the 2/3 positions that did yield an impression mark, cut these to a 3 depth.



**21. Push the key into the keyway until the first Position Index mark is aligned with the face of the ignition lock.**

For more information and pricing on the AlphaCracker, contact: Saber Tool Co., 2511 W. Schaumburg Rd., PMB 213, Schaumburg, IL 60194. Phone (630) 872-1017. Or take your web browser to [www.sabertool.com](http://www.sabertool.com). Circle number 281 on the Rapid Reply Card.



**22. Insert key #1 up to the #4 Position Index mark using the Wafer Slide to lift and bypass wafer position #2.**

The authors of this article also wrote *The National Locksmith's GM Steering Column Course*. The course is the finest reference anywhere covering all GM Columns. It is available through this magazine or through the online store at [TheNationalLocksmith.com](http://TheNationalLocksmith.com). **TNL**



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#ASA - 2000



# To Clone or Not To Clone that is the question

**I**s it more profitable to own a transponder cloning/duplicating device, and reap from the preponderance of transponder equipped autos? Or, is valor better served if one should send the customer to a dealer for duplicate keys?

If only I had the wisdom of Solomon, and could answer.

If I should answer "Yea," I might clone and prosper. But, if I answer "Nay," to decline the opportunity, ignoring the possibility for monetary gain, might I miss my mark? Might I fall short of my desire to give the best and most complete service to valued customers? Surely not!

There are those among us who will take up the challenge, shoulder the burden, and move boldly into the Twenty-first Century. They will serve the needs of those in want of transponder keys. They will reap the benefit if standing at the ready, when opportunity raises the call. It is for those brave souls that I pen this short review.



Read on, for the world of  
opportunity lays before you.



**O**ur world is changing, and change we must, if we are to survive. Transponder equipped autos are and will become more the rule and less the exception, as we begin the year 2000. The "Big Three," (Ford-Chrysler-GM) all offer transponders as standard equipment on many models. All Ford Motor Company autos, except the Escort (Tracer), for 1999 are equipped with transponder security. The Ford Escort/ Mercury Tracer model will end production with the 1999 model year. Ford ngsPATS is the rule, not the exception. Many 1999 GM autos and SUV's use the PK3 transponder system. Chrysler offers the Sentry transponder system as an option on most of their vehicles. Most of the foreign auto makers offer transponders on their high-end autos, and this is only the beginning.

Though originating keys for the transponder equipped autos may demand a sizable outlay for diagnostic and programming devices, duplication of many of the transponder keys is not quite as demanding. There are three major players in the game of transponder key cloning/duplicating. They are ILCO/Silca, Jet, and Curtis. They all offer electronic devices that will clone/duplicate most all of the clonable transponder keys. Ilco and Jet manufacture a similar line of transponder key blanks. Jet however, has recently offered some interesting variations on the GM and Nissan transponder key blanks.



by Bob  
Sieveking



**1. The front panel of the Silca RW2 and Curtis CI-4.**



**2. The rear of the RW2.**



**3. The RW2 is also supplied with a 3-1/2" floppy disk.**

Not all transponder systems allow "cloning/duplicating." Some systems are protected by rolling codes (the key returns a different signature each time it is queried). Some systems use a mathematical algorithm, which processes the query made by the vehicle microprocessor, and returns a code that has an infinite number of possibilities.

For those systems that can be serviced by other than the dealer, there is the clone/duplicating device, or transponder duplicator. The transponder read/write device will allow the locksmith to copy the mechanical portion of the key then read the transponder code of the customers key and impress this code onto an after market programmable transponder blank. The clone/duplicator is born.

Many transponder systems have capacity for only a limited number of transponder codes. With cloned/duplicated keys, there can be an unlimited number of "second keys" made for these vehicles. Because they are all clones, they will all use only one transponder code. The auto microprocessor cannot tell the difference. This is an advantage of cloned/duplicated keys over multiple different transponder keys.

### **ILCO/Silca RW2 and Curtis CI-4**

The first transponder Read Write duplicator (2) we will look at is the ILCO/Silca RW2. If you compare the ILCO/Silca RW2 to the Curtis CI-4 (CI= Curtis Industries) you will find no noticeable difference. The two

transponder machines are virtually identical in every aspect of operation.

*Photograph 1*, shows the front panel of the Silca RW2 and Curtis CI-4. There are three main features indicated.

There is the "Key Receptacle," which houses the read/write antenna. When a key is placed in the key receptacle, the programming device can pulse the transponder of a programmed key to find the response. The transponder chip will respond to a query by giving up its transponder code. The antenna of the receptacle will receive the code and record it in short term memory. If the key is to be duplicated, you would remove the original and place an unprogrammed key into the receptacle. The antenna would then be used to read back the code and impress it onto the new key.

The second feature of the front panel is the "LCD Display" (Liquid Crystal Display). The RW2 has a 2 line, 20 characters per line, display. It is used to prompt the operator to take specific actions during operation. It is also used to display the transponder codes read from the original key, or entered by the operator on the keypad. The display will also indicate the manufacturer and type of transponder being read. If you are programming a key from a previously recorded transponder code, it will indicate the memory location (internal to the RW2) of the transponder code.

The RW2 can record and keep record of up to 99 transponder codes. Lost keys can be replaced and programmed without the need for any other computer devices. The RW2 will also interface with your PC to record and "archive" transponder codes.

The last feature of the front panel is the "Keypad." The keypad allows the operator to direct the programming device to take specific actions. The keypad can also be used to enter a known transponder code into the programmer, so that it can be impressed onto an unprogrammed blank transponder key.

The number/letter keys are pretty much self explanatory. Transponders use "hexadecimal" codes, therefore there are sixteen keys. (1 thru 0, and "A" thru "F". Letters "A" thru "F" represent the decimal numbers 11 thru 16.) The double arrow keys are used to scroll and navigate the cursor through the menu items on the LCD Display. The "Rd" and "Wr" keys indicate "read" and "write" functions. The "ESC" escape key allows you to back up, exit, or cease a particular action. The "ENTER" key is the affirmative key. It OK's, initiates, or completes programming functions.

*Photograph 2*, shows the rear of the RW2. At the rear of the machine there

is an auxiliary power receptacle that allows use of a 15V (volt) transformer, supplied by the manufacturer, to operate the duplicator. The 15V input also charges the rechargeable 12-volt battery, internal to the unit. The Power ON/OFF switch is at the center of the rear of the machine. On the right, is an RS232 (9-pole) data port that will allow the RW2 to be connected to your PC desk top or lap top computer. You must supply the connecting cable.

The RW2 is also supplied with a 3-1/2" floppy disk, like the one shown in *photograph 3*. It contains the utility programs (3 utilities) necessary to archive transponder codes to a computer. It also contains housekeeping utilities, to organize the information by customer name or password, and to open the programming for update. The current units ship with version 1/1 of the utilities. They are "TRANSRW2.EXE," "TRANSOFT.HEX," and "TRANSFER.BAT." I was unable to open the utilities with a Macintosh, but there is no problem if you have a PC.

The RW2 is a menu driven device. This means that when the power switch is turned "on" the LCD Display will prompt or ask questions that will lead you through all the steps necessary to; identify, interrogate, display code information, program new keys, and store transponder code information.

### **ILCO/Silca RW2 and Curtis CI-4 Programming**

Let's run through a simple transponder duplication. For our test, I went to the local Mazda dealer to find a 1999 Mazda 626 LX. The key used was an ILCO MAZ24RT5.

When power is turned "on" the display will read "\*\*\* WAIT \*\*\*" the processor is reading the resident programming. In a few seconds, the display changes to read "CONNECTED TO PC". This is a question. I am not using a PC, so I touch the "LOC/REM" (local/remote) key to tell the processor I am not connected to a PC.

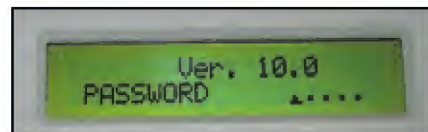
The LCD Display changes immediately to the screen you see in *photograph 4*. It notifies you that you are operating in "Version 10.0," and asks for your "PASSWORD."

When you receive your new RW2, it will be shipped without the Password. You must register the unit with the

manufacturer to receive your password. This is a security measure that insures that your machine and serial number is registered in your name.

When the Password has been correctly entered, the screen will be as you see in *photograph 5*. Press the enter key to enter the password. The Display will change briefly to "PASSWORD OK," and the processor will launch or open the programming.

**I**f the Password is entered incorrectly, the LCD Display will show "PASSWORD ERROR PASSWORD - - - - -." You will have

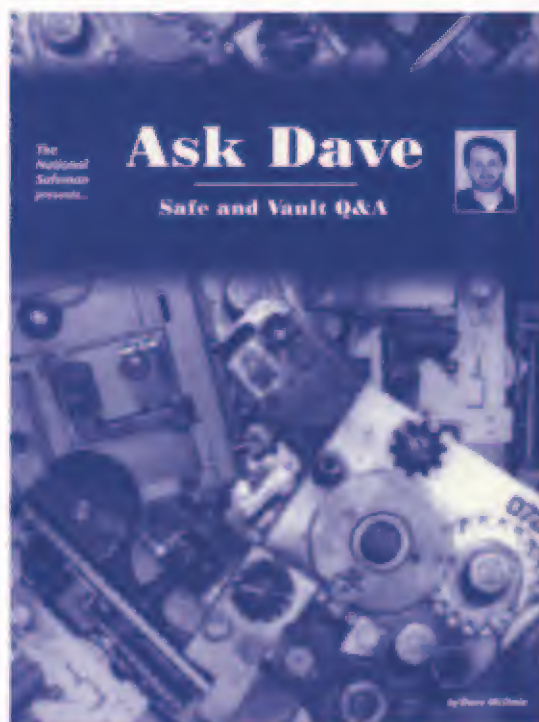


**4. The LCD Displays you are operating in "Version 10.0," and asks for your "PASSWORD."**



**5. The Password has been correctly entered.**

# Ask Dave



You asked. He answered. This is safe and vault Q&A with an attitude.

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#AD - 1

opportunity to enter your Password again. If you do not have or do not know the correct Password you will be locked out of the program. The RW2 will not allow you to work without the Password.

When the processor has launched the program, the first screen will be the main menu. This is a six line menu, but the LCD Display only shows two lines. Use the double arrow keys to "scroll" down the menu.

The options are:

COPY  
IDENTIFICATION  
ENTERING CODE  
ARCHIVE  
TLM  
OPTIONS

The COPY function allows you to begin the copy operation.

The IDENTIFICATION function will allow you to read the customer's key. It will identify; the "Manufacturer and Type" of transponder, and read the hexadecimal Transponder Code.

The ENTERING CODE option will open a screen, which will allow you to scroll through the supported manufacturers ORIGINAL TRANSPONDER types. The supported transponder types are:

MEGAMOS 13  
PHILLIPS 33 - 73  
PHILLIPS 53 - 93  
TEMIC 11  
TEMIC 12

Chose the correct manufacturer/ type, and press the Enter key to open a screen that is appropriate to the type chosen. Different transponders have different formats for the code numbers.

The ARCHIVE option allows you to enter the files of archived transponder codes. The LCD Display shows "DISPLAY CODE POSITION 00." By entering a number between, 1 and 99, which represents the "address" of the code number desired, you can open and display the stored transponder code. The zeros in the prompt screen will change to represent the memory address. Press "Enter" to open the file. The RW2 will store up to 99 transponder codes.

The TLM option is used to access a piece of peripheral equipment not supplied with the RW2. The TLM device is used to program keys for the VAG transponder system. This is a European system. It is found on the Volkswagen, Audi, Seat (Spanish Fiat),

Skoda, and a few others. The TLM plugs into the vehicle, and performs electronic programming functions to originate keys when none are present, delete lost keys from memory, and add keys to memory. I was told that the TLM is not available in the USA.

The OPTIONS function will open a scroll menu that shows these options.

LANGUAGE  
CANC. CUST. ARCHIVE  
KEYBOARD CHECK

The LANGUAGE option allows you to change the language option of LCD prompts. You can opt. for; ITALIANO (Italian), ENGLISH, FRANCAIS (French), DEUTCH (German), or ESPANOL (Spanish).

The C A N C . C U S T . A R C H I V E option will erase all customer archive files. If you Press "Enter," the screen will display; "CONFIRM CANCELLATION NO-ESC YES-ENT." Press "ESC" to exit this function, or press "ENT" to affirm the action and erase the customer files.

The KEYBOARD CHECK option allows you to test the keys of the touch pad. If you are having problems entering codes, you might want to test the numeric keys, to make sure they are operating properly.

We're making a copy of a Mazda transponder, but I'm not sure what type of transponder this vehicle uses. Let's read the key to find out what type of transponder you have, and see the code.

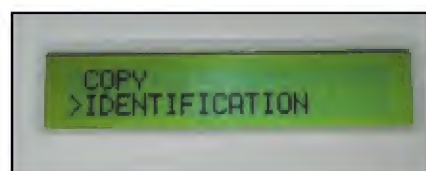
Place the cursor at IDENTIFICATION, as you see in *photograph 6*, and press the "ENT" key. The LCD Display, shown in *photograph 7*, prompts you to INSERT ORIGINAL KEY (and press)-RD.

In *photograph 8*, I have inserted the customer key into the Key Receptacle. This centers the head of the key in the read/write antenna. Because of the close proximity of other keys on a key ring, it would probably be a good idea to remove the customer's key from the ring. I would hate to reprogram all of the keys at one time.

Press "RD," to read the customer key, and the LCD Display changes to "READING IN PROGRESS," then to what you see in *photograph 9*.

3FF4ED78 3FE8A16F 33  
C7FB410F 7D3BDE0F 00

There are four eight-digit numbers. These represent the transponder code. The "33" at the right end of the top line



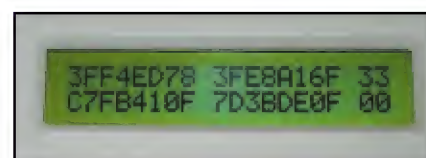
**6. Place the cursor at IDENTIFICATION.**



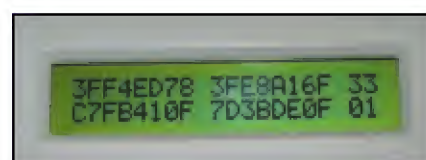
**7. Display prompts you to INSERT ORIGINAL KEY (and press)-RD.**



**8. Insert the customer key into the Key Receptacle.**



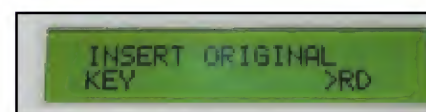
**9. There are four eight-digit numbers. These represent the transponder code.**



**10. The transponder code, transponder type, and location in memory.**



**11. Scroll up or down to bring the cursor to the COPY function.**



**12. Insert the original key into the key receptacle, and press the Rd (Read) key.**

identifies the transponder type. It is a Phillips (original or emulated) transponder. The RW2 will recognize and identify fourteen (14) different types of transponders. It will also identify, but not read or duplicate, CRYPTO transponders. CRYPTO transponders have a code that can not be copied. Do not try to copy CRYPTO coded transponder keys. The "00" at the right end of the bottom line represents the serial location of the file assigned to the code if the code is carried in the RW2 archive memory. As you can see, the code has not been archived.

If you press "ENT" at this point, the RW2 will file the Transponder code in a serial memory location. Press the "ENT" and the screen will change to "KEY MEMORIZED." When I checked the archive to see if the code was recorded, the display showed what you see in *photograph 10*. Notice that the code and transponder type are the same, but the archive address has changed to "01," to indicate the location of the transponder code in the RW2 memory. With this information you could "originate" a key for this auto, a week or a year from now, without having the original key. Up to 99 codes can be stored in the RW2 without the need for your PC. If you archive a large number of codes you will need the PC to keep track of them. This sounds like a dealer application for the RW2. If you simply copy the code information into a notebook, you could achieve the same result.

The RW2 will allow you to use the keypad to enter codes into the processor, for recording onto the key transponder chip. I can see this as an advantage for the locksmith. If the dealer or manufacturer will supply the transponder code over the phone, you will be able to program a key for your keyless customers without difficulty. This is where the RW2 really stands above the competition.

Now let's make a new key. Press "ESC" to return to the main menu. Scroll up or down, using the double arrows, to bring the cursor to the COPY function, as you see in *photograph 11*. Press ENT to enter the copy mode. The LCD Display changes to what you see in *photograph 12*. The Display reads "INSERT ORIGINAL KEY >RD." Insert the original key into the key receptacle, and press the Rd (Read) key. The display briefly shows "READING IN PROGRESS," then displays the prompt

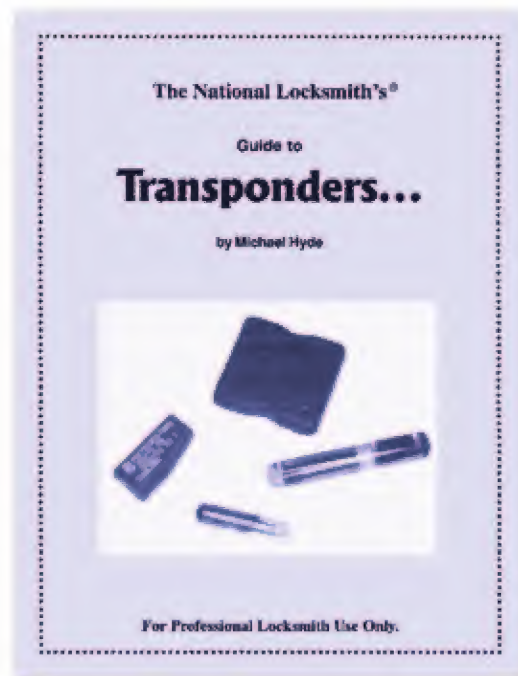
"REMOVE KEY," as you see in *photograph 13*. When the original key is removed, the display immediately changes to "INSERT BLANK KEY >WR." See *photograph 14*. Insert the blank key into the key receptacle and press the "Wr" key.

If the key is already programmed, the LCD will prompt you with "ALREADY PROGRAMMED OVERWRITE? >WR." (See *photograph 15*.) If you want to overwrite the transponder, the old code will be erased and the new code written in its place. Press Wr, to write the new transponder code over the inserted transponder

blank.

If the new key is not programmed, the processor will begin to write our new transponder code to the key chip. The LCD Display will show "WRITING IN PROGRESS." When the key has been programmed, the processor will check the programming. The RW2 pulses the transponder to read the newly impressed code. If the code is returned correctly, the RW2 will indicate that programming was successful by displaying "OPERATION COMPLETED" on the LCD Display. If the key has a faulty transponder chip,

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or there is no key in the key receptacle, the display "TRANSPONDER NOT DETECTED."

The "OPERATION COMPLETED" prompt will remain on the LCD screen for a few seconds, then change to "OTHER COPIES? NO>ESC YES>ENT," as you see in photograph 16. If you need to make other copies, press ENT to remain in the programming mode. If you only need one copy, you can exit the programming mode by pressing ESC.

**P**ress the ESC key to exit the programming mode. The LCD Display will ask if you want to archive the code. The display will show "MEMORIZE CODES? NO>ESC YES>ENT." (See photograph 17.) If you press ENT, to enter the code into memory, the display will change, filling the screen with the transponder code, transponder type, and location in memory. This is the same screen that you see in photograph 10. Press ESC to exit the programming mode. The processor will return to the first programming screen, and ask you to insert the customer's original key. Press ESC again to return to the main menu. Turn off the power to complete the job.

With no experience, you should be able to clone/duplicate a transponder key in less than a minute. Just remember to read the operation manual before you begin. Carefully follow the screen prompts and follow the directions.

**Jet ETD-1**  
The Jet ETD-1 (Electronic Transponder Duplicator-1) transponder decoder/duplicator shown in photograph 18, is a fine piece of equipment, designed to read transponders and impress the code onto a new transponder blank. The Jet ETD-1 does not have the same features as the RW-2, but it does represent a strong presence in the market.

A quick look at the front panel reveals four main features. They are; the LCD display, the key receptacle, and the green (read) and red (write) buttons.

The LCD display is used to communicate instructions to the operator, and display the transponder type being read.

The key receptacle houses the read write antenna. When a key is inserted into the ETD-1 receptacle, it will be

centered in the antenna ring.

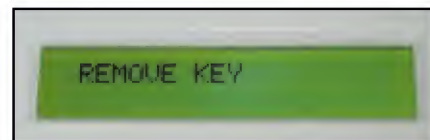
The red and green buttons control all functions of the ETD-1. The green "READ" button is pressed to query the transponder present in the key receptacle. The red "WRITE" button is pressed when you want to record the transponder information to a new unprogrammed transponder key blank.

The rear of the device has access to the battery compartment, an auxiliary power jack, and the on/off switch. Space for an optional data port card is also found on the rear of the ETD-1.

The ETD-1 is powered by a standard 9-volt radio battery. This greatly simplifies maintenance. The unit can also be operated on standard 115VAC power by using the auxiliary power transformer, included with the ETD-1. Plug the auxiliary power transformer cord into the auxiliary power jack on the rear of the device.

The optional data port module supplies an RS232 connection for your PC. (See photograph 19.) With the optional port and software, you can record transponder codes to your PC, with additional information, such as codes, key cuts, customer names, and security codes. If you intend to program keys from a known transponder code, you will need a computer and ETD-1. The ETD-1 can not originate a transponder key without the computer link.

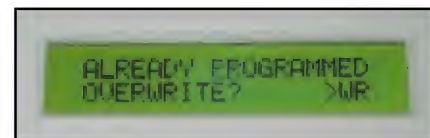
The ETD-1 is accompanied by a "Security Key," which must be used to initiate the unit. The "Security Key" is a red headed transponder key. (See photograph 20.) The transponder contains the "secret code" which allows the ETD-1 to initiate its programming mode. If you do not have the "Security Key," you will not be able to use the ETD-1.



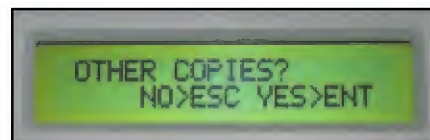
**13. Display briefly shows "READING IN PROGRESS," then displays "REMOVE KEY."**



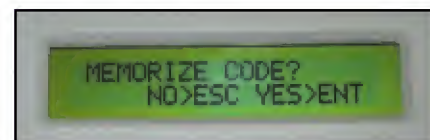
**14. Insert the blank key into the key receptacle and press the "Wr" key.**



**15. If you want to overwrite the transponder, the old code will be erased.**



**16. If you need to make other copies, press ENT to remain in the programming mode.**



**17. The LCD Display will ask if you want to archive the code.**



**ETD-1**

**18. The Jet ETD-1 transponder decoder/duplicator.**



## Programming

Let's program a transponder key on the Jet ETD-1. First, insure that you have a fresh battery, or have plugged the auxiliary power transformer cord into the ETD-1. Turn the power on/off switch to the "on" position. The display will show the serial number of your ETD-1, and a portion of the security key code. The display will then read "INSERT SEC-KEY and press Read." If the security key is not inserted within 30 seconds of powering up the unit, the display will shut down and the unit will go into a battery save mode. Press the read key to reactivate the LCD display.

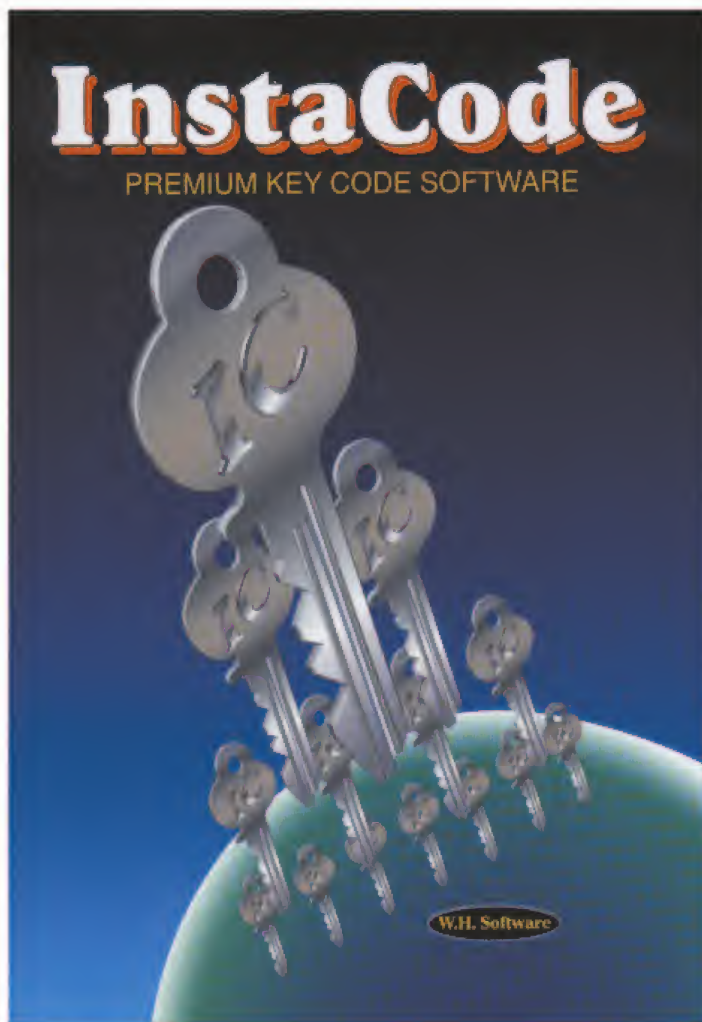
Insert the RED "Security key" into the key receptacle, and press the RED "read" button. The ETD-1 will interrogate the security key code. If the code is correct, the ETD-1 will initiate the programming mode. The LCD display will read "INSERT CAR KEY - PRESS READ." (See photograph 21.)

Insert the customer's key into the key receptacle, and press the RED "read" button. If the key has a defective transponder, or is not a transponder key, the LCD display will read "NON-TRANSPONDER." If the key has a transponder type that is not supported by the ETD-1 system, the display will read "CANNOT." The ETD-1 will not identify transponders that it does not support.

With the customers key in the key receptacle press the "read" button. The LCD display shows the make of the transponder. (See photograph 22.) The ETD-1 will identify; PHILLIPS, NOVA, TEMIC, and MEGAMOS transponders. The display will show "DEVICE MEGAMOS Read correct" (or PHILLIPS NOVA, or TEMIC). Press the "read" button a second time to see the transponder secret code. (See photograph 23.) The code will be displayed on the LCD screen. Again press the "read" button (third time). The display will read "INSERT NEW KEY AND PRESS "WRITE." (See photograph 24.)

Insert the unprogrammed transponder key into the key receptacle and press the RED "write" button. The ETD-1 will pause, then the LCD display will read "WRITING SUCCESSFUL." (See photograph 25.) When the key is removed from the ETD-1 you are ready to begin the process again. The LCD display will prompt you to "INSERT CAR KEY AND PRESS READ." If you are not going to program additional

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#IC - 2001

keys, turn the power switch to the "off" position. If you forget to power down the unit, it will wait 30 seconds and go into a "sleep" or battery save mode. The display will go blank. Press the read key to "wake up" the display and begin the programming sequence again. The battery save mode is a very nice feature.

The transponder has been programmed, and the job is done. Programming the transponder will most likely take less time than duplicating the mechanical cuts from the customer's key.

You should be able to operate this unit with very little training, but read the instructions carefully before you begin.

Guard the RED "Security Key" from loss or damage. Use it only to power up the ETD-1. If you write to it, by pressing the RED "write" button while it is in the key receptacle, you will change its code and render it useless. Without the "Security Key," you will not be able to use the ETD-1.

## Conclusion

Any of these transponder cloning/duplicating devices are easy to use, and ruggedly built. They offer the locksmith and key cutter the tools necessary to satisfy the needs of their customers.

Will it become the center of attraction in your shop, and generate a line of customers that will make you rich overnight? Probably not. Will it allow you to service those customers that come to you for transponder keys? Yes, but you must let your customers know you can duplicate their "Transponder Based Keys." I still have customers come to me that are surprised that we make VATS keys. They have been educated by the car dealers to believe that they have keys that can only be made by the dealer. Get a sign that tells your customers that



**19. The optional data port module supplies an RS232 connection for your PC.**

you make keys for the new transponder equipped autos (advertise). List the cars you can service. Go to the car dealers and make them a key for one of their transponder vehicles (demonstrate). Put the transponder logo and a few words in your yellow page ad, or on your service vehicle (advertise). If you can't find customers, you have to run up a flag and beat your little drum. The customers will find you. Tell your "transponder story" to an editorial writer for the local newspaper (advertise free).

Nothing sells itself. Nothing will happen, until you make it happen. Transponders are a FACT. The need for "spare keys" supports most of us. The tools to generate those keys are changing. Without the tools you will be shut out of just "one more" portion of your business. Get the tools. Beat the drum. Do the work.

## Say the Words - Get the Money

If life be the judge, then let me be judged by what I did, rather than what I did not. For, opportunity is met only for those that aspire. It would be sad, indeed, to reach the end of life's challenge, and be greeted with the words, "It was there for you."

*For more information contact:*

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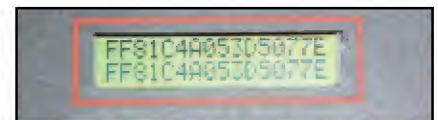
**20. The "Security Key" is a red headed transponder key.**



**21. Insert the customer's key into the key receptacle, and press the RED "read" button.**



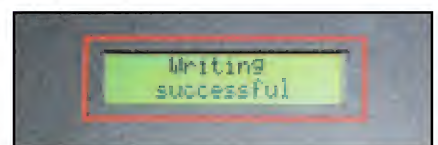
**22. The LCD display shows the make of the transponder.**



**23. Press the "read" button a second time to see the transponder secret code.**



**24. The display will read "INSERT NEW KEY AND PRESS WRITE."**



**25. The LCD display will read "WRITING SUCCESSFUL."**

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# The LAB Annex<sup>®</sup>

**A**lthough LAB is probably best known for their precision replacement pin tumblers and pinning kits, they do make a variety of locksmith related tools. Their newest is quite impressive. Called the "Annex" this new tool from LAB is designed for servicing Best style (or small format) interchangeable cores. (See photograph 1.)



by  
**Sal Dulcamaro,**  
**CML**

The Annex is sort of an all in one tool. It can be used as a capping block, and it is set up to securely unload the pin chambers of an I-Core for decoding. To the right of the fixture in photograph 1 is a Capping Tool (the short tool) and an Evictor Tool (long tool).

The Capping Tool is used for capping coded pin chambers, while the Evictor Tool is for dislodging and removing pins and springs in an

already coded I-Core. The tool identified as the Evictor Tool is more commonly referred to (in the industry) as an "ejector" tool.

The part that holds the ejected pins and springs is called the "Code Book". It has been removed from the fixture in photograph 2. There is a ball detent on the bottom toward the back, in the vacated cavity where the Code Book was removed. It holds and helps position the Code Book when it is inserted into the fixture for decoding I-Cores.

The first demonstration covered will be the capping procedure, so the Code Book doesn't need to be in the Annex yet.

## **Loading and Capping I-Cores Using the Annex**

Three main components make up the I-Core: the shell, sleeve and plug. Pin chamber holes run through all three, and the holes of each must be aligned with the others before one can load the pin chambers. To align the chambers in an uncoded I-Core,

you must first make sure that the locking lug is fully extended. The locking lug is the part of the sleeve that holds the I-Core in the housing. The keyway of the plug should be vertical so all chambers are aligned.

Photograph 3, shows the I-Core being inserted into the Annex. The I-Core should be pushed inward all the way until it stops, as in photograph 4.

**1. The Annex tool from LAB is designed for servicing Best style interchangeable cores.**





2. The part that holds the ejected pins and springs is called the "Code Book".



3. The I-Core being inserted into the Annex.



4. The I-Core should be pushed inward all the way until it stops.

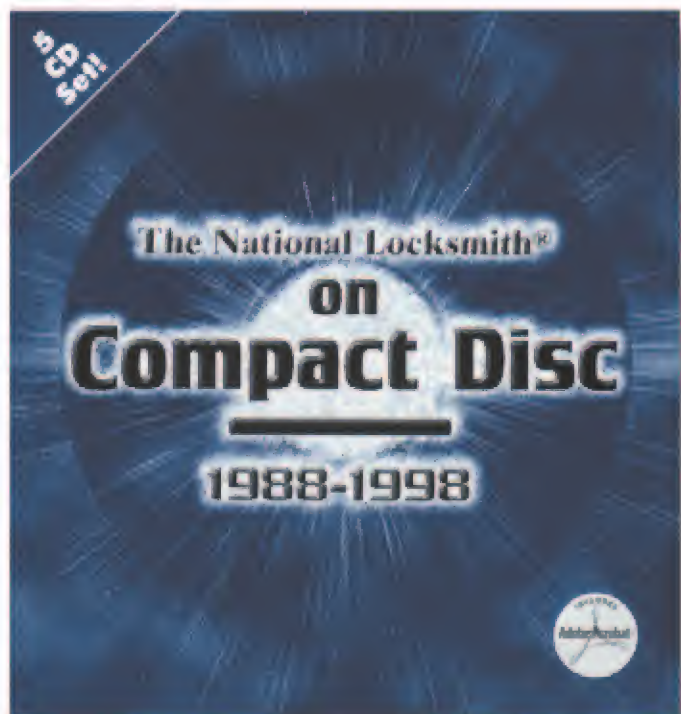
The Evictor Tool (in my hand) is designed for dislodging pins, but for the moment I will use it as an alignment tool (as suggested in the Annex instruction sheet).

In *photograph 5*, the Evictor Tool has been placed into the last chamber (closest to the front). This style I-Core normally has pin chambers and key cuts referenced tip to bow, instead of the more common bow to tip orientation. The Evictor Tool is long enough to extend into the small diameter ejector holes that are normally on the bottom surface of the I-Cores. With the pin chamber alignment secured, I can start loading pins in the first chamber, as seen in the photo.

The I-Core being used has seven pin chambers. You will probably find that I-Cores of this format will be typically made with six or seven chambers. A six chamber I-Core would have the second chamber from the back (or sixth chamber from the front) as its first chamber.

I don't normally do it, but the instruction sheet indicates that

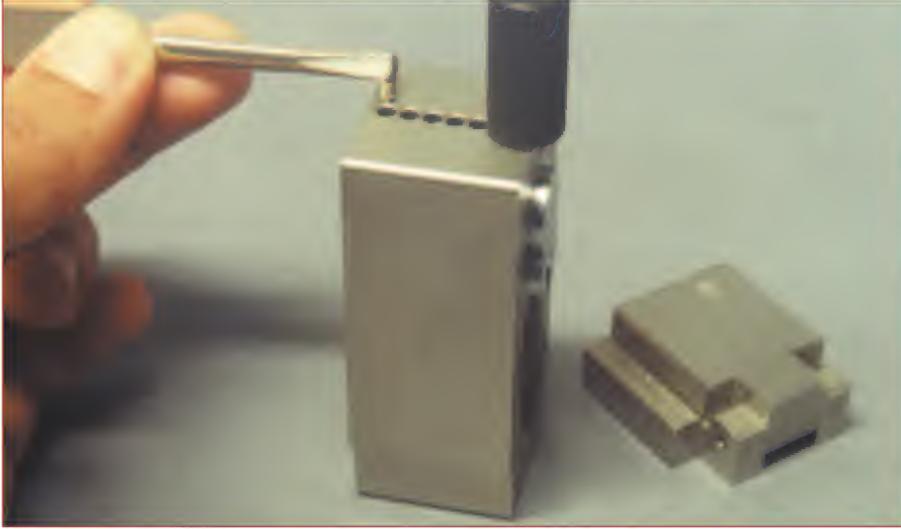
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#TNL - CD1



5. The Evictor Tool has been placed into the last chamber.

individual chambers should be loaded, tested and then capped, before working on the next pin chamber. It seems like a good idea. That way you will know if any particular chamber was loaded wrong, as it happens. If a key doesn't work, you will know that the chamber just loaded is wrong, rather than a previously loaded chamber. If you load all the chambers at once, before testing the keys, you will have to check every chamber to find the error.

With the first chamber loaded the Evictor Tool is removed. (*See photograph 6.*) It is no longer needed for alignment once one chamber is filled. After a spring is loaded on top of the pin stack and the keys have been tested it is time to load a chamber cap and take out the Capping Tool.

The tip of the Capping Tool is in the first chamber. (*See photograph 7.*) At this point, it is resting on the individual chamber cap that has not yet been seated. Use a small plastic or rawhide hammer (mallet) to cap the chambers. A metal faced hammer could damage the tool while applying too much force. If the tool tilts while capping, the chamber cap might not seat properly and actually protrude slightly from the top of the I-Core. Hold the Capping Tool straight while tapping it with a hammer.

The completed first chamber will maintain alignment for the rest of the chambers. The remaining chambers should repeat the same process just completed. That is: load the pins and spring, test the keys, load the chamber cap and seat it with the Capping Tool. After all the chambers are filled, your I-Core should be ready to install in the proper housing.

### Unloading an I-Core Using the Annex

One of the more valuable features of the Annex is its ability to effectively unload the pin chambers of an I-Core without losing the order of the pin stack. If you mix up the order of the pins, you will not be able to accurately decode an I-Core. The part called the Code Book is what holds the pins securely so that they can be measured later and decoded.

**T**he Code Book must be placed back into the fixture, before you can load an I-Core for decoding. *Photograph 8*, shows the Annex with the Code Book reinstalled into the fixture. It loads from the front of the fixture and slides inward. When it goes most of the way in, it will begin to engage the ball detent. Continue pushing inward until you feel the ball detent engage a small recessed slot on the bottom of the Code Book. That will hold and align its chambers with the rest of the fixture.

When capping an I-Core, the tops of the pin chambers should face upward while it is in the fixture. The position of the I-Core must be reversed when decoding is done. Looking back at *photograph 8*, you can see that it is upside down. The ejector pin holes are pointing up and the chamber caps are pointing down. It is properly oriented to place into the fixture.

In *photograph 9*, I have already ejected the cap, spring and pins from the first chamber. The Evictor Tool is now inserted into the second pin chamber. It doesn't go all the way down because the pin stack is taking up part of the space. The tip of the Evictor Tool rests on the bottom tip of the bottom pin. The tool should be



6. With the first chamber loaded the Evictor Tool is removed.



7. The tip of the Capping Tool is in the first chamber.



8. The Annex with the Code Book reinstalled into the fixture.



**9. I have already ejected the cap, spring and pins from the first chamber.**

tapped down gently. Apply just enough force to disengage the chamber cap.

With the Evictor Tool all the way through, as in *photograph 10*, the contents of that pin chamber have been moved into the matched



**10. The contents of that pin chamber now in the Code Book.**

chamber position of the Code Book. You should continue emptying each chamber until all of the contents of the I-Core have been securely transferred into the Code Book.

#### **Decoding the Contents of the Code Book**

When the I-Core has been emptied, it should be removed from the fixture.

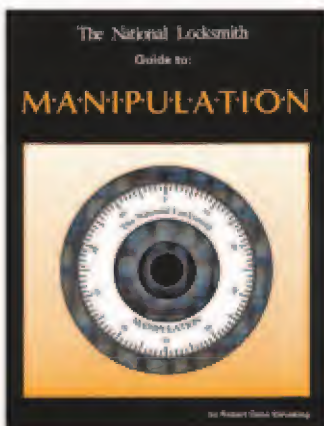


**11. When the I-Core has been emptied, it should be removed from the fixture.**

Once it is out, you can start to withdraw the Code Book, as in *photograph 11*. As long as you hold the Code Book together, you shouldn't lose or rearrange any pins.

I have the Code Book in my hand in *photograph 12*, and am holding it together to prevent anything from falling out. At the bottom there are two sets of consecutive numbers. Those numbers identify the pin chamber positions. With its tip to bow point of reference, a seven chamber I-Core uses every chamber in the Code Book. From left to right, it counts from 1 to 7. A six pin I-Core would not use the chamber at the very back end, so it

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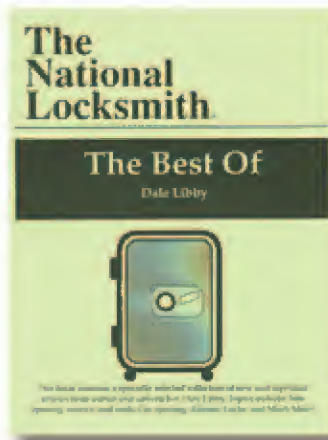


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#MAN - 1

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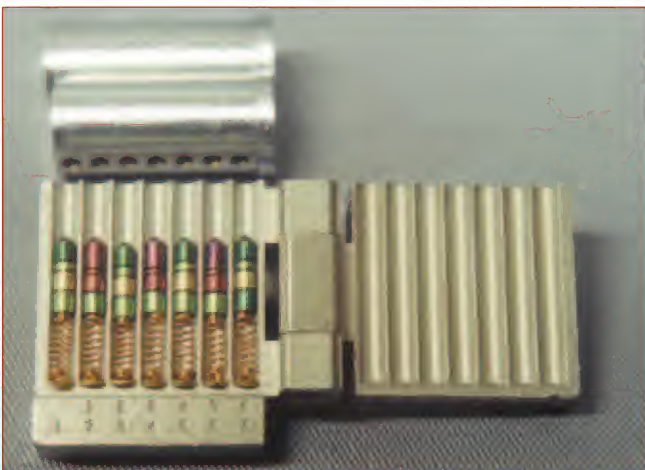
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#DALE



12. The Code Book in my hand holding it together to prevent anything from falling out.



13. The Code Book opened revealing all of the individual pin stacks.

skips that chamber position and counts from 1 to 6.

Never open the code book unless it is securely resting on a stable flat surface, or you may tip over the contents. *Photograph 13*, shows the Code Book opened and revealing all of the individual pin stacks. You can see the seven chambers of the I-Core directly in line with the numbered chambers of the Code Book.

To determine the control key cuts, you should measure and decode the value of the top pins from each of the pin chambers. Since everything is upside down in the picture, the top pins are actually at the bottom of the pin stacks (just above the springs). The chamber caps are at the very bottom (below the springs). If you don't have a chart handy that converts the measured length to the pin size, you can divide the measured height of the pin and divide it by .0125 inch (the increment for A-2 system pins).

**F**or example, if the top pin height is .050 inch, dividing it by .0125 would equal 4. That would be a #4 size pin. You would then subtract that value from the number 13. Thirteen minus four equals nine. In that example the control key cut would be 9.

This method works only with A-2 systems when the pin stack total is the required value of 23. If the lock has been coded properly, 13 minus the top pin value will give you the control key cut value for that pin chamber. The master key cuts can be determined, but you would need a working change key for a particular I-Core for the process to be practical. I won't go through that process, but decoding the master key with an I-Core is virtually identical to the method you would use for standard lock cylinders. Determining a pin size by dividing by the increment will work with all the pins in the stack except for the bottom pins.

You should be able to buy the Annex from most suppliers that already carry LAB brand pin tumblers. If your supplier doesn't stock it, contact LAB at: 800/243-8242, or circle 280 on Rapid Reply. **TL**

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#MOT - 2



# 1998 Honda Odyssey

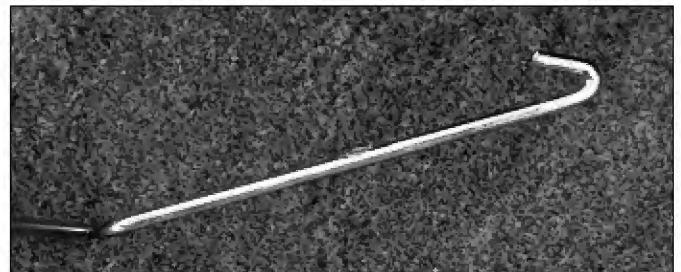
part 1



by  
**Michael Hyde**

**T**he Odyssey is Honda's entrance into the popular and profitable minivan market. The Odyssey is also sold under the name Oasis for the Isuzu line.

Due to the length and number of photographs in this article, this will be broken into two parts. This month covering the ignition and doors and next month the hatch, glove box and programming procedures.



**2.** Start out with a good set of wedges and what I call a 'sideways gripping' tool.



**1.** Opening the Odyssey is pretty simple, since Honda made a weak attempt at shielding the vertical linkage rod.



**3.** The vertical linkage rod has a thin rubber sleeve to slow down the Slim-Jim. Grip the rod from the side and you will be pressing the rubber sleeve against the rod and then raise it up.



**4.** The ignition lock can be a real pain to get out. This van is equipped with a dealer only transponder system.



**6.** There are 6 Phillips-head screws to remove.



**5.** To remove the ignition lock you must first remove the plastic column shroud.



**7.** Once the screws are removed you can unsnap the plastic shroud. The shroud fits in the dash tightly and it may be necessary to remove the lower dash panel.



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#PI



**8.** To remove the lower dash panel first remove the 2 Phillips-head screws on the right side.



**9.** Next remove the screw behind the small flip out compartment.



**10.** The panel can now be unsnapped and removed.



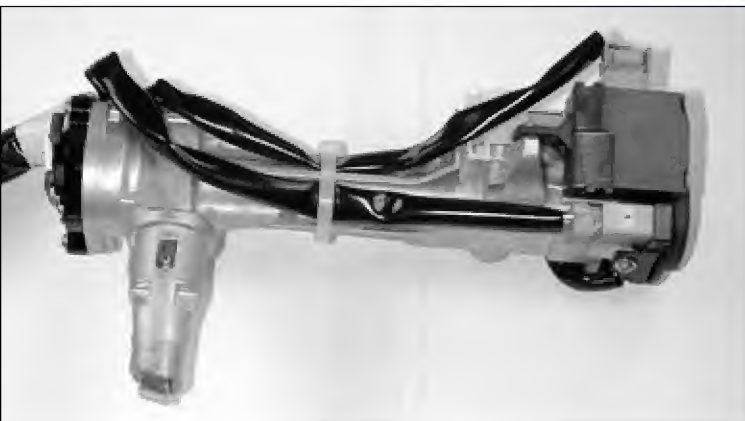
**11.** Once everything is removed, you have access to the ignition lock and housing.



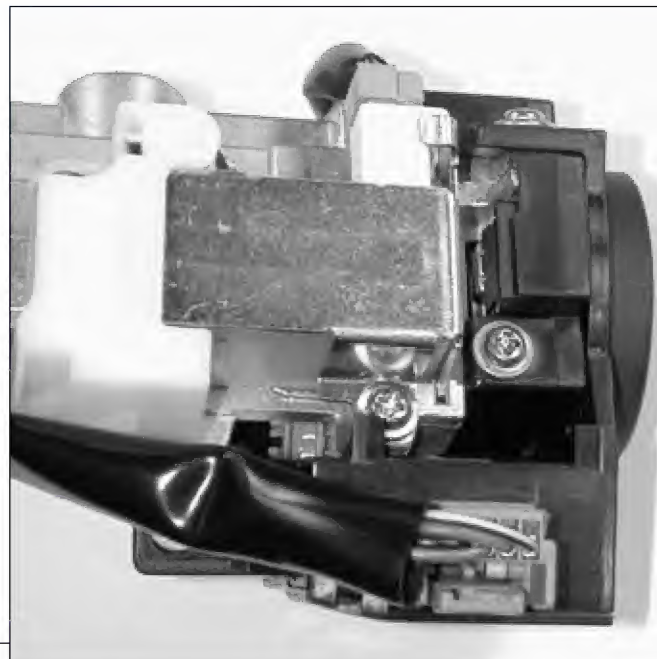
**12.** The ignition lock cylinder is retained into a larger lock housing. The larger lock housing has an active retainer.



**13.** There is a shear-head bolt that secures the lock housing with a clamp at the base of the lock where it meets the column.



**14.** This is no small lock assembly.



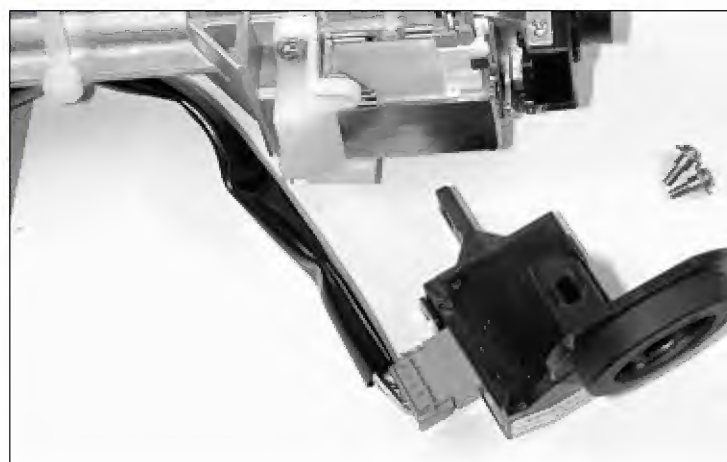
**15.** A view of the active retainer. The key must be turned to the ON position to depress the retainer.



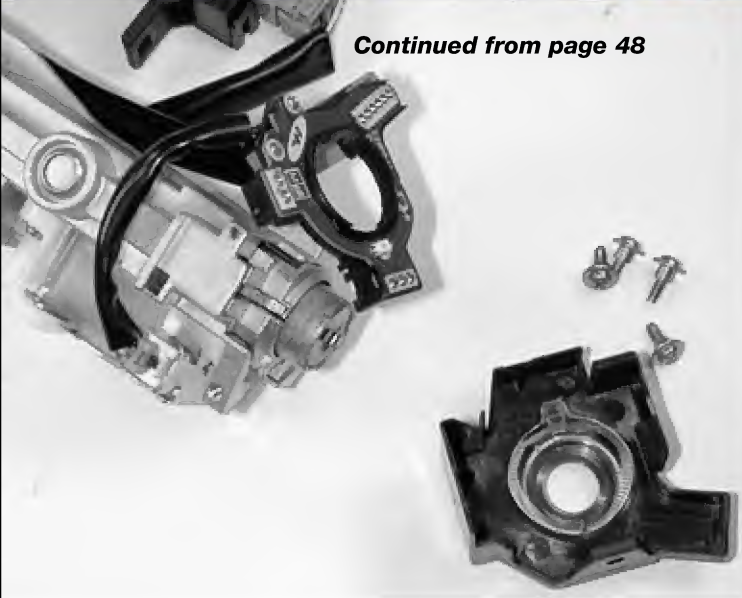
**17.** There is a Phillips-head screw on each side of the induction coil that must be removed.



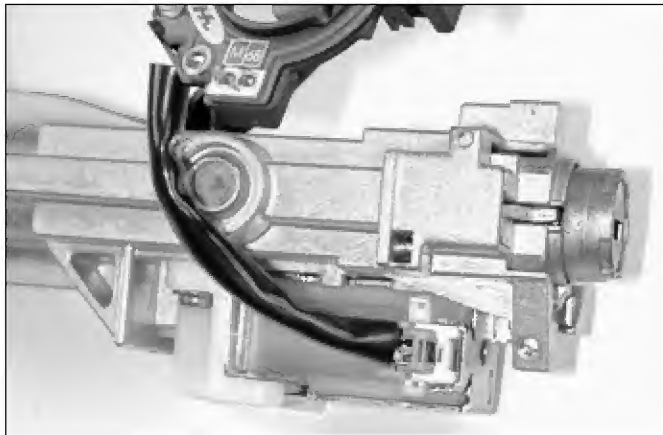
**16.** The transponder induction coil (antenna) mounts to the face of the lock housing.



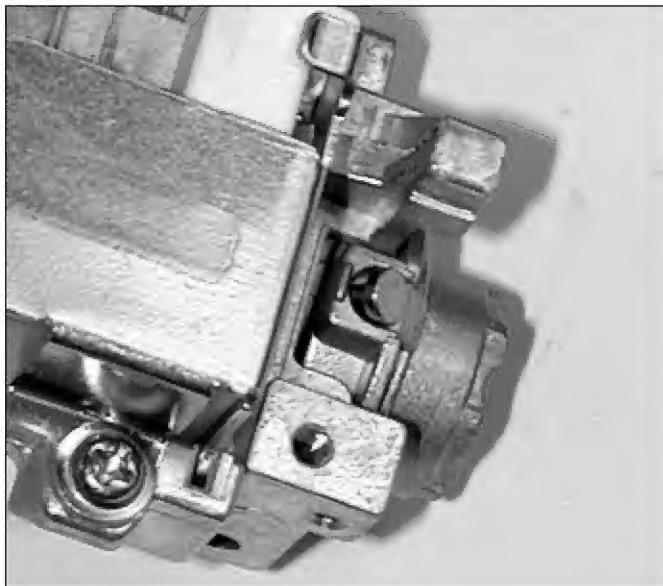
**18.** The induction coil can now be moved aside and disconnected from the wiring harness.



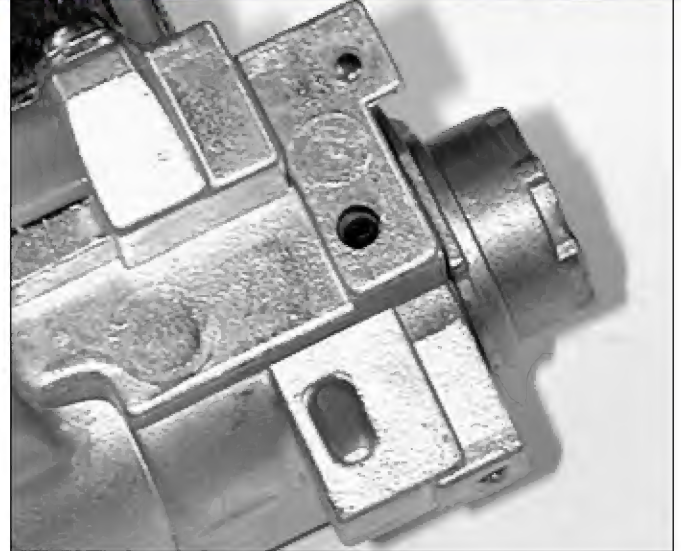
**19.** The illumination ring and adjacent electronics can now be removed and disconnected from the wiring harness. There are 2 Phillips-head screws.



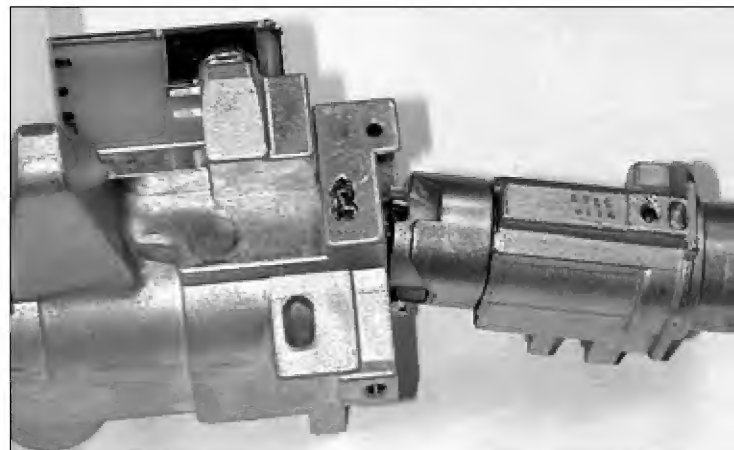
**20.** A view of the front of the lock without any electronic components.



**21.** There is a small actuator that can easily be lost if not removed for re-assembly later.



**22.** The next thing is to remove the roll pin holding the lock cylinder into the lock housing.

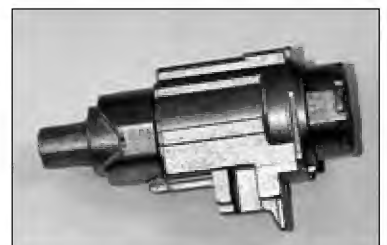


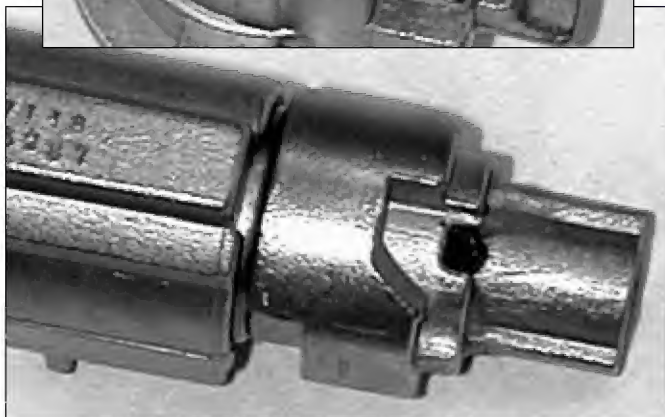
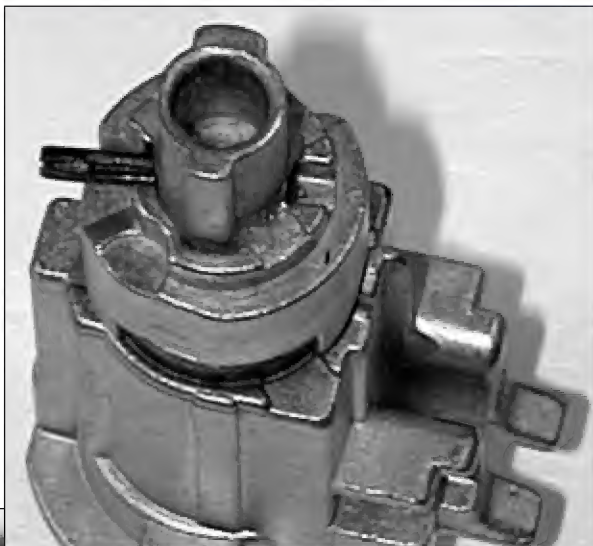
**23.** The cylinder will then slide out. There is an actuator lever that presses down on the cylinder, but will lift up far enough to get the cylinder in and out.



**24.** There is a code stamped on the lock cylinder. This is not a help since you have to do a lot of work to get the cylinder out.

**25.** The lock cylinder removed from the lock housing.

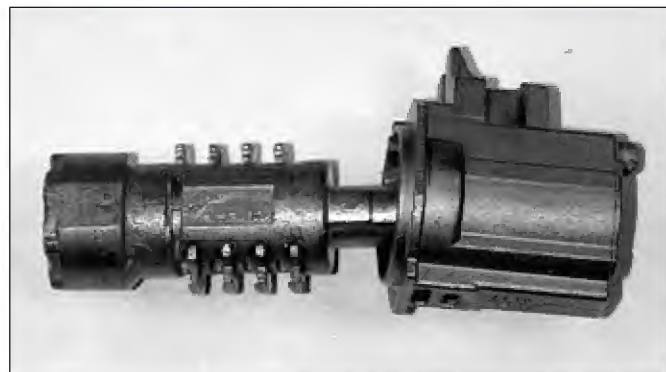




**26.** There is a tension roll pin that secures a cam on the rear of the cylinder plug. Use a pin punch to remove the roll pin.



**27.** Once the roll pin is removed slide the cam off the back of the lock.



**28.** With the roll pin and cam removed you can slide the cylinder plug out.



**29.** The ignition cylinder contains all 8 tumblers.



**30.** A view of the ignition lock cylinder disassembled.

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#ASA - 2000





**31.** The door lock cylinder is part of the outside handle.



**34.** Remove the Phillips-head screw to the right of the speaker in the storage cavity.



**32.** To service the door lock cylinder you will have to remove the inside door panel.



**35.** Remove the Phillips-head screw on the inside door release trim.



**33.** Remove the Phillips-head screws in the door pull cavities. There are plastic trim covers to hide them.



**36.** Slide the unit forward to remove.



**37.** Next disconnect the linkage rod and disconnect the unit from the wiring harness.



**38.** The door panel can now be unsnapped and moved to the side. Don't forget to disconnect the wiring.



**39.** A view of the door and the weather barrier. Do not tear the weather barrier but instead lift it off the door gently.



## 15 Minute Safe Opening

This book deals exclusively with round head lift out doors. Shows five ways to open a Major; three ways to find the Dog Pin on a Major; four ways to open a Star; four ways to open a LaGard style round head.

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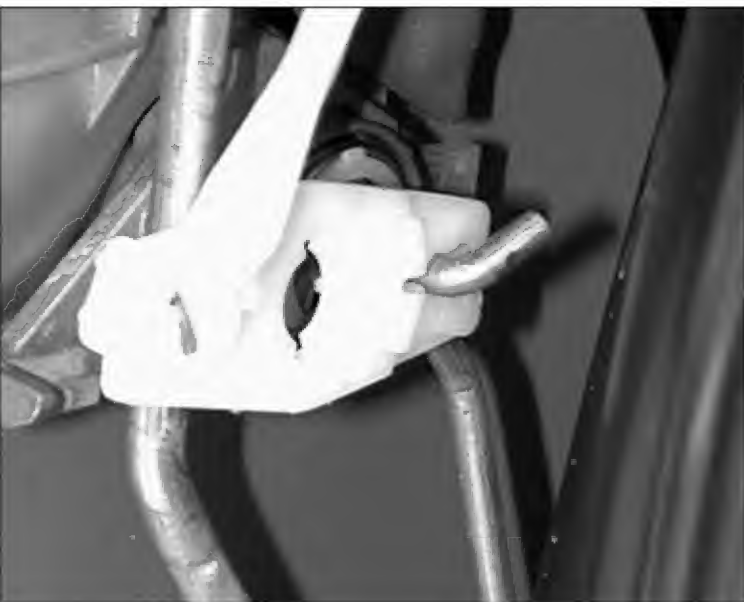




**40.** There is just enough room to get the lock out.



**41.** The best way to remove the lock cylinder is to take off the C-clip and slide off the tailpiece.



**42.** The tailpiece is plastic and the connector to the door lock switch is plastic. Once you remove the tailpiece from the lock cylinder it is much easier to remove the linkage rod and plastic door lock connector.



**43.** Remove the two 10mm bolts that hold on the outside door handle. You can now slide out the handle enough to gain access to the wire clip that holds on the cylinder to the handle. You must use a small flat blade screwdriver to get the clip out from around the lock cylinder.



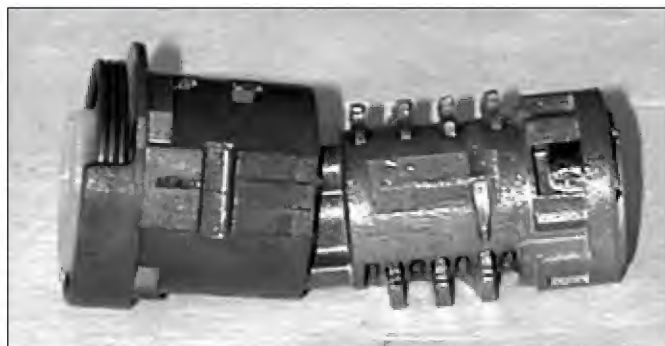
**44.** A view of the outside handle.



**45.** This is the cylinder guard for the handle.



**46.** A view of the cylinder guard and the wire clip as it sits on the handle.



**49.** The cylinder plug will slide out and is not warded.



**50.** The cylinder plug contains 7 tumblers in positions 1 through 7.

*Next month we will cover the hatch and glove box lock as well as ignition programming procedures.*

**TNL**



**47.** A view of the lock cylinder and handle assembly as it would be in the door.



**48.** The door lock cylinder removed. There is a code stamped on the side of the lock. The code is the bottom 4 numbers. The code series runs from 5001-8442 with no prefix.

# InstaCode



Your total code and code machine management program.

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#IC - 2001



# PINNING KITS

**T**here is an unbelievable number of pinning kits available to the locksmith. Everything from OEM single manufacturer pin kits to universal kits in every size and configuration possible. It would obviously not be possible to have a pin kit for every lock made, so choosing the pin kit(s) that will best serve your specific needs is critical.

Every pin kit manufacturer offers something different and there is something for everyone. To help narrow the search for the kit that will best suite your needs, the following manufacturers and suppliers of pinning kits are sure to have what you need.

## ESP PINNING KITS

ESP Lock Products has an assortment of pinning kits from the classic wooden kit to the heavy-duty, leak proof metal universal kit to specialty kits.

The classic KK-80 anti-spill laminated wood pin kit features a

Formica covered lid and sliding bottom drawer. Complete with a locking latch and extra deep compartments, the kit holds over a gross of pins and comes loaded with 40 different color-coded bottom pins and 39 various color-coded top and master pins.

A reference chart inside the kit's lid indicates what pin sizes are used by various lock manufacturers. Locksmiths can purchase pins only, the box only, or the loaded kit.

ESP Specialty Pin Kits are available to complete pin assortments for Kwikset, Schlage, I/C Core, Arrow, Sargent and Weiser.

## HPC TUBULAR PIN KIT

The HPC Tubular Pin Kit (APS-077), contains 800 combination pins, 100 driver pins, 144 cylinder springs and 20 retainer pins, all .077" diameter. The included plug follower and depth key make this a complete re-keying kit when used with a tubular key machine such as HPC's Pocket Cut-Up or either of the HPC/Scotsman Tubular Key Machines.

The Tubular Pin Kit comes in a divided plastic box for easy use. The pin dimensions and the Ace and Fort pin designations are listed inside the box lid. Replacement pins and springs can be ordered through your Authorized HPC Distributor.

## ILCO UNICAN 796-00-8X

The Ilco Unican 796-00-8X pin kit contains bottom pins from .160 to .0360 and top pins from .010 to .200 in increments of .005. There is a pull-out drawer on the side of the metal carrying case that provides storage for the included waffle tray as well as other cylinder tools.

The newly updated and revised data table on the inside of the lid provides current pinning parameters for two dozen of the most popular models of lock cylinders. It supplies key root depth information, bottom pin lengths, master pin sizes and top pin requirements to allow use of pins from this kit to closely match original lock manufacture's specifications.



CIRCLE NUMBER  
283



CIRCLE NUMBER  
284



CIRCLE NUMBER  
285

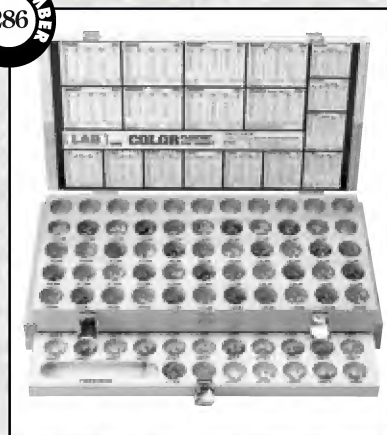
## LAB WOODY CLASSIC

The Woody .003 and .005 kits from LAB are handcrafted in maple by New England wood craftsmen and are protected in a clear polyfinish to preserve their quality.

The Woody .003 kit has 104 sizes, with top/master pin sizes from .024 to .170 while the bottom sizes range from .165 to .360. The Woody .005 kit has 92 sizes with top/master pin sizes and

top/master pin sizes from .010 to .250 and bottom sizes from .150 to .360.

Each kit feature larger printing under pin pockets and larger finger pin pockets than in prior models. Kits contain the Color Passport pin chart for positive identification on the job and have triple-latch case protection to prevent accidental spillage. The kits also have a slide-out center drawer with master pins, spring and a tool compartment.



LAB kits contain up-to-date, comprehensive pinning charts with annually updated technical data straight from the manufactures. AB's exclusive "eye saver" exploded view of information helps make pinning easy and accurate.

In addition to the Woody Kits, LAB offers the Wedge Pro and Super Wedge kits, each of which can be mounted to the Pro Platform with Drawer, two versions of the Classic Pro solid metal kit, and the Dur-X Pro and Dur-X Semi Pro kits which are made of super tough polyethylene. The Dur-X Pro and Semi Pro are available in two models, both of which feature full pin size ranges and the Color Passport pin chart.

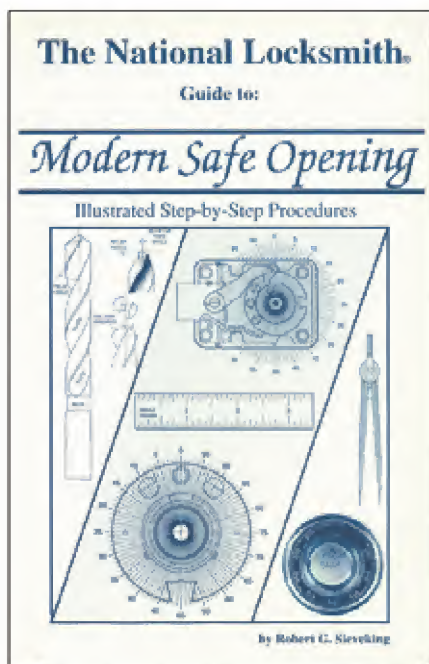
## SEPTON KITS



Septon, Inc. has original pins in kits, which contain 100 each of all necessary pins and springs for particular brands. Kits are bright red with a draw pull catch and are available for Arrow, Best, Dexter, Falcon, Interchange, Corbin Cabinet, Chicago, Rockford, Master, Kwikset, Sargent, Schlage, Weiser and Yale. Over 124 gross of pins come in the 3/1000 kits, which contain an up-to-date pinning chart and sturdy eyelets for easy fastening and removal from the service vehicle.

There are more pinning kits available than you can imagine. They came in every conceivable size and configuration for any type of lock made. However, the possibility of carrying every kit made for every lock would be impossible. In choosing a pinning kit for standard pin tumbler locks alone, there are more choices of styles, sizes and configurations than you can believe. **INL**

# Modern Safe Opening



This book is a step-by-step How-To course in safe penetration. Opening safes is one of the most profitable aspects of the locksmithing business.

[CLICK HERE TO LEARN MORE](#)

#MSO - 1



# Safe Tools

**T**his is the fun part of my job. It is the time where I get to test and try new tools and give a brief review, with some of my own thoughts and comments. Just because you own the best tools does not make you a good safecracker. Hard work, experience, and hundreds of hours of safecracking are the only way to gain the much needed education, seasoning, and training that make a great safecracker (CMS). In safecracking, experience is the only teacher... period!



by Dale Libby, CMS

If you have never ridden a bicycle before, just buying an expensive bike, reading all sorts of books on how to ride and repair bicycles, does not prepare you for the real experience of riding and balancing that is needed to keep from falling flat on your face. The same is true with safecracking. Practice, sweat, practice, and never give up. If it is man made, it can be man defeated. (I keep telling myself that over and over when I am working on a difficult job.) If the safe has good Karma, do the job. If there is any question that you are in over your head, call someone that can do the job.

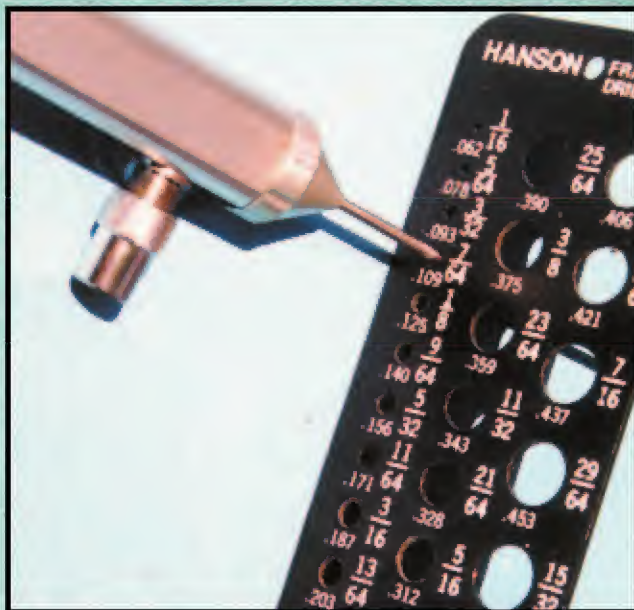
## Power Thin Ultra View Borescope by Lockmasters

This borescope comes from Lockmasters in 10", 19", and 29" lengths, offering a straight view, and with the addition of a mirror tube, offers a 90-degree (right angle) view. This scope is small. With the mirror tube, it is about .090" in diameter. I placed the mirror tube on the scope and used a drill gauge. It fits into a 7/64" hole with some play. (See photograph 1.)

The view of this tiny scope (considering its small diameter) is phenomenal. The eyepiece is adjustable to bring the features in perfect focus. This scope does a big job for something so small. Forward view is clear, and the angle is also excellent.

A three "C" cell battery pack and a flexible light cord furnish the light. (See photograph 2.) There is a high intensity bulb at the base of the cord that plugs into the borescope with the standard adapter. This supplies a lot of light and is easy to use.

If you are going to do a lot of safe work, then the addition of a fiber optic cable and light source will be greatly appreciated. Photograph 3 shows a good light source. The wide end of the cable goes into the unit and is secured with a thumbscrew. The scope end



1. The small size of scope and mirror is seen. Both are about .090" when assembled. Great for 8/32" holes.



2. Battery operated light source and flexible cable comes with the unit. On-Off switch is located near cable plug.

just plugs into the bottom of the scope as shown in *photograph 4*.

This arrangement lets you vary the source of light from a dim glow to too bright on the highest setting. The high light setting would be good for looking around in a large area for a relocker, but when inside of the lock, it is too bright and washes everything out.

#### **Comments on the Power Thin Ultra View Borescope by Lockmasters**

I like the scope and in fact used it to open three safes. After drilling a 1/4" hole through hardplate, the scope had

lots of room to maneuver in the hole. Great for geared locks too.

For the money, this is a great thin micro type scope. It comes packaged in a cardboard box with foam inserts. If a good additional carrying case is available then I would suggest purchasing it.

My only criticism is regarding the fiber optic cable that fits into the light source. It is too short and NOT armored. Using a regular non-armored cable is dangerous. If the cable accidentally touches the end of a just used hardplate drill, it could be melted or sliced (burned) in half. End of cable.

I personally like to use an armored cable, again wrapped in rubber, but with a steel sheath underneath. It has the standard ends for both the scope and the light source, but is much thicker and more rugged than the non-armored type of cable.

I saw no real advantage to this small scope until I talked to Walt Martin in California. He uses this scope especially on safes that have a ball bearing matrix hardplate. When he encounters the matrix, he can drill between the ball bearings. Once he is through, he inserts the scope and reads the wheels. He leaves the

hardplate intact and does not have to remove any bearings. That is a very good use for this scope that I did not think of myself.

#### **Emergency Dial by MBA**

This is a cool tool that performs two functions. The first purpose is a sensible emergency dial that attaches easily with no drilling or hitting of a taper alignment pin. There are three holes with three Allen screws used to attach the emergency dial to the spindle. The Allen wrench is held in the center of the tool for storage.

This dial is used when you are faced with a burglarized combination lock dial that has not been broken off the spindle or a dial that has fallen off the spindle. There must be a part of the spindle protruding from the door surface to attach this dial. (See *photograph 5*.)

To use this emergency dial, first find the drop-in area of the lock (around 5-15 on S&G locks) and attach the dial to the end of the spindle with the three Allen screws accordingly. Dial the combination and add and subtract numbers accordingly until the unit opens.

The second diabolical use of this tool is to use it as a transferring tool. It works great. If you have to drill because the combination is lost or not working drill at the drop-in position with the emergency dial off. After drilling the lock with a view of the gates or lever end, or both, re-attach the emergency dial. There are viewing slots cut out of the dial that let you look into your hole while you are dialing the combination. (See *Photograph 6*.) You can see the dial attachment upper screw just under the number 80 on the dial.

These readings can be used to directly view and dial the gates at the drop-in position under the fence. If you drilled at another spot with no fence visible, then the tool can be used as an excellent transferring tool.

#### **Comments on the Emergency Dial by MBA**

This tool is great. It has more uses than just an emergency dial. It is a transferring tool as well. The directions that come with the tool are exquisite and admirable. It tells how to transfer readings from one spot easily to another part of the dial ring, and eventually to the drop-in position.



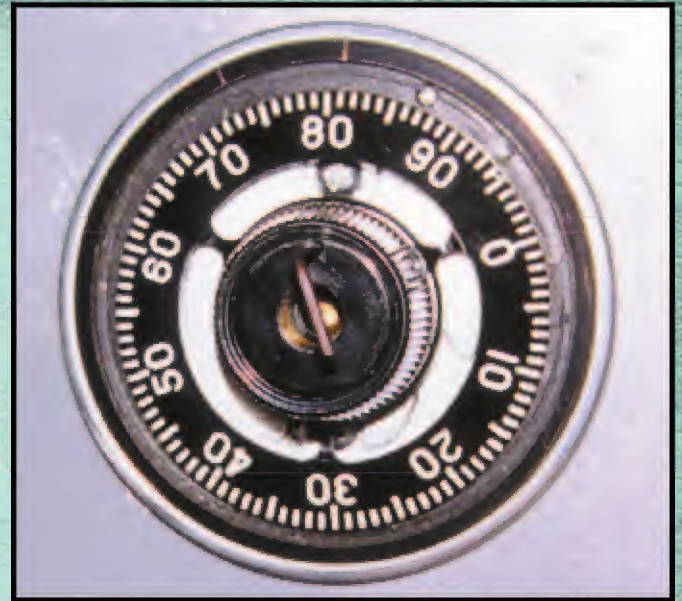
**3. Additional light source with intensity dial at bottom and optic cable plug above.**



**4. Optic cable plugged into borescope. This borescope has a focusing eyepiece for great viewing.**



**5. Spindle protruding from dial ring.**



**6. Installed emergency dial showing mounting screw through milled slot at #80. Allen wrench is held on dial through special hole.**

The directions are clear, succinct, brief and to the point. This tool, the MB01 is available from (Mark Bates Associates (MBA) A good tool does not necessarily have to be expensive. It is innovative and affordable. I recommend it to ALL safecrackers, from novice to

expert. It is a simple conscientious tool.

The only thing I did to the tool, when I used it for the first time, was to run a 5/16" drill through the center of the fixture. It fit a little too tightly on the exposed spindle to begin with. Pushing

too hard on the spindle when attaching the tool might set off a relocking trigger or device. Ease of installation and removal of the tool is important. If you have to open up the bore, make sure the setscrews do not interfere with the drill bit.



## 15 Minute Safe Opening

This book deals exclusively with round head lift out doors. Shows five ways to open a Major; three ways to find the Dog Pin on a Major; four ways to open a Star; four ways to open a LaGard style round head.

[CLICK HERE TO LEARN MORE](#)

## Norm's Safe Tools by H.P.C. (NST-6)

I have owned a set of the Norm Safe Tools for about 15 years. They come in an orange carrying pouch. Norm Schamp who is a safeman in California developed them. I have used these tools many times. At times, I even used them for what they were intended for. (See Photograph 7.)

These tools are designed for use after an attempted burglary. Specific tools are needed for specific locks. The first tool is inserted into the spindle hole and is used to align the wheel pack to the opening position. Then a specific relock defeat tool is inserted, the relocker pushed, pulled, or depressed. The wheel pack (except on

Mosler) is then turned, and the lock will open.

With Mosler, the wheel pack is not present if it has been punched, for it is attached to the back plate of the lock. A special tool is then used to pull the Mosler Lever to pull the bolt back.

The tools have hinged ends that fall open in the safe after inserting. To remove the tool, the safe door must be open, and they are removed from the inside. This is especially true for the wheel alignment tool. Simple to use, they take minimal practice to master their simple but effective tasks.

### Comments on the Norm's Safe Tools by HPC

These tools work, but the actual application is only a part of the opening. The wheel alignment tool can be used in a variety of ways. On Sentry safes that have a removable dial, just remove the dial, punch the spindle into the safe (fully), insert the tool, align the wheels and the safe is open.

To repair the safe, just reattach the dial to the spindle and reassemble. The problem comes when the spindle

has not been punched fully into the safe door. This can be due to a back plate of the door which covers the lock has not been moved enough to let the spindle fall out of the way. If for some reason you cannot get the spindle out of the way, then you cannot use any of the Norm Tools.

In *photograph 8*, we can clearly see the S&G relock tool inserted in the spindle hole and pulling the relock up and out of the way. (No lever in this picture.)

As with most HPC products, the directions have been refined over the years, which is to say they are well written and illustrated explicitly with clear picture and procedures.

A secondary problem is when a spindle is punched on a better safe or chest and secondary relock devices (outside of the combination lock body) are activated. Moving the combination lock bolt is not enough sometimes to get the safe open. Other measures must be used to deactivate or destroy these pesky relockers.

Everyone should own a set of Norm Tools (Norm Safe Tools) These tools are worth the price for deactivating relockers in the combination lock proper. They work and will save you drilling multiple holes to accomplish the same thing.

Warning! Do not just punch any safe and try to use these fine tools. There are many factors, besides relockers that hamper punching. The cover plate on the back of the safe door is a hard obstacle to overcome by punching alone. You must be able to punch the entire spindle into the safe or these tools will not work.

### Nose and Door Puller Kit by Timemasters

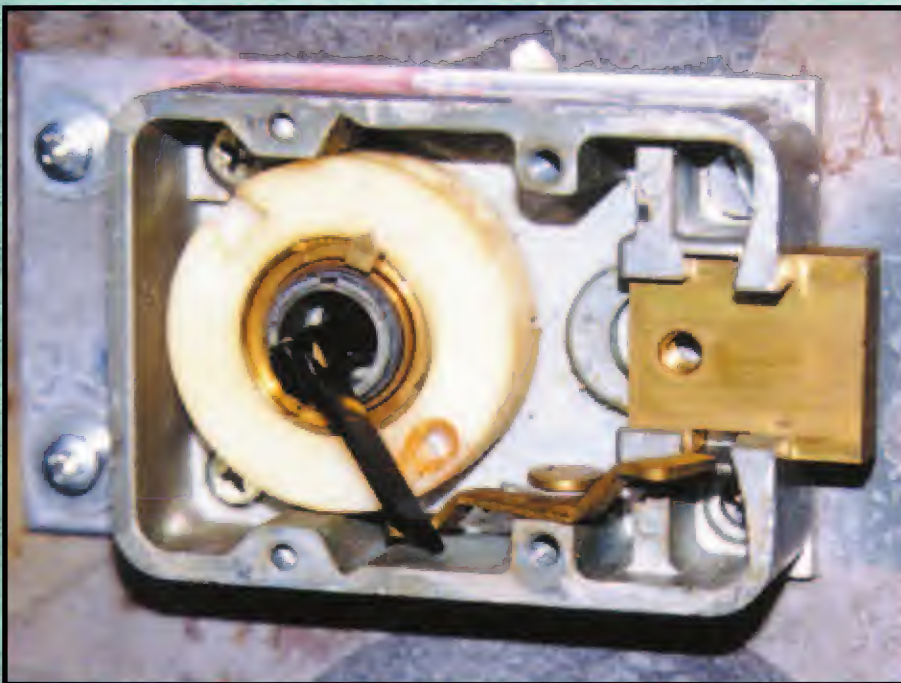
This compact kit contains all the essential elements to open most safe deposit locks. Each component is designed to perform a specific task. When used correctly, these tools will last a lifetime with minimum care or service.

The entire kit comes packaged in a zipper bag with inner compartments to hold the little pieces. The door puller part of the tool also fits nicely in the same bag. The enclosed directions for using the tool are succinct and specific. With the help of the exploded view contained in the directions you will have no problem using the tool correctly.

I cheated on this tool. I called the



7. Norm's Tools in folding plastic pouch.



8. S&G tool shown pulling relocker on S&G lock with plastic wheels. Tool is automatic. Insert and pull.

owner of Timemasters (Dan Graffeo) and interviewed him about this tool and other things in the works. The first thing that one notices about this tool is that it is made of a plastic type

substance.

The puller bar and puller bolts are metal, of course, as well as the screw and driver bit attachment. I asked him why the body was of 33% glass and

nylon. Dan stated that after talking to many field technicians who did a lot of safe deposit work, they asked if he could make the unit lighter. They felt the weight when they were opening boxes near the top of the stack and had to hold the tool overhead. Nose pulling is rather straight forward. We have all done it. The directions detail how to do it, and a couple of maneuvers that are necessary to make pulling the doors easy and efficient. The kit also contains parts for pulling doors open if the lock cannot be opened any other way.

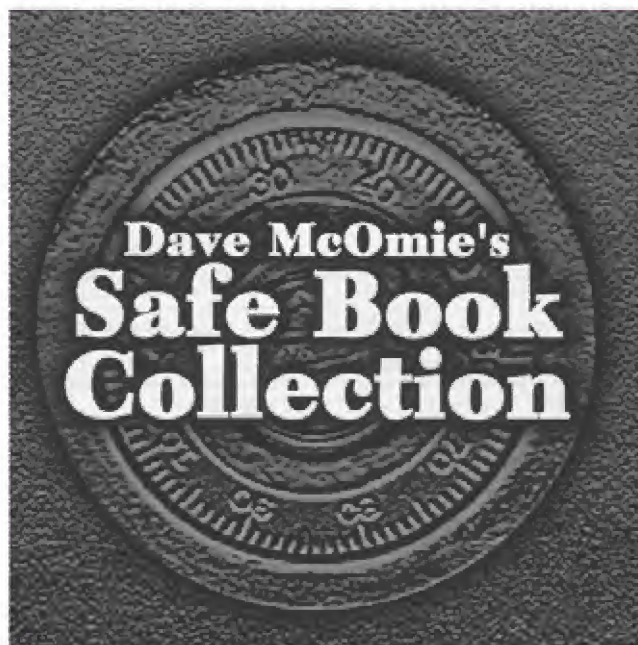
The easiest way to describe the TMI door and nose pulling kit is to look at *photograph 9*. I did not get a chance to use it on a real safe deposit door, but I will and I will then show the proper way to use this kit. Until then, bear with me as I talk it through.

From left to right there is a bag of accessory screws and a couple of extra door pulling hooks along side an Allen wrench. Below this is a large door pad. This is used when pulling a door after removing the plug of the safe deposit lock. This spacer is made of plastic and protects the door being pulled open.

Next is the door puller bar and the concave top plug below it. One side of the plug has a raised portion on it that



9. The Timemasters door and nose puller kit.



## Dave McOmie Safe Book Collection on CD

This CD contains every book Dave has ever published.

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#DMCD - 1



**10. The new Mini-Rig with four basic templates and dial puller system.**

fits precisely in the door puller bar. This black nylon plastic washer must be used when pulling doors. It keeps everything in alignment.

There are also two large white plastic plugs, which fit under the two jack bolts, which are just to the right of the puller bar. The plastic washers are used to spread out the force of the jack bolts so that hollow doors will not be dimpled or mutilated.

The jack bolts have a hex end that the included Allen wrench fits. The end of the jack bolts are interesting. They are plastic coated swivels. This accommodates the change in angle as the door is pulled. Quite ingenious and diabolical.

Next in line is the nose puller with knurled nut and stainless steel (strong) screw. There is also a hex nut built into the tool for those really tough pulls. Last, but not least is the door puller attaching bolt. It is rather ingenious.

After pulling the nose of the door you wish to pull, you insert this tool and tighten the bar. This causes the two hooks to come apart, ready to grip the inside of the door or lock. If the lock levers interfere, just bend them apart with a screwdriver and hammer. One of the hooks should be facing the direction of the safe deposit lock bolt.

After tightening the hooks, put the door pad over the bolt, the puller rail, the large radiuses black nylon washer with the radius down, and the top wheel with holes in it. Takes longer to write about it than to do it.

Move the unit until one of the jack

bolts in on an adjoining door and crank it up with the Allen wrench. Special directions are given for opening doors where there is no immediate adjacent door to pull against.

#### **Comments on the Nose and Door Puller Kit by Timemasters**

I like this tool and will use it on a job and put it through its paces. It feels light, but with the special polycarbonate and glass construction, it is a strong (if not stronger) than the all metal version of the same tool, and half again as light.

#### **The Mini-Rig by Strong Arm**

Bob and Jeff Volosing make the Strong Arm Mini-Rig safe drilling fixture and supply fine carbide drills for penetrating hard plate. The newest version of the Mini-Rig has a larger drill bolt, dual chip wipers, and a new fastening system. (See *photograph 10.*)

The kit also has a dial slam puller and a spindle forcing attachment for Mosler and other locks. This is a complete safe opening system.

Up and coming are two additional tools. (See

*photograph 11.*) The template on the left is for floor safes. The template attaches to the bale or handle holes on Star, Major, and other floor safe round heads. The hollow bore bolt can be placed in three different areas for the preferred attack sequence.

Next to the floor safe template is a Ball Bearing Burr, used when encountering a ball bearing matrix hard plate. It does work.

I like how the new unit attaches templates to the safe door, so let us go quickly through the new ways it works.

*Photograph 12,* shows how the standard template is attached to the door. There are cap screws at 12 and 6 o'clock that fit the dial mounting screws. For S&G and other locks, the screw nearest the "A" point have been ground down as to not interfere with the hardplate drill.

Once the template is attached to the door, the drill guide is attached to the door using two larger cap screws. (See *photograph 13.*) Note the replaceable bearing between the screws. This keeps the drill going in straight and protects the drill guide. There are three hardened inserts included with the kit to handle most popular hard plate drill sizes. The knurled nuts at the end of the fixture do not come off and roll under the safe in this newer version.

Look closely at point "E" on the template. There is a large 1/2" threaded hole there, but how do we attach the drill guide at that point? Here is where this new system excels.



**11. New round floor safe template and Ball Bearing Buster kit.**



**12. Basic template for S&G locks.**  
**"A" is the drop in position for a horizontal left mounted lock.**



**13. Drill base attaches with two hardened cap screws. Note removable bearing between screws.**

The Strong Arm kit incorporates the "Hollow Bore" bolts. These are 1/2" hardened bolts with either a 1/4" or 5/16" hole in them. They fit nicely to the fixture and thread up evenly with the bottom of the template.

*Photograph 14*, shows the drill holder attached to point "E" with the 1/4" hollow bore bolt.

The extra nice part of this system is that the hollow bore bolts can be mounted anywhere on the safe, the door, the sides, or even the top of the safe. This is accomplished by using the drills included within the kit, and the 1/2" tap. Just drill and tap a hole wherever, tap the hole and attach the drill guide fixture to the door with the hollow bore bolt. It is much faster and simpler.

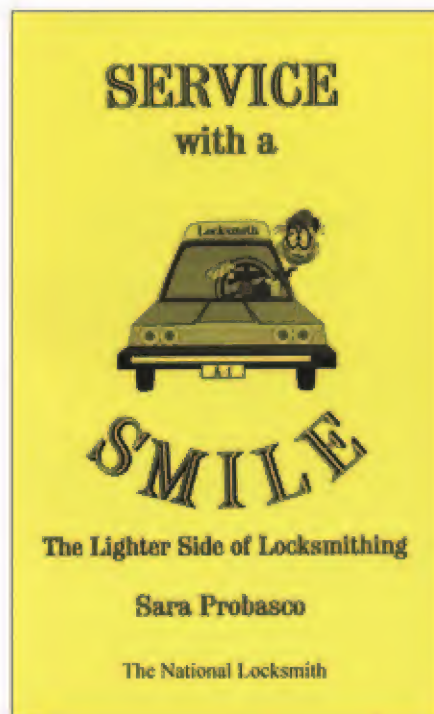
*Photograph 15*, shows the drill guide attached to the door. Now it is possible to drill from the side of the safe with the hollow bore bolt. This is important for pinpoint accuracy and drilling through exotic barrier materials that may be used in the sides of newer X6 type safes.

Another new improvement is the addition of a ruler or scale on the leg of the drill fixture. This lets you measure your progress as you penetrate the hardplate. (*See photograph 16.*)

#### **Comments on the Mini-Rig by Strong Arm**

In my opinion, the Strong Arm Mini-Rig drilling system is the best all around fixed drill rig system going. Fixed rig means attached to the safe. Coming up from Strong Arm is a vacuum fixture to hold the rig to the door.

# Service with a Smile

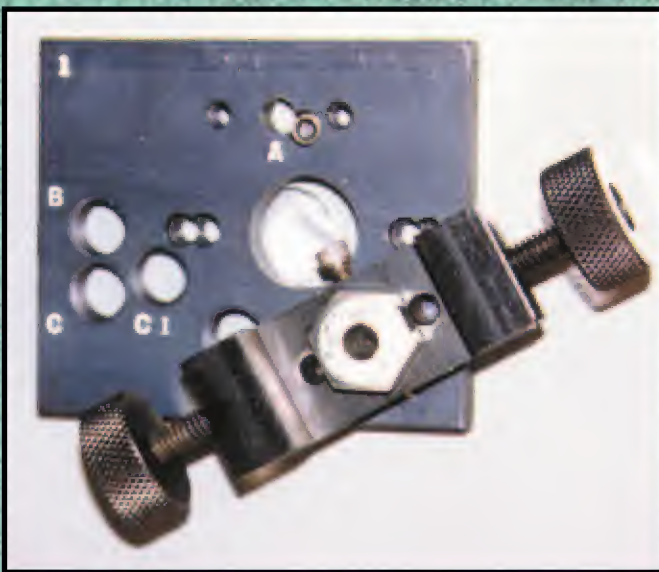


To tickle the funnybone of anyone in a service oriented business.

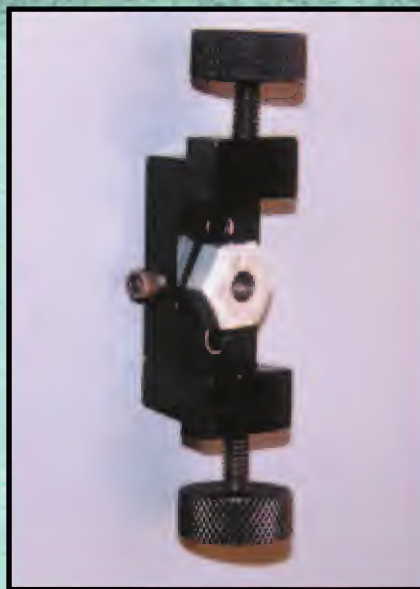
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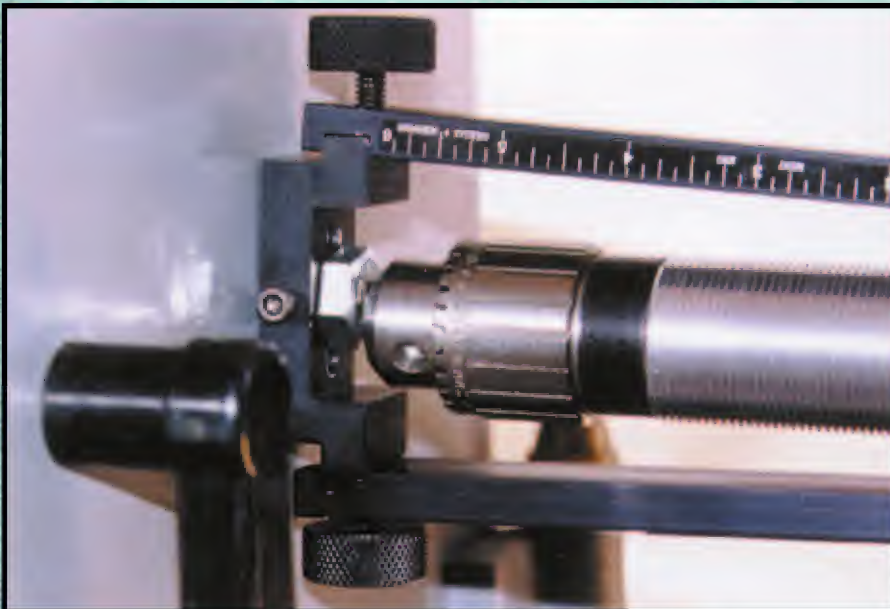
#SWS



**14. Drill base mounted with 1/2" hardened hollow bore bolt at point "E" of template.**



**15. Hollow bore bolt mounted directly to door with drill base. Knurled knobs do not come off.**



**16. Ruler is mounted to rig leg so that progress can be monitored.**

StrongArm promised they would "not" improve the rig again, so I bought the one featured in this article. You will see it on a real safe soon, especially for side drilling.

Repairing a hollow bore hole is simple. Just run a 1/2" bolt into the hole until it seizes up and cut it off. I use hardened bolts to keep others from drilling. Also, an application of Lok-Tite makes the plug almost un-removable.

### **Safebuster Lever Rig from Keedex**

A good safecracker will have two drill rigs in his arsenal. One will be a lever rig, and the other will be a fixed

rig, like the Strong Arm unit just discussed. Which is better? Depends on the situation. I believe the first drill rig you should buy is a lever rig. It will do everything that a fixed rig will do, but it loses something in the accuracy, but gains it in the versatility.

Most other rigs I have used were made for a specific drill. My Lee rig uses a Bosch Hornet drill motor, which is no longer manufactured. Since the motor is enclosed in the rig body, no other drill will work in this application. After my Hornet dies, my drill rig dies, unless I buy a new attachment for a more modern drill.

Stepping into the arena is the

Keedex Safebuster Drill Rig. The beauty of this tool is that the basic collar will fit over 12 models of drill motors, plus there is an additional ring made for Milwaukee drill motors. This means that the rig will never be outdated and can be used with many different drills. This is only one of many innovative features.

Other lever rigs have the drill encased in a formed body, which makes the drill hard, and awkward to use when you are not drilling hardplate.

The Keedex rig has 2 quick release pins that free the drill from the drill rig. This allows the immediate use of the drill for other locksmithing jobs and assignments.

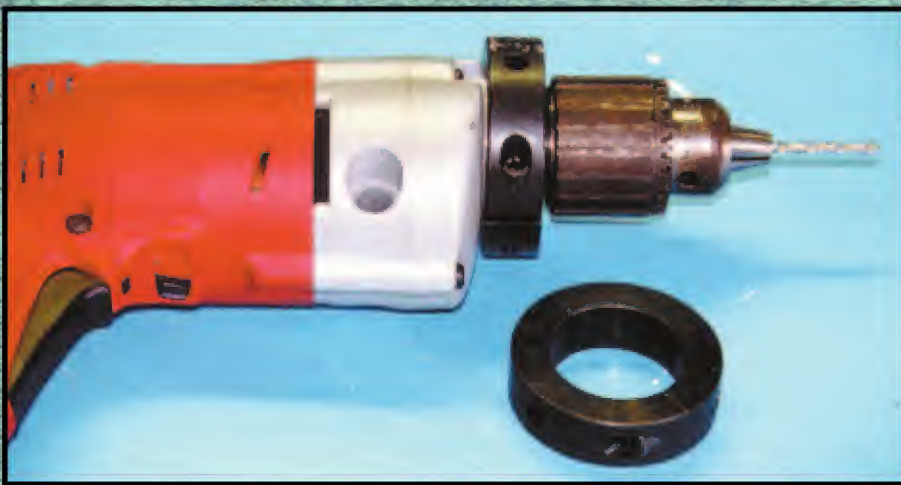
Set up for a drill is easy. *Photograph 17*, shows my Milwaukee drill motor with the collar installed. Below it is the standard, slightly smaller, collar. The collar is attached with two Allen cap screws.

The drill can be attached to the wide part of the rig with two quick release pins. There are 3 holes to grip the drill in different places for angular positioning. (See *photograph 18*.) The end of the rig has five holes in it for the placement of the chain. This chain attaches to the safe via the safe handle, usually.

By being careful, the rig will not break the safe handle. 35 pounds of pressure on the end of the handle will produce 500 pounds of pressure at the point of the drill bit. This will make short work of most hardplates. Technique is important. It has taken me about 25 years to develop good hardplate procedures. These must be learned by hard work and years of practice. (See *photograph 19*.)

If for some reason, the handle is broken off, I drill and tap either a 1/4" x 20 or 5/16" x 18 hole and thread an eye bolt in. I attach the end of the chain to this fixture. Repair is easy. Just grind off the bolt at the surface of the door and paint. Repair is invisible.

In *photograph 20*, I am trying to show that the drill motor and the chain should



**17. Milwaukee collar on drill. General collar below.**

be parallel. This is important to drilling hardplate. It is easier to control the penetration of the drill bit. The quick release pins can also be seen in the photo.

**Comments on the Safebuster Drill Rig by Keedex**

The Keedex Safebuster Drill Rig is an economical way to start your safecracking tool collection. It is versatile and sells for about \$200.00. Included are four Keedex Hardplate drill bits. I like the ability to use multiple drill motors.

*For more information on any of the products presented contact:*

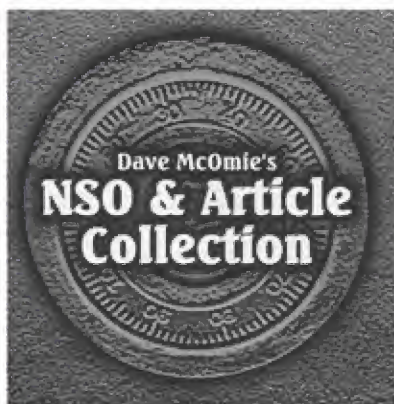
**Lockmasters, Inc.**  
5085 Danville Rd.  
Nicholasville, KY 40356  
Phone: 800-654-0637  
Fax: (606) 885-7093  
Circle #268  
E-mail: salesinfo@lockmasters.com

**MBA**  
101 Edgewood Plaza Dr.  
Nicholasville, KY 40356  
Phone: 888-622-5495



**18. Quick release pins, one on each side. There are three positions to attach drill, depending on angle needed.**

## Dave McOmie NSO & Article Collection on CD

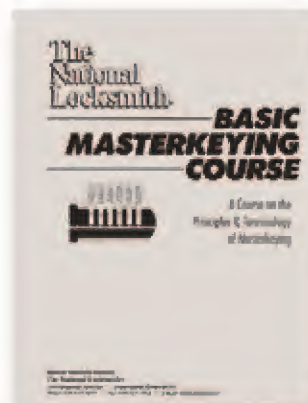


This CD contains every NSO newsletter and McOmie File Dave has ever published.

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#DMCD - 2

## Basic Masterkeying Course



The Basic Masterkeying course is designed for the locksmith who wishes to become proficient in Basic Masterkeying.

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#MK - 1



**19. Drill rig with chain and spacer holes at end of rig.**



**20. Rig in drilling position. Drill bit and attaching chain should be parallel.**

Fax: (606) 887-9491  
Circle #269  
E-mail: [mbatools@aol.com](mailto:mbatools@aol.com)  
Web: <http://www.mbausa.com>

**HPC, Inc.**  
3999 N. 25th Ave  
Schiller Park, IL 60176  
Phone: 800-323-3295  
Fax: (847) 671-6343  
Circle # 270  
E-mail: [hpc@hpc.world.com](mailto:hpc@hpc.world.com)  
Web: <http://www.hpcworld.com>

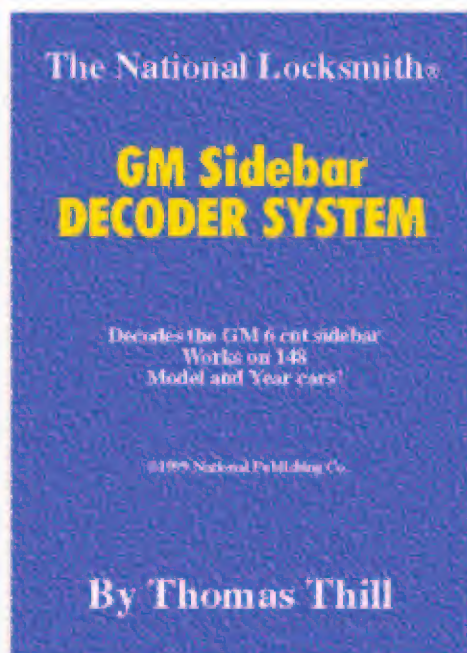
**Timemaster, Inc.**  
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Phone: 888-798-8465  
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Garden Grove, CA 92841  
Phone: (714) 636-5657  
Fax: (714) 636-5680  
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## GM Sidebar Lock Decoder System

Tom Thill, the author of a new book, has invented an amazing new way to make keys for six cut GM Sidebar Locks.

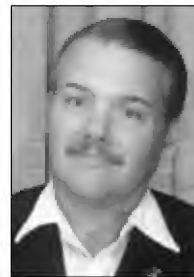
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#TT - 1

# BEGINNER'S CORNER

## The New Mul-T-Lock IC Lock and Padlock



by  
**Jim  
Langston**



**1. The Mul-T-Lock IC lock and keys.**



**2. The IC lock as it is being taken out of the lock housing.**

Mul-T-Lock has a new interchangeable core lock adding to the ever-growing Mul-T-Lock product line. This new IC lock is very simple to service. The design of the Mul-T-Lock IC lock is modeled after the Schlage IC lock, and works basically the same.

*Photograph 1*, shows the Mul-T-Lock IC lock and keys.

*Photograph 2*, is the IC lock as it is being taken out of the lock housing.

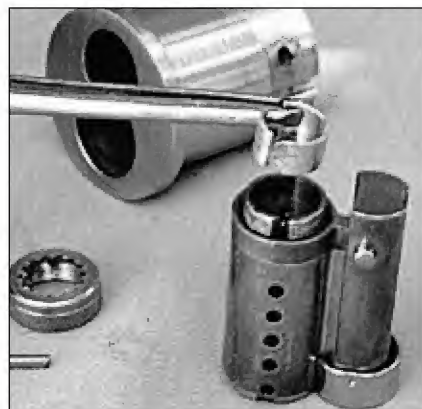
Since Mul-T-Lock's IC lock is modeled after the Schlage IC lock, it will fit all Schlage IC locks. Any lock that is now fitted with the Schlage IC lock, the Mul-T-Lock can replace. For example, the Simplex 1000 series combination door lock has a Schlage interchangeable core on the handle; the Mul-T-Lock will replace it.

*Photograph 3*, shows how to take the back off the lock for servicing; this is done in the same way as you would a Schlage lock.

The Schlage lock has an extra pin at the tip of the lock, which the control key activates. When the control key is

inserted into the lock it activates the retainer that holds the core into the lock housing. The Mul-T-Lock IC lock works in the same manner. The tip of the key is cut back in such a way that it makes this pin rise above the shear line and activate the locking retainer. (See *photograph 4*.)

In the same photograph you will note where the ink pin is pointing, is the control pin mentioned above. Also, in this photograph you will note there are five pins in this plug. There are



**3. This is how to take the back off the lock for servicing.**

### High Security Safes Volumes 1 & 2



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#HSS, HSS - 1

# Wafer Lock Reading



Easy to learn.  
No Codes needed.

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#WLR - 1

also pins inside of these pins, which is the standard Mul-T-Lock pin within a pin design. Although you can see five pins there are actually ten pins, because of the pin within a pin concept.

Because of the pin within a pin design, pick resistance is greatly increased. It also has drill resistant hardened pins to deter a drilling attack.

This lock also features Mul-T-Lock's three-in-one lock concept. To define the three-in-one concept, you can rekey this lock three times while it is on the door. The way it works is you have special pins in the lock which breakaway with each new key usage. When the second key is inserted and rotated in the lock, it breaks off part of the pin, essentially rekeying itself. When the cylinder is rotated, the tiny part of the pin that broke off will fall out of the lock. The first key will no longer work the lock.

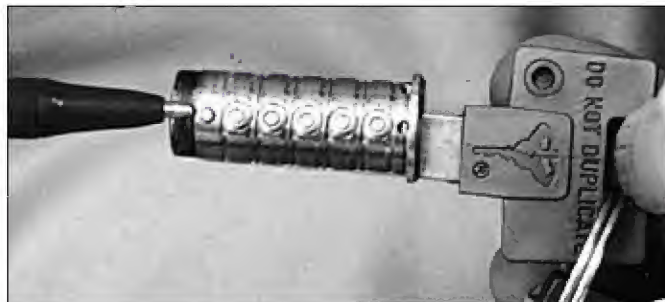
You can repeat this same process with key number three. After the third key is used the lock needs to be rekeyed.

The advantage of such a design is that it allows the lock to be immediately rekeyed should the need arise. If there is a termination of an employee, the lock combination can be changed on the door immediately, and there is no need to worry about getting the key back from the terminated employee. The business owner can change the lock himself by just inserting the next key. After he reaches the third key, he must have a locksmith rekey the lock.

To eliminate any down time, the locksmith can sell his customer an extra set of removable cores. This way

the customer would send the used core that needs to be rekeyed back to the locksmith after its maximum rekey settings and simply install a new core.

Also bear in mind that these keys can not be duplicated. The only way you can get a key is to cut it by code with a Mul-T-Lock machine. If you do not have a Mul-T-Lock machine you can get the keys cut by Mul-T-Lock. Mul-T-Lock will also sell a locksmith a key machine on payments, and if something happens where he no longer needs the machine, Mul-T-Lock will buy it back and pro-rate the use of the machine and condition.



**4. The tip of the key is cut back in such a way that it makes this pin rise above the shear line and activate the locking retainer.**



**5. The new Mul-T-Lock padlock. It is called a TS or TB-45P lock.**



**6. The bottom of the padlock. Look familiar?**



**7. The lock taken apart.**



**8. The screwdriver is pointing to the tailpiece of the lock.**

Next, I will cover the new Mul-T-Lock padlock. It is called a TS or TB-45P lock as seen in *photograph 5*. This lock is designed like an American padlock.

Note in *photograph 6*, what the bottom of the lock looks like. Look familiar?

*Photograph 7*, shows the lock taken apart.

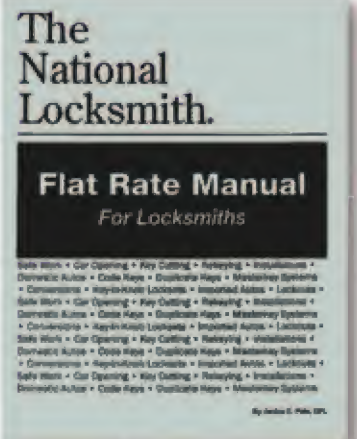
In *photograph 8*, you can see the back of this lock. The screwdriver in the photograph is pointing to the tailpiece of the lock. It is the same configuration as the American padlock cylinder. It will rekey the same as the three-in-one lock. Keep in mind that with the three-in-one lock system, if

your customer needs five keys to the lock, with the three in one system you would be cutting fifteen keys, three sets of five different combinations.

The keys are color-coded, green, yellow, and red, and you would have five of each color. The colors indicate the different rekeying capabilities. The first color being green, the second being yellow, and the third is red. The rekeying process must be done in this order. When the last key is used, the red color is a reminder of a "red flag" to call a locksmith for further service.

For more information, you can call Mul-T-Lock main office at (973) 778-3222, or fax at (973) 778-4007. Circle #267. **TNL**

# Flat Rate Manual



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#FRM - 1

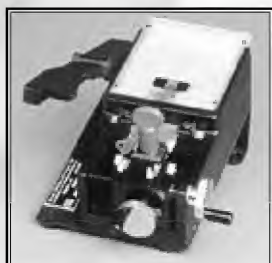
# TECHNITIPS

## YEAR-END PRIZES



### **Grand Prize**

*Silca Bravo Duplicator*



### **1st Prize**

*HPC's 1200PCH  
Punch Machine*



### **2nd Prize**

*Mas Hamilton's Auditcon  
2100 & Certification Class*



### **3rd Prize**

*Curtis 2100 Duplicator*



### **4th Prize**

*SDC Magnetic Lock, Keypad  
and Exit Switch*



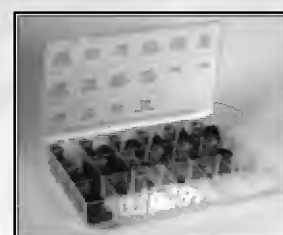
### **5th Prize**

*LaGard "Smart  
Guard"®*



### **6th Prize**

*\$500 in All Lock Products*



### **7th Prize**

*\$500 in ASP  
Auto Locks*



### **8th Prize**

*\$500 in Strattec Auto  
Products*



### **9th Prize**

*Arrow Exit Device and  
Mounting Kit*



### **10th Prize**

*Dewalt Cordless Drill*



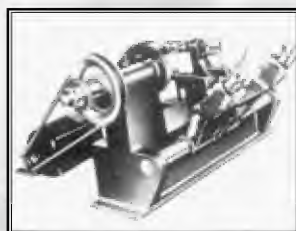
### **11th Prize**

*Detex ECL-8010W  
Wetlock®*



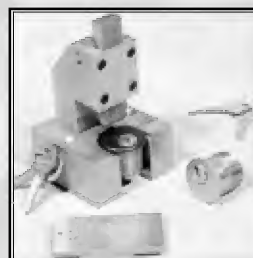
### **12th Prize**

*Securitron DK-26 Touchpad  
and CPU Board for  
Magnetic Lock*



### **13th Prize**

*Foley-Belsaw 200  
Key Machine*



### **14th Prize**

*Accu-Mark™ Key  
Stamping Machine*



### **15th Prize**

*S&G 6120  
Electronic Safe Lock*

## These Prizes Awarded Each Month!

- BWD Automotive Ford or GM KwiKit
- Wedgeco™ Key Extractor Kit
- Strattec Racing Jacket
- HPC Air Wedge™
- Sargent And Greenleaf  
4400 Series Safe Deposit Box Lock
- A-1 Security Products
- ILCO Key Blanks (100 Blanks)
- Keedex "SPIN OUT" Screwdriver
- Tech Train Training Video
- Sieveking Products  
Gm E-Z Wheel Puller
- Major Manufacturing Products
- Slide Lock's "Z" Tool Opening Set
- The Sieveking Auto Key Guide
- Jet Key Blanks (100 Blanks)
- High Tech Tools
- LaGard Combo Guard

## Send in your tips, and win!

### How To Enter

Send a tip on how to do any aspect of locksmithing. Certainly, you have a favorite way of doing something that you would like to share with other locksmiths. Write your tip down and send it to:

Jake Jakubowski, Technitips Editor,  
**The National Locksmith**  
1533 Burgundy Parkway, Streamwood,  
IL 60107-1861

Or send your tips via  
E-mail to: Natllock@aol.com

### Rules & Regulations

Each tip submitted must include your full name, street address (no P.O. Box numbers), city, state, zip code, phone number, fax number or e-mail address.

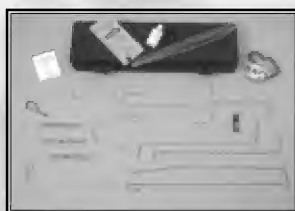
### Every Tip Published Wins

If your tip is published you will win one of the monthly prizes listed. At the end of the year, we choose winners from all the monthly tips published, that will be awarded one of the fabulous year end prizes. All you have to do to win is enter.

Prizes are arranged according to suggested retail price value.



**16th Prize**  
High Tech Tools  
2500 Pro Set



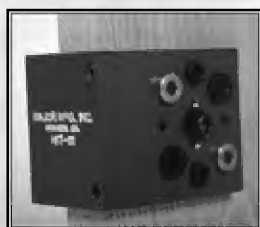
**17th Prize**  
Slide Lock's  
Master "Z" Tool Set



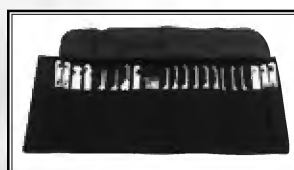
**18th Prize**  
ESP Products Sampler



**19th Prize**  
Baxter JV-1 and  
JV-5 Code Books



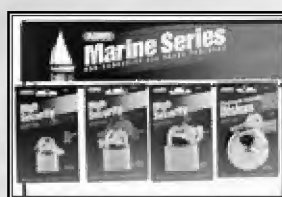
**20th Prize**  
Major Manufacturing's  
HIT-111 Drill Guide



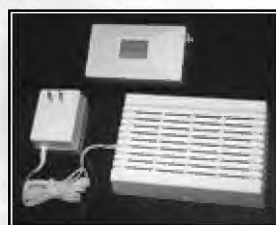
**21st Prize**  
Falle Pick Set From Mark  
Bates Associates



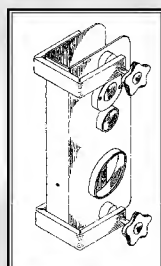
**22nd Prize**  
Sieveking Products  
Squeeze Play



**23rd Prize**  
ABUS Padlock's Marine  
Padlock Display



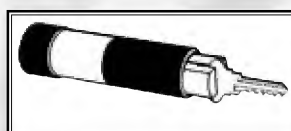
**24th Prize**  
Rodan's AV 100 Heavy  
Duty Door Annunciator



**25th Prize**  
A-1 J-50  
Installation Jig



**26th Prize**  
M.A.G. Engineering  
Sampler



**27th Prize**  
Framon Impressioning  
Handle



## The 15 Minute Safe Opening Technique

**28th Prize**  
Book — 15 Minute  
Safe Opening  
Technique by Jake  
Jakubowski

## Jake's Tip of the Month...

### Round Head Floor Safe Lockout Trick

In-floor safes using the LaGard lock mechanism such as Meilink, U.S. Safe, In-A-Floor, Pryor, etc., can often cause a lockout when the back cover plate retaining screws begin to loosen. The cover plate drops down just far enough to let the relocker on one or more of the bolts activate, thus locking the safe in the tube.

You can usually tell if one or more of the relockers has activated when you dial the combination and as you come around to the drop-in position, you can feel the fence drop but the dial feels like it hit a brick wall. It suddenly comes to a dead stop before retracting the bolts! At this point rather than get out the drill, try the following.

First dial the combination and bring the wheels around until the dial stops moving. At this point the lock mechanism is trying to retract the bolts, but they are stopped by the relocker. At this point begin rapping the face of the safe head (gently but with enough force to cause a vibration) with a deadblow hammer.

If the relocker is going to yield to this method, after a couple of blows with the hammer you will notice that the dial will move to the right. If it moves even slightly, the



by Jake  
Jakubowski

chances are pretty fair that it will open. Continue rapping with the hammer and turning the dial with your fingers until the bolts retract.

The reason this method can work when the back cover plate has loosened is because each of the three bolts on these types of heads have individual relockers. Most often one or two screws will loosen sufficiently to allow the back cover plate to "tilt" and activate a single relocker.

When that occurs, vibrating the plate against the relocker spring will often push the spring up and allow the bolt to retract. This won't work every time, and if more than one relocker has fired it may not work at all. Drilling may be your only option.

This trick should also work on Star heads, since those heads also have a screw retained back cover plate that will loosen.

If you suspect that a loose back cover plate is the cause of the lock-out on the next LaGard-style round head safe you encounter, try this trick before getting out the big guns. It only takes a few minutes to find out if it will work and can save you a lot of strain and aggravation.

See Y'all next month!



### BWD WINNER: Rolling Keyboard Tip

Recently, we were fortunate enough to be

able to expand our shop to three times its former size. During the remodeling, we looked for ways to reduce the linear footage

(approximately 30 feet) of wall space that our old keyboards took up so we could devote the maximum amount of space to displays and merchandise racks.



## AutoSmart Advisor

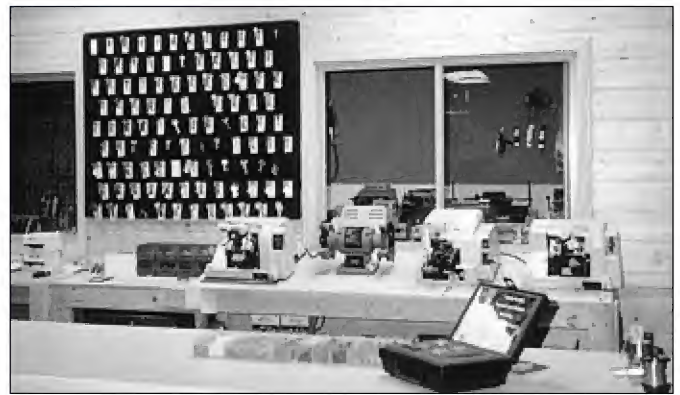
Contains  
virtually  
every car  
and part  
known to  
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#ASA - 2000



**Photograph 1.**



**Photograph 3.**



**Photograph 2.**

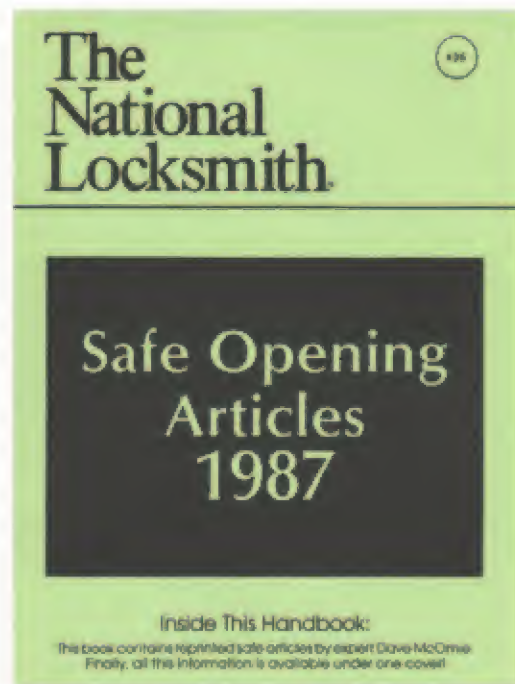
What we came up with was the idea of utilizing heavy-duty track (the same kind that is used for barn or machine shop doors) to make sliding keyboards.

We made four 4' x 4' sliding panels using finishing nails for key hooks as seen in *photograph 1*. *Photograph 2*, shows the four panels hung from the heavy-duty slide track that is attached to cross beams across the ceiling. In addition to the four sliding racks, there is an eight-foot by four-foot rack that is attached to the back wall behind the sliding racks. The net result is that we have 24 linear feet of key rack space that takes up less than ten linear feet of wall space!

*Photograph 3*, shows the key rack immediately behind our sales counter where we keep the most popular numbers for customers coming in to have dupes made. The larger key rack is in the "back room" where our technicians do most of their work.

*Gary Keenan  
Iowa*

# Safe Opening Articles 1987



Now under one cover—all the information safe opening articles by expert safeman, Dave McOmie.

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#SA - 1



**WEDGECO™ KEY  
EXTRACTOR KIT WINNER:  
Renault Ignition Shim  
Trick**

You can impression a key to the Renault ignition locks that use the code series E, M, N, P, R, however, the tumblers are small and are housed in a plastic cartridge which, if damaged, cannot be salvaged. There is an easier way to do it.

To remove the lock cylinder housing from the column, it is necessary to turn the plug to a position halfway between the ACC position and the "run" or ON position.

The lock can be picked to this location, but I have found these cylinders difficult to pick because of the tiny pins. I have found that shimming the lock from the front is a much more efficient way of picking the cylinder and turning it to its release point.

First, remove the shroud from the column. Then remove the security screw that is located in the rear of the housing. Next, place a standard shim above and to the right of the keyway. You may want to remove the small round stainless steel cover from the plug to make it easier to insert the

shim, but it is not always necessary to do so.

Insert the shim in the shear line at about a 40° angle and apply light pressure to the end of the shim. Using a half diamond or hook, lift the tumblers until the shim moves through all five pin positions. With the cylinder "picked" turn the plug to the removal position, depress the lock retainer and carefully pull the cylinder away from the housing.

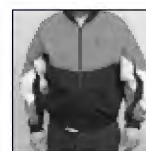
Disconnect the wiring harness at the modular connection located below the column and feed the wires out through the column.

The code is usually located on the lock cylinder housing and the first five letters are the code. Disregard any other numbers or letters you may find and use an X116 key blank.

Sometimes it is possible to read the code without pulling the ignition all the way out. To reassemble, simply reverse the above procedure.

*Robert Blake  
New York*

**STRATTEC WINNER:  
Originating a Volvo  
Key**



I was called out to make a key to a 1990 Volvo 740 wagon so I removed the rear door (hatchback) lock. Not having any space and depth keys for this car, I filed a VL-8 key blank blade to a razor edge and inserted it into the cylinder. With my file tang, I gently wiggled each odd numbered wafer, which marked my key very well.

When I was finished filing, I turned the key over and worked on the even cuts, then copied this key on both sides of a new blank in my key machine.

This trick worked so well for me that when the customer lost her keys the next day I made her a new key the same way. Occasionally, you may have to progress the last cut in the ignition lock, but I got lucky.

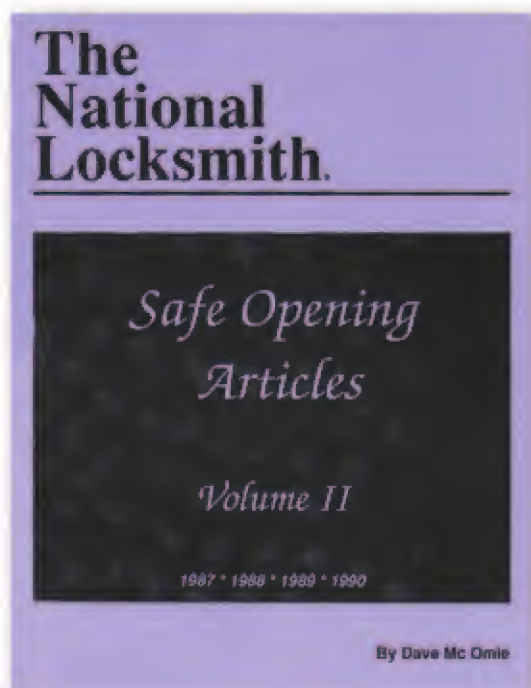
*Bill Weingard  
Arizona*

**HPC WINNER:  
Yale Panic Device Fix**



A school custodian was causing havoc with the Yale mortise locks equipped with deadbolts on the premises. The tab on the deadbolt assembly that initiates the retraction of the latch is a small piece of bent sheet steel. Using a key on a

# Safe Opening Articles



Dave McOmie's original articles from when he first started writing for The National Locksmith are reprinted in this book.

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#SA - 2

three-inch key ring, the custodian was exerting enough force to bend the tab and bypass the cam on the rear of the cylinder plug. In turn, the tab was jammed into a position where it was impossible to turn it back to remove the key or operate the lock.

Eventually I found that these locks would resist jamming much better if I adjusted the depth of the mortise cylinder in the lock so the cam is as close to the angle, or bend in the tab (where the tab has the most strength) as possible.

This means that on a right hand door, the mortise cylinder should be screwed in as far as possible and still function. On a left-hand door, it should be screwed out as far as possible and still work. Using the key ring now to lever the key is more likely to produce a bent or broken key. *Bill Weingard Arizona*

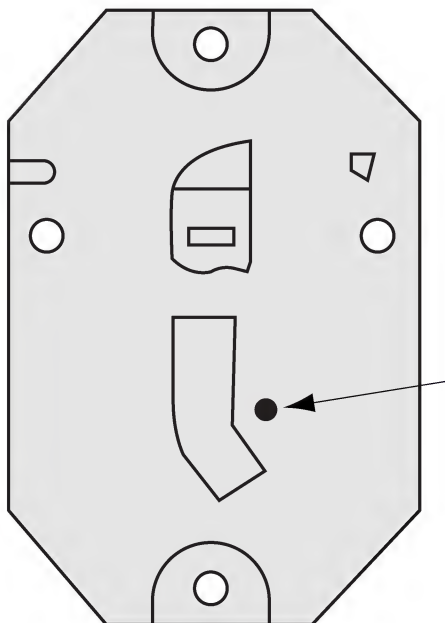


**SARGENT & GREENLEAF WINNER:**  
**Weiser A630 Repair Trick**

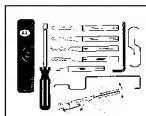
Parts for the Weiser A630 are getting harder to find, but here's an idea for repairing the cam pivot pin with a quarter inch long 4-40 screw:

*Illustration A*, shows the location of the pivot pin that is prone to break. If you have one with this problem, simply tap the hole (no need to drill) to accept a 4-40 machine screw. After installing the screw, replace the cam with to thin washers as spacers and you're back in business!

*Charles M. Mort, CRL  
E-Mail*



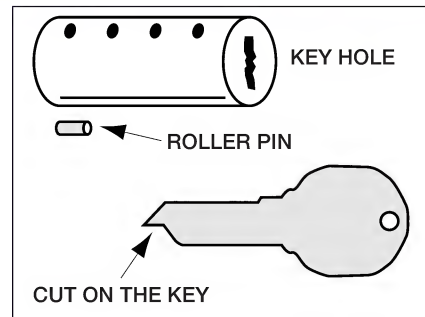
**Illustration A.**



**A-1 SECURITY PRODUCTS WINNER:**  
**Key Stop Tip**

I did a job for an elderly couple that quite obviously had little money to spend on high security locks, yet they were concerned about the number of people (family and friends) who had keys to their home. They asked me if I could devise a way to block out the other keys.

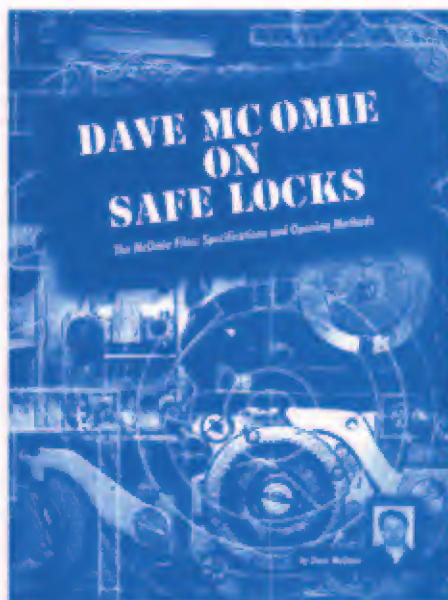
*Illustration B*, shows how I modified the cylinder plugs in their locks and in turn modified the keys to work in the newly reworked plugs.



**Illustration B.**

As you can see by the illustration, I used a roll pin about 3/8" long to block the back end of the keyway in

# Dave McOmie on Safe Locks



Almost 300 pages of information, photographs and illustrations give you every scrap of information about a huge variety of safe locks.

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#DMSL - 1

the plug. Then, I cut a notch on the bottom of the new keys to accommodate the roll pin. Just to be on the safe side, I rekeyed the cylinders.

In addition to the rekeying of the cylinders negating the use of the old keys, the roll pin would stop a normal key from seating properly in the keyway. As an added precaution, I used mushroom pins when I rekeyed the cylinders to increase the prick resistance of the locks. I realize these modifications will not turn these locks into Grade 1, High Security locks, but they fit the bill nicely for these folks.

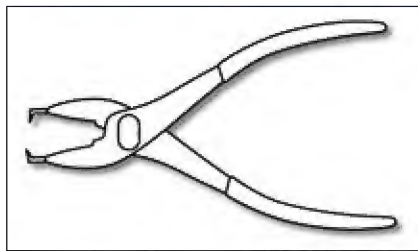
*Kris Tatarian  
California*



**ILCO KEY BLANKS  
(100) WINNER:  
Honda Lock  
Removal Tool**

*Illustration C*, shows a pair of TruArc pliers that I modified to push the double spring loaded detents that are found on some older Honda models that use the X-181 keyway.

To remove these locks, you have to depress both detents at the same time after you remove the handle from the door. By using the 90° tips and turning them inward as shown in the



**Illustration C.**

illustration, depressing both detents is easy.

I am sure this idea will work for other locks although I have not yet tried the pliers in other applications.

*John Day  
Washington*



**KEEDEKX WINNER:  
Corbin Key Blank Tip**

I supervise the locksmith unit at a major university hospital in New Jersey. Among the many buildings throughout the campus, we use several different keying systems, however, Corbin-Russwin is our primary locking system. We only use original key blanks, which as everyone knows, means there are no keyway markings on the blanks. After cutting many keys on the wrong blank many times, I came up with a method

of eliminating the guesswork over these keyways and made it easier for all the locksmiths in the shop.

I went to our carpenter shop down the hall and asked for a piece of scrap wood, about 1'x2'. They did one better. In the scrap pile was a piece of plywood about an inch thick, and covered with Formica.

After taking it to my shop, I drilled a series of evenly spaced holes just big enough for a cylinder plug to fit snug and marked each hole with it's proper keyway. Bingo! No more wrong keys. The guys in the shop use it all the time, and in fact, we have even expanded the idea to Yale and Schlage as well.

*Tom Karausky  
New Jersey*



**TECH-TRAIN  
TRAINING VIDEO  
WINNER:  
Kwikset Tool  
Conversion**

I was asked to repair some panic hardware where the key would not lock or unlock and the customer said the device never really worked right in the first place.

I took the bar off the door and

# Safe Opening Volumes 1-5



These are the classic safe books you will need to open most any safe easily and professionally.

- Volume 1 - Modern Safes
- Volume 2 - Modern Safes
- Volume 3 - Antique Safes
- Volume 4 - Antique Safes
- Volume 5 - Very Recent Safes

**CLICK HERE TO LEARN MORE**



#SO - 1, SO - 2, SO - 3, SO - 4, SO - 5

discovered that the tailpiece was cut too short. Not being able to identify the hardware, I was sure I would not have a replacement tailpiece. I did, however, have a couple extra Kwikset cylinder removal tools. They were the same thickness so all I had to do was cut one to length and modify one end to fit the cylinder in the outside trim. It worked perfectly. *Mark Jackson California*



**SIEVEKING  
PRODUCTS GM E-Z  
WHEEL PULLER  
WINNER:  
Chevy Nova Key  
Generation**

I have a customer that specializes in repairing Toyotas. Not surprisingly, they also work on a lot of 1986-1988 Chevy Novas (re-badged Corollas). I found that by using my X137 EEZ Reader, I could quickly, generate both primary and secondary keys for these cars.

Even though the published depths and spaces are very similar, I found that the marks on the tool did not line up on the Novas exactly as they do on Toyotas. However, I found that if I start from the rear and work towards the face of the lock, one wafer at a time, I can use the tool in the same manner and accomplish the accurate decoding of the lock and use that information to generate a key.

Little discoveries like this make my day. I hope this information may make yours better too. *Matt Eggleton, CRL North Carolina*

**MAJOR MANUFACTURING  
PRODUCTS  
WINNER:  
Quick,  
Temporary  
Rekey Trick**



I use this temporary rekey method at the high school that I work, but it works equally well for business and apartment complexes where a tenant or sub-lease tenant will only be using the area for a short time.

Every year we consolidate our summer school classes in two or three of our schools. This requires rekeying anywhere from 50 to 100 door locks because the teachers for summer school are not the teachers regularly assigned to those rooms. The whole district is grand mastered, mastered, and sub-mastered. Since I only have two days between regular school and summer school, rekeying time can be a real problem.

I made up a bunch of small coin envelopes with the school, room, key number, and biting. All that is necessary is to remove the pins and spring from the 6th chamber and put them in an envelope to be replaced after summer school. I give the new teacher a (short key) a 5-pin key which will only operate that lock. This does not disturb the master keying setup, and the regular teacher's key will still work as well. This saves a lot of time effort and pins. *Steve Shields California*



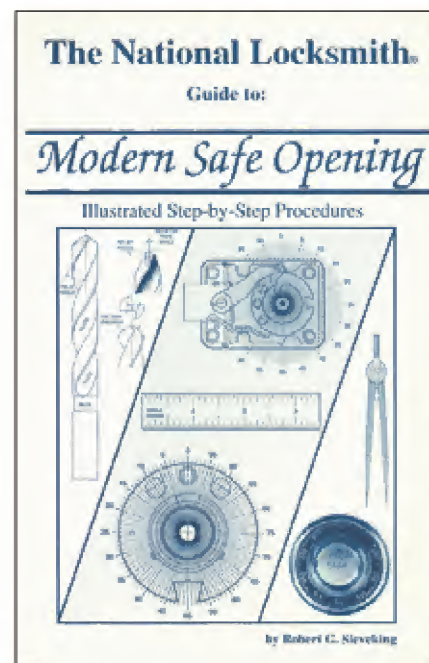
**SLIDE LOCK'S "Z" TOOL  
OPENING SET WINNER:  
Asuna Opening**

I got a call to open a 1993 Asuna Sunfire and did not find any reference to it in any of my manuals. After talking with my customer, I found out that the car is manufactured in Canada and is similar to the GEO Storm.

With that information, I went after the bottom horizontal linkage and opened the car easily. *Dave Nissen Minnesota*

**Continued on page 93**

# Modern Safe Opening



This book is a step-by-step How-To course in safe penetration. Opening safes is one of the most profitable aspects of the locksmithing business.

**CLICK HERE TO LEARN MORE**



#MSO - 1



# THE SIEVEKING AUTO KEY GUIDE WINNER: Another Shear Head Bolt Removal Idea

I do my share of foreign car ignition removals and have found over the years, that the hardest part of the job is removing the ignition housing headless bolts. I have tried the hammer and awl approach, the Dremel approach with a lot of dust and shavings. The best way I have found is the following method.

Sears sells a Craftsman Automatic Center Punch that is about 4-inches long, which is just the right size to fit into the smallest of dash areas. All that you have to do is put the point on the bolt in the direction to loosen the bolt. Then, with three or four "hits" of the center punch, the bolt backs right out. Then just do the opposite to tighten it.

David Shaffer, RL  
Ohio

Editor's Note: Depending on where you buy an automatic center punch, they will cost you between fourteen and twenty dollars. However, they are well worth having in your toolbox.



# JET KEY BLANKS WINNER: Removable Stick on Advertising

Ever get an advertising decal you wanted to display on your service vehicle, but didn't want to apply it because of the adhesive backing and what it would do to the paint?

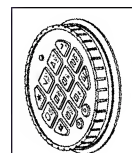
I recently had an auto club send me their adhesive (sticky) logo/decal. I went to a local sign shop and purchased a piece of magnetic (plastic) material which comes in a variety of colors and is inexpensive. I applied the adhesive backed decal to the magnetic material, trim to size and then put the now magnetic logo on my vehicle.

Now, when necessary, the decal comes off easily and without damage to the paint. Putting the decal on a magnetic backing is also a lot cheaper than a logo or advertisement painted on your van.

Mike Strobusch  
Wyoming

Editors Note: Mike, good idea! However, let me caution you to take the magnetic sign off of your van every couple of weeks and clean the painted surface of the van

and the back of the magnetic sign. I know from experience that if you leave a magnetic sign on your van without cleaning under it, the paint will begin to pit and rust can form because of the moisture and acidic nature of soil and road grime.



# LA GARD WINNER: Opening Sentry's New KeepSafe

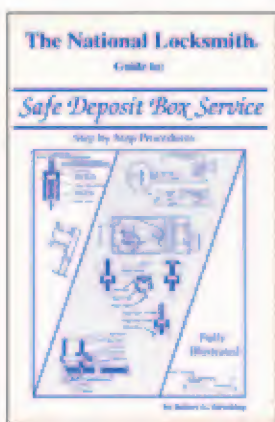
I was asked to open an in-floor round head safe called KeepSafe.

The KeepSafe is made by Sentry Safe (John D. Brush, Co. in New York) and is their model #7250.

The 7250 dial is not the same type of dial used on the earlier Sentry round heads. On the earlier dial you can remove an insert in the center of the dial and have access to the screw that holds the dial on the spindle. On the 7250 there is no insert or screw. The new dial is a one-piece unit and is pressed on the spindle, which means the only way to remove these dials is to destroy the dial.

I know you can drill a hole nearly anywhere in a Sentry head and scope the wheels but here's the way I opened this safe without a scope:

# Safe Deposit Box Service



There  
is gold  
in safe  
deposit  
boxes!

CLICK HERE TO LEARN MORE

#SDBS - 1

# InstaCode



Your  
total code  
and code  
machine  
management  
program.

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#IC - 2001

First drill a 1/4", or larger hole through the dial and into the head. I use this hole to insert a screwdriver to hold the dial steady while I drilled out the spindle.

Next, I drilled right down through the center of the dial drilling out the spindle and allowing the spindle and the wheel pack to fall deeper into the head of the safe. This head has a deep "well" to it and there is plenty of room for the wheel pack to fall out of the way for the next step.

With the wheel pack out of the way, there is nothing to block the two bolts from retracting. The bolts are on a spring loaded cam or activator bar and all I had to do was tap the safe head with a hammer to vibrate the cam. The two spring-loaded bolts will snap back and the safe is open.

There were no relocators on the head that I worked and when I encounter another one, I don't think the opening will take more than five minutes.

*Bill Wessel  
California*



# **HIGH TECH TOOLS WINNER: Lexus Trunk Access**

Here's how I retrieve keys that are locked in the trunk of most Lexus sedans that I encounter.

The rear deck (below the rear window) has a large speaker box in the center. Carefully pry up the plastic speaker cover and remove the three bolts that hold the subwoofer down. Two of the bolts are set back into the deck, near the window, but are accessible.

With the bolts removed, unplug the speaker connectors and remove the speaker. Removal of the speaker leaves a hole about the size of a bowling ball that leads directly into the trunk. If you have long, thin arms, you can reach in and retrieve the keys. Personally, I prefer to use a long rod with a hooked end to snag the keys.

*David Fairchild  
California*

**TRL**

# **Locksmith Dispatcher 2000**



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#DIS - 2000



# **15 Minute Safe Opening**

This book deals exclusively with round head lift out doors. Shows five ways to open a Major; three ways to find the Dog Pin on a Major; four ways to open a Star; four ways to open a LaGard style round head.

**CLICK HERE TO LEARN MORE**



#JJ - 1

# The **WINTER** Side

"Having A (Hot-Pink) Ball"



by  
**Sara  
Probasco**

Sometimes, morning comes awfully early on Monday. Sitting at the breakfast table, hunched over my steaming mug of coffee one such day, I was doing facial calisthenics in an attempt to get my eyes to stay open, when I heard a low chuckle from behind Don's newspaper.

"What?" was about all even my curiosity could manage to mutter, at that stage of semi-wakefulness.

"Have you read this?" he answered, chuckling again.

"Nope," I replied, going back to slowly stretching my left eyebrow up my forehead three times. I hate it when he's so cheerful in the morning.

For my benefit, he began to paraphrase the news article in question. "Here's an elderly lady returning to the parking lot at the mall after doing some shopping, and she finds four guys sitting in her car. She drops her shopping bags, pulls a handgun out of her purse, and starts screaming at them at the top of her lungs that she knows how to use a gun and will blow them away, if they don't get out of the car."

Don began chuckling again.

"What's funny about that?" I mumbled, deeply inhaling coffee fumes as I concentrated on raising my right eyebrow, one... two...

"Just wait. These four guys leap out of the car and take off running, so the lady proceeds to load her shopping bags into the back seat. Then she gets into the driver's seat and pulls her keys out of her purse." By this time, Don was doubled over, laughing.

I stared at him through barely open eyes and wondered how long a person should wait before having her spouse committed to a mental institution.

Wiping tears from his eyes with his napkin, he continued: "Her keys won't fit! See, it isn't really her car at all. Her identical vehicle is parked four or five spaces away."

He was laughing again. "Can't you

just see it! These guys sitting in their car, minding their own business, and this old lady comes up with a gun...."

"I get the picture," I said, smiling as I managed three coffee-mug-lifts to my lips. "So what happened next?"

"Next?" Don sobered momentarily while his eyes scanned the page. "Well, it says she transferred her packages and everything into her own car and drove down to the police station to report the incident. And — get this." He had begun sniggering again as he read aloud, "The sergeant broke out laughing and pointed to the other end of the counter where four visibly shaken men were filling out a car-jacking report against an 'insane, elderly woman with a gun'." Don dissolved into laughter.

I guess you'd have to be reading it.

I smiled sympathetically and went back to my coffee-fume inhalation therapy. It was working. One eye was almost open, now. I could see that Don wiping his eyes with his napkin, again.

"Then what?" I asked, not wanting

to seem disinterested after what he was going through.

He waved away my question. "Oh, all the charges were dropped. But can't you just see it?"

It seemed so important to Don, I tried to imagine the scene, but it eluded me. "Whatever happened to hot-pink tennis balls, anyway?" I asked Don.

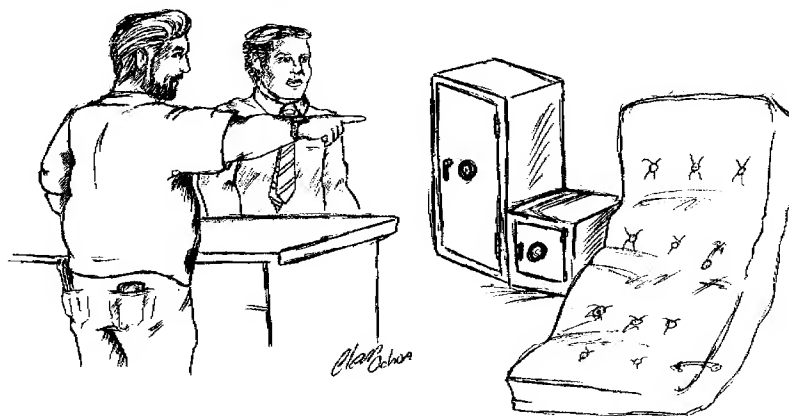
"What?" Don stopped mopping his eyes with his napkin. His smile faded as he squinted in my direction, his face a picture on non-comprehension.

"Don't you remember when the kids were small, how we'd jam a hot-pink tennis ball on the radio antenna so we could spot our car in parking lots?"

"Yeah, well, sort of. But what does that have to do with anything?"

"If the lady in the article had done that, she would have saved everybody a lot of headaches."

"Hmmm." Don returned to reading his paper.



"I had a customer ask if I stocked any 'cheap safes' and this cartoon came to mind."

- Thank you, F. Peterson from Stockton, CA, for this cartoon.

**T**hat would have helped Javana, too. Remember when Leo's doctor sent him to the hospital? He called Javana, described his car, said he'd left his keys in the ignition, and asked if she would pick up his car at the doctor's office and keep it until he got back."

"Was that when the other guy at the doctor's office (who had also left his keys in the ignition) called the police and reported his car stolen?" Don asked, peering over the top of the pages.

"Right. And then, while they were inside the doctor's office filling out the report, Javana — who by then had discovered her mistake — returned his car and took Leo's. But the point is, she would never have taken that other man's car in the first place, if there had been a hot-pink tennis ball on Leo's antenna. She would have known for sure which one was his."

"Hmmm." Don was back into his newspaper again.

"And what about the guy we heard about who drove home from the office one night in the wrong car - same make and model as his, same color, keyed to the very same keys as his own vehicle. What finally tipped him off was the difference in color of the interior. He, too, could have avoided all the hassle with a hot-pink tennis ball."

Don laid down the paper. "Don't forget that lady who called us recently saying her door lock wouldn't work and got Rickie to open the car for her, only to find her key wouldn't go in the ignition, either," he said.

"I'd almost forgotten about that. The owner came running out of his office to see what they were doing to his car."

"Then, when the lady found her own car a few spaces farther down the street, she discovered she'd left her purse in the other car, and Rickie had to go into the man's office and get his permission to retrieve it from his locked car," Don added. "What a day that was."

"Well, it could all have been avoided if the lady had only...."

"I know, I know, '...had a hot-pink tennis ball on her antenna'."

"Right!"

"You know, there's just one problem with your little theory."

"What's that?"

"On most automobiles, these days, antenna retract into the fender when you turn off the radio. How do you propose to keep the ball from falling off?"

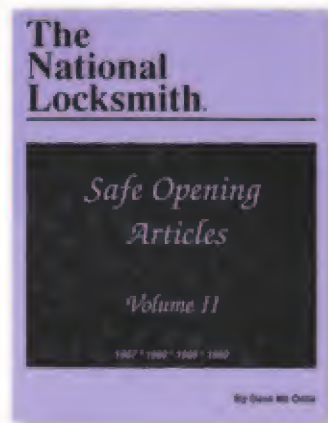
I could see myself starting across the parking lot at the mall and playing hop-scootch over thousands of hot-pink tennis balls that had popped off people's retracted antennae.

"I have no idea," I sighed. "Oh, well, as they say, 'The best laid plans...'"

"...sometimes turn out to be rotten eggs," Don finished with a grin.

**TNL**

## Safe Opening Articles



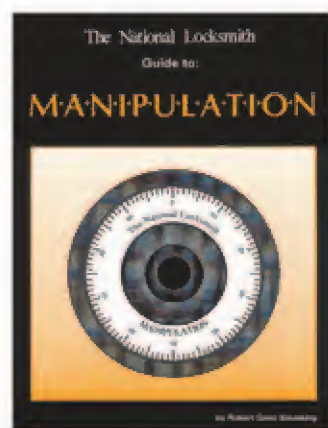
Dave McOmie's original articles from when he first started writing for The National Locksmith are reprinted in this book.

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#SA - 2



## Manipulation Home Study Course



Our home study course guides you on step-by-step process, teaching you everything there is to know about manipulation.

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#MAN - 1





# Transponder Programming



*"Put your left foot in...Take your left foot out...Put your left foot in, and shake it all about..."*



**by Randy Mize**

No, it's not the Hokey Pokey. It's all part of the new 1999 Lexus remote/transponder key programming procedure.

In 1997, both Toyota and Lexus introduced models that include security systems that are backed by transponder technology. Programming duplicate keys for these vehicles involves a sequence of alternately depressing the accelerator and brake pedals. Stepping on the pedals the correct number of times and in the correct order is essential to successful key duplication for these vehicles. In fact, a simple misstep or miscount requires that the technician exit and restart the programming sequence.

Unfortunately, when it comes to the programming, the choreography is all

but certain. In 1997, a version of the programming sequence was released, and, for the most part, worked. (In some instances, the programming sequence had to be repeated several times before the key was actually be accepted.)

For 1998 and 1999, however, there seems to be some minor differences that mean the difference between success and failure.

The following procedure, performed on a 1999 Lexus GS300 (see photograph 1) was introduced on the 1998 and up Toyota and Lexus vehicles. The Lexus version is available with a remote key head. This, too, needs to be programmed.

Lucky, locksmiths performing these procedures flawlessly, make it look as though they're dancing the Hokey Pokey. Those less

fortunate, however, appear to be performing the Gerbil Dance of Death. (Brain deterioration due to aging causes gerbils to endlessly run in circles and/or flip-flop like a fish on land - thus dubbed the "Gerbil Dance of Death.")

For 1999, aside from the new programming sequence, Lexus has also introduced a new key. Still using an

## **1. A 1999 Lexus GS300.**





**2. Lexus has introduced a new key.**



**3. Cycle through Lock/Unlock using electronic lock button.**

internal 4-track design, the new Lexus key is similar to the previous unit in that it includes both a remote key head for locking/unlocking the door locks and a security panic button, plus a separate transponder that controls the ignition/starter cut-off. Unlike the previous key, the new key is shorter and requires a different accelerator/brake programming sequence for adding duplicate keys. (See photograph 2.)

While new keys are available only through the Lexus dealer, a locksmith may find occasion to program a duplicate key. To program two different procedures must be followed to the tee - programming the remote function (door lock/unlock) and programming the transponder security function. Following are the two procedures:

### **1999 Lexus Remote/Transponder Duplicate Key Programming**

#### **Remote Programming:**

1. Open vehicle's driver side door. (Leave door in open state.)

2. Using the electronic Lock/Unlock button found on the door's armrest, cycle through lock/unlock five times. (i.e. Lock-Unlock, Lock-Unlock, Lock-Unlock, Lock-Unlock, Lock-Unlock.)

3. Close door.

4. Open door.

5. Repeat step 2 - Cycle through Lock/Unlock using electronic lock button (do not manually lift/depress the lock button) on the door's armrest five times. (See photograph 3.)

6. Insert the new key into the ignition and turn to ON position.

7. Turn key to OFF position and remove key.

8. Simultaneously, depress and hold the remote's PANIC and UNLOCK buttons found on the key's bow. During this time, the vehicle's security module is performing the program function. The SECURITY mode LED will flash during this process. The LED is located near the trunk release button, just below the driver side window vent.

9. A beep or chime signals the end of the program function. Release the PANIC and UNLOCK buttons. The vehicle's door lock and panic



## **GM Steering Column Course**

Comes complete with take-home test so you can become certified on GM steering column service! Authoritative training on every domestic GM column from 1967 to 1995.

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**4. Insert an existing working or registered MASTER key.**

functions can now be controlled via the new remote key.

**Transponder Programming:**

This vehicle includes programming for both a MASTER key and a VALET key function. Only an existing working or registered MASTER key



**5. Depress accelerator pedal five times.**

can be used to access the security module's program function for adding a duplicate key.

1. Insert an existing working or registered MASTER key and turn to the ON position. *(See photograph 4.)*
2. Depress accelerator pedal five times. *(See photograph 5.)*
3. Depress brake pedal six times.
4. Turn key to OFF and remove from ignition lock.
5. Insert new key. Do not turn to ON position.

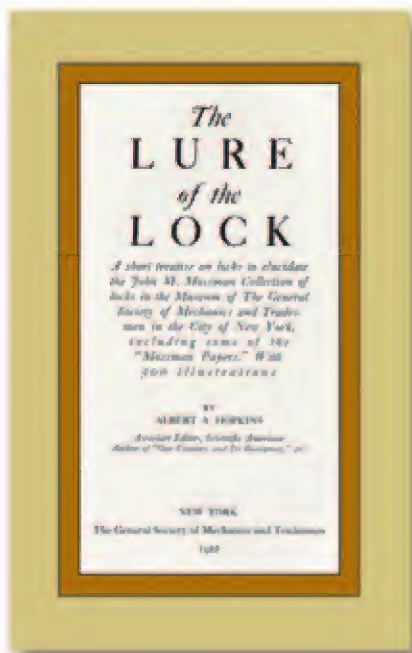
6. Depress accelerator pedal one time. The security light blinks for approximately 60 to 90 seconds.

7. When security light goes out, remove the key.

8. Step on brake pedal one time to release security module's program mode.

Once the programming sequences outlined above have been completed, try the key and the remote. You'll know shortly whether you performed the Hokey Pokey or the Gerbil Death Dance.

**TNL**



# The Lure of the Lock

This hardcover book, compiled in 1928, features dozens and dozens of beautiful photographs on ancient through modern locks.

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#LURE

# BUSINESS BRIEFS

## **Kenstan Lock Design Winner**

The winner of the 1998 Kenstan design contest was announced at this year's Globalshop Show and a check for \$5,000 was presented to Michael Johnston, Executive Vice President and General Manager of Trinity Engineering for their winning submission.

Trinity's display cabinet features a locking system that locks or unlocks twenty drawers at one time with an effortless turn of the key.

## **Security Lock Chosen Distributor of the Year**

For the second year in a row, the South Florida Locksmiths Association has named Security Lock Distributors their "Distributor of the Year." The award honors Security for outstanding efforts in servicing the needs of locksmiths. David Block, Branch Sales Manager and Larry Tanke, Technical Manager, are shown receiving the award.

*For more information call: 800-847-5625; Fax: 800-878-6400; E-mail: info@seclock.com; Web: http://www.seclock.com.*

## **Ingersoll-Rand Appointment**

Ingersoll-Rand Company announced the election of Herbert L. Henkel as president and chief operating officer. In addition, Henkel has been elected to the New Jersey-based manufacturing company's board of directors.

## **Monarch Merger with Ingersoll-Rand**

Monarch Hardware has made significant changes since its successful merger with architectural hardware

leader Ingersoll-Rand. As a result of the merger, Monarch has remained a separate component of Ingersoll-Rand and functions as an independent business unit. Monarch continues to manufacture a broad range of panic and fire exit devices and trim, with primary market applications being focused on the retrofit and new construction markets.

## **U.S. Lock Opens Texas Center**

U.S. Lock Corporation has opened a sixth service distribution center. The new Dallas, Texas location is fully stocked providing one-day shipping service to the entire region and is equipped with a complete city sales service center. Scott Combs, a 10-year industry veteran, manages the facility at 2610 Andjon Drive.

U.S. Lock's Dallas office can be reached at 214-351-3747.

## **BWD Manufacturing Location Changes**

The decision to close the BWD Automotive (formerly All-Lock) operation in Selma, Alabama was announced on March 19, 1999. The closing date is effective December 31st, 1999.

Parts purchased from All-Lock that were manufactured in Selma will now be manufactured in the Mexico plant in Matamoros, Mexico. This plant has been in operation since 1989 and is currently ISO 9002 Certified. The sales office will still be in Selma.

*For more information call: (800) 647-4926 or (334) 874-9001; Fax: (334) 874-6011.*

## **New GSA Schedule Products from Lockmasters**

Lockmasters now offers a number of security items on



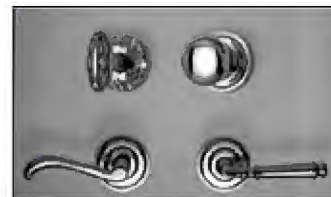
*For information check the web at: www.lockmasters.com or call 1-800-654-0637, ext. 498 for a copy of a complete brochure and price list. Circle #300.*

## **Access Hardware Stocking Locknetics CM5100 and CM5500**

Access Hardware Supply is stocking the Locknetics new CM5100 and CM5500 card reader locksets. The CM series electro-mechanical locksets is now available with an ABA standard trak 2 magnetic stripe card reader that easily integrates with most existing phone, credit and "one-card systems". Lock models include cylindrical style, latchbolt mortise, and the Auto Bolt mortise style.

*For more information call: 800-348-2263 or fax: 800-435-8233. Circle #301.*

## **Omnia offers Seven New Interior Latchsets**



Omnia Industries has introduced seven new interior latchsets to further expand their extensive line of solid brass locksets.

These new traditional and ornate designs include both knob and lever configurations. All are

GSA Schedule. Products include Lockmasters' ScifLock, S&G combination locks, S&G sliding deadbolts, LaGard ComboGard and more.

available in a variety of finishes, including polished and lacquered brass and polished chrome. Some models can be ordered in additional finishes including shaded bronze and satin chrome or nickel.

*For more information call: (973) 239-7272. Circle #302*

## **ABUS New Express**

In support of the locksmith market and in concert with the locksmith distributor, ABUS has introduced the new "ABUS-Express" program. Now locksmiths will be able to order and be shipped direct from ABUS for all their padlock and hasp needs. ABUS recognizes the new "E-commerce/Internet" consumer direct programs being offered by the national chain stores, which compete with the locksmiths' service. ABUS developed this new "Express" program to give the locksmith an alternative source of high quality (ISO-9000 certified) padlock and hasp products priced very competitively, with the same day shipment, and in store merchandising support.

*For more information call: 1-800-352-2287.*

## **Security Lock Adds Two Technical Positions**

Jeffrey (JR) Hentschel and John Singleton have joined Security Lock. Both will be working in the firm's expanded Electronic Products Access Control Division. Hentschel, stationed in Boston, is a member of the Technical Products Department.

*For more information call: 800-847-5625; Fax: 800-878-6400; E-mail: SECLOCK@IX.NETCOM.COM; Web: http://www.seclock.com*



# THRU THE KEYHOLE

*A Peek at Movers & Shakers in the Industry*

## ATTENTION MANUFACTURERS AND DISTRIBUTORS:

Would you like your company and products to be profiled in *Thru The Keyhole*? Please call Editor, Greg Mango, at (630) 837-2044.



### **ABLOY® Construction Locking moving North American Facility**

Due to increased demand for ABLOY DISKLOCK PRO products as well as to better serve their USA clients, the Brooklyn office of ABLOY Construction Locking will merge their complete operations into a new division of ABLOY Canada Inc. which will be called ABLOY Door Security, North America.



This new division which will be based in Montreal, will continue to offer USA clients excellent service along with next day shipping on virtually all orders.

This new North American facility with more than 30 years of ABLOY experience contains sales, marketing, customer service, master keying departments, as well as complete assembly operations for all door security products in North America.

Also housed in this facility is the only North American based ABLOY

**D I S K L O C K  
P R O**, computer controlled production key machine. This key machine cuts an extremely precise key every 10 seconds, which translates into quicker service on virtually any size order

for locks, keys and ABLOY master systems.

The new ABLOY Door Security team promises to increase their USA market penetration and their overall profile in the locksmith industry by providing excellent products along with above average service on the complete range of DISKLOCK PRO products.

The unique and patented ABLOY DISKLOCK PRO rotating disc cylinder mechanism offers the maximum in high security features in a UL 437 listed cylinder.

This includes patented keyways, the only completely hardened steel mortise/rim cylinder, the industry's most extensive master keying capability, along with maximum resistance to harsh environments and wear.

With one of the most complete ranges of products that retro fit virtually all applications with a "one key fits all products" approach that few competitors can match. **TNL**

Circle # 282 on Rapid Reply Card.

# KEY CODES

## New GM Code Series S000A-S711K, Part 3

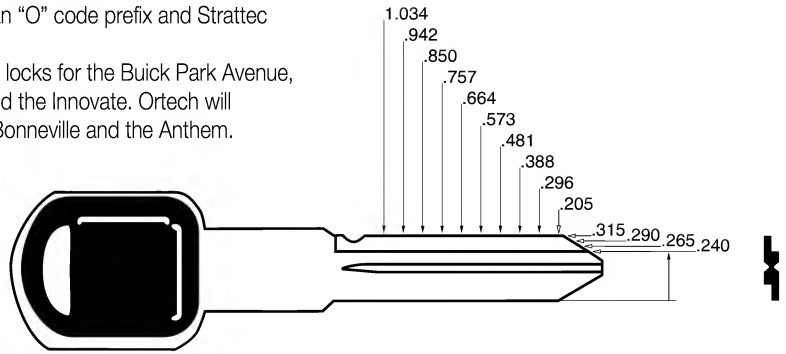
General Motors is introducing a new 10-cut code series for the year 2000 vehicles. The code series is being split between three lock manufacturers: Huf, Ortech and Strattec. The letter prefix designation of the code will determine which manufacturer produced the lock. For instance, Huf codes will have an "H" prefix. Ortech will have an "O" code prefix and Strattec will have an "S" code prefix.

From the information we have gathered, Huf will be supplying locks for the Buick Park Avenue, Catera, Cadillac Seville, Cadillac Eldorado, Cadillac DeVille and the Innove. Ortech will supply locks for the Buick LeSabre, Oldsmobile 88, Pontiac Bonneville and the Anthem.

Strattec will supply codes for all other GM models.

All previous 10-cut key blank and spacing and depth information remains the same. The only thing new is the code series.

As with the original 10-cut code series, this is a very large series addition. The portion of the code series we are presenting here is the Strattec series identified by the letter "S" prefix.



**Manufacturer:** Strattec for General Motors

**Code Series:** S000A - S711K

**Key Blanks:**

**BWD:** M95DB or M95DBL

**Curtis:** B-82 or B-86

**Iico:** P1102

**Iico EZ:** B82

**Jet:** B82 or B82NP

**Silca:** GM39

**Strattec:** 597500 (88 & 75 Grove)

**Number of Cuts:** 10

**M.A.C.S.:** 2

**Key Gauged:** Tip

**Center of First Cut:** 1.034

**Cut to Cut Spacings:** .092

**Cut Depth Increments:** .025

### HPC 1200CMB

**Code Card:** CF215

**Jaw:** A

**Cutter:** CW-1011

**Gauge From:** Tip

**HPC 1200PCH (Punch):**

**PCH Card:** PF215

**Punch:** PCH-1011

**Jaw:** A

**Silca UnoCode**

**Card Number:** 567

**HPC CodeMax**

**DSD #:** 259

**Jaw:** A

**Cutter:** CW-1011

**Curtis No. 15 Code Cutter:**

**Cam-Set:** GM-6

**Carriage:** GM-6A

### Framon #2:

**Cuts Start at:** .216

**Spacing:** .092

**Block #:** 3

**Depth Increments:** .025

**Key Clamping Info:** Using

spacing clip, align tip of key

with left side of vise. Lay clip

flat on left side of vise and

slide key in from the right.

**A-1 Pack-A-Punch**

**Quick Change Kit:** PAK-G1

**Punch:** PAK-90T

**Die:** Standard

**ITL 9000 & 950**

**Manufacturer ID:** 519

### Spacings:

1 - 1.034

2 - .942

3 - .850

4 - .757

5 - .664

6 - .573

7 - .481

8 - .388

9 - .296

10 - .205

### Depths:

1 = .315

2 = .290

3 = .265

4 = .240

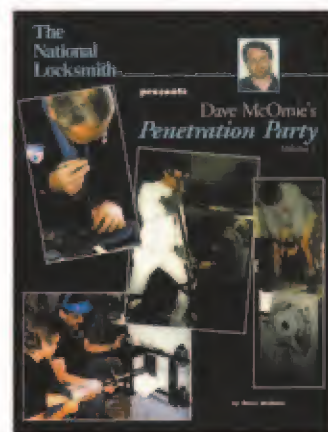
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S001H 2332342443	S023H 2331343112	S045H 2332242134	S067H 2334331124	S089H 2332432422	S111H 2334323112
S002H 2334213132	S024H 2334343242	S046H 2342213234	S068H 2334421334	S090H 2332113312	S112H 2334223422
S003H 2342132442	S025H 2331321342	S047H 2334223242	S069H 2334313122	S091H 2334342342	S113H 2334432342
S004H 2332443132	S026H 2332343124	S048H 2334233112	S070H 2331334244	S092H 2332431312	S114H 2332234212
S005H 2332234243	S027H 2332131322	S049H 2332344212	S071H 2331344224	S093H 2332431134	S115H 2332324242
S006H 2334423224	S028H 2332443342	S050H 2342113422	S072H 2332431224	S094H 2334234342	S116H 2334223122
S007H 2331331223	S029H 2332234422	S051H 2332134233	S073H 2332242112	S095H 2334433122	S117H 2342213112
S008H 2332243242	S030H 2332124423	S052H 2332433112	S074H 2342113122	S096H 2332321312	S118H 2342112434
S009H 2342133224	S031H 2332423242	S053H 2332122342	S075H 2332244312	S097H 2332323422	S119H 2331342312
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S011H 2334224232	S033H 2342213324	S055H 2331324312	S077H 2332131244	S099H 2342134242	S121H 2331334422
S012H 2334323442	S034H 2342131124	S056H 2332324313	S078H 2332442324	S100H 2332324232	S122H 2334334422
S013H 2334323442	S035H 2332331212	S057H 2331343242	S079H 2332243422	S101H 2334431324	S123H 2332312422
S014H 2334312434	S036H 2342123442	S058H 2332123122	S080H 2332423422	S102H 2332244213	S124H 2331331213
S015H 2332112442	S037H 2332313442	S059H 2331313422	S081H 2332134242	S103H 2331342244	S125H 2342121312
S016H 2334312312	S038H 2332242312	S060H 2334221324	S082H 2332131224	S104H 2331323442	S126H 2332133423
S017H 2332424232	S039H 2332123132	S061H 2332133112	S083H 2332422134	S105H 2332432242	S127H 2334243434
S018H 2334244212	S040H 2334423132	S062H 2342121342	S084H 2334242442	S106H 2342113242	S128H 2332422342
S019H 2332123422	S041H 2334243224	S063H 2332423122	S085H 2332213422	S107H 2334424242	S129H 2332234234
S020H 2332231124	S042H 2334423342	S064H 2332344222	S086H 2334422442	S108H 2331342434	S130H 2332213342
S021H 2332134312	S043H 2332324212	S065H 2334231224	S087H 2342133132	S109H 2332422434	S131H 2332322442

# New GM Code Series

## S000A-S711K, Part 3

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S133H	2332332422	S204H	2422331123	S275H	2421343242	S346H	2343424242	S378H	2343431324	S410H	2343134232
S134H	2331331123	S205H	2423124212	S276H	2423133213	S347H	2342434212	S379H	2342312324	S411H	2344223112
S135H	2334424422	S206H	2421324342	S277H	2422431124	S348H	2344223324	S380H	2343243132	S412H	2343233112
S136H	2332344312	S207H	2421234244	S278H	2421244242	S349H	2344224312	S381H	2342433132	S413H	2342433434
S137H	2334234312	S208H	2422434312	S279H	2422434342	S350H	2344231334	S382H	2343433242	S414H	2343223422
S138H	2334213312	S209H	2423213112	S280H	2423133132	S351H	2343234222	S383H	2343231224	S415H	2343132434
S139H	2331344324	S210H	2422113112	S281H	2421121313	S352H	2343223242	S384H	2342313132	S416H	2342321134
S140H	2334424334	S211H	2423133434	S282H	2423112312	S353H	2342322342	S385H	2343113112	S417H	2342323422
S141H	2342211334	S212H	2344324422	S283H	2422134243	S354H	2343112334	S386H	2342322312	S418H	2342232312
S142H	2334231342	S213H	2423132213	S284H	2344313442	S355H	2343213342	S387H	2344223442	S419H	2344234334
S143H	2332132312	S214H	2422312313	S285H	2423134212	S356H	2343323442	S388H	2342423112	S420H	2342233242
S144H	2334342434	S215H	2344242312	S286H	2423113313	S357H	2343123224	S389H	2343231312	S421H	2344211324
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S147H	2332113132	S218H	2422344312	S289H	2422134422	S360H	2343312124	S392H	2342313434	S424H	2344224342
S148H	2331344243	S219H	2422323312	S290H	2422433442	S361H	2343132134	S393H	2343234342	S425H	2342423324
S149H	2342123324	S220H	2421131213	S291H	2423123342	S362H	2342442342	S394H	2344232234	S426H	2342442134
S150H	2331342113	S221H	2344313234	S292H	2344323312	S363H	2343234312	S395H	2343422324	S427H	2343124422
S151H	2334421124	S222H	2422313132	S293H	2421312312	S364H	2343132312	S396H	2343243312	S428H	2342321324
S152H	2334232422	S223H	2344331324	S294H	2421343423	S365H	2342232134	S397H	2343121124	S429H	2343121242
S153H	2331344313	S224H	2421321312	S295H	2422334232	S366H	2344232324	S398H	2344231124	S430H	2342424434
S154H	2334243342	S225H	2421123423	S296H	2421323112	S367H	2342334222	S399H	2342423442	S431H	2343242234
S155H	2332233113	S226H	2423211312	S297H	2421133242	S368H	2343124242	S400H	2344213422	S432H	2343342434
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S170H	2332342124	S241H	2421334212	S312H	2423242334						
S171H	2331334224	S242H	2421313242	S313H	2423423324						
S172H	2332313123	S243H	2422343123	S314H	2431231242						
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S174H	2332434312	S245H	2422113342	S316H	2423234232						
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S198H	2423134423	S269H	2422342334	S340H	2342312442						
S199H	2421123422	S270H	2422312442	S341H	2342344212						
S200H	2422343134	S271H	2421234312	S342H	2342324324						
S201H	2421242332	S272H	2421331242	S343H	2343212442						
S202H	2423123124	S273H	2421211313	S344H	2344224434						

## Penetration Party



- Uncensored!
- The Safes!
- The Tools!
- The Action!
- The Perfect Openings!
- The Bloopers & Blunders!
- The Slick Tricks!

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# New GM Code Series

## S000A-S711K, Part 3

S441H	2421122342	S512H	2344324212	S583H	2423133224	S654H	2431324212	S725H	2432124423	S796H	2423421134
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S444H	2421342134	S515H	2344322442	S586H	2344243122	S657H	2432334312	S728H	2432343122	S799H	2423423234
S445H	2344324242	S516H	2421233112	S587H	2422431312	S658H	2431332434	S729H	2432123112	S800H	2423443422
S446H	2423132133	S517H	2421123113	S588H	2431313442	S659H	2432332242	S730H	2431344213	S801H	2431242332
S447H	2421331132	S518H	2422121342	S589H	2433223112	S660H	2431332312	S731H	2433112422	S802H	2423244312
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S461H	2422134342	S532H	2421213342	S603H	2431322342	S674H	2433223313	S745H	2431213442	S816H	2423223124
S462H	2423123442	S533H	2421133132	S604H	2432433132	S675H	2432231133	S746H	2431232422	S817H	2431224434
S463H	2423121322	S534H	2421121242	S605H	2432244212	S676H	2433124242	S747H	2431312313	S818H	2423323113
S464H	2422124312	S535H	2344342124	S606H	2432342134	S677H	2433132312	S748H	2431242124	S819H	2431134242
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S486H	2423124432	S557H	2421124242	S628H	2432243123	S699H	2432423112	S770H	2423313434	S841H	2431243312
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S488H	2423132433	S559H	2344242134	S630H	2433242324	S701H	2433423132	S772H	2424424334	S843H	2431233132
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S511H	2423131223	S582H	2423124342	S653H	2433243423	S724H	2432342234	S795H	2431221342	S866H	2431124324

# New GM Code Series

## S000A-S711K, Part 3

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S871H	2423344342	S942H	2423322312	S013J	2431331122	S084J	2443134342
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S873H	2423233422	S944H	2423234313	S015J	2433232422	S086J	3112243313
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S877H	2431223112	S948H	2424343122	S019J	2433231134	S090J	3112231122
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S882H	2423343423	S953H	2423223342	S024J	2433234312	S095J	3112342332
S883H	2431134342	S954H	2424334242	S025J	2432131242	S096J	2443244232
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S887H	2431234212	S958H	2431234312	S029J	2442212442	S100J	3112213213
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S919H	2423324232	S990H	2433133242	S061J	3112134223	S132J	2443431224
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S922H	2423343442	S993H	2432231324	S064J	3112122312	S135J	2432243132
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S926H	2423323122	S997H	2432133423	S068J	2443123422	S139J	2433213132
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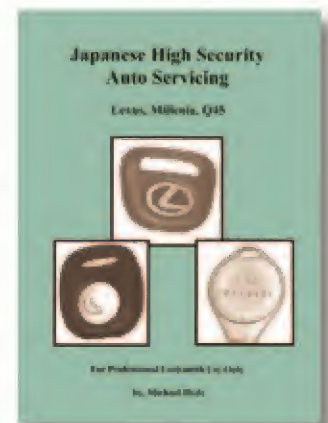


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## S000A-S711K, Part 3

S151J	2432231312	S222J	2432312442	S293J	2434324422	S364J	2442342134	S435J	3113432442	S506J	3121123342
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S154J	2433113442	S225J	2431324232	S296J	2433442124	S367J	2442243434	S438J	3121243234	S509J	3121342312
S155J	2433243113	S226J	2434434312	S297J	2433432312	S368J	2434423122	S439J	3121122442	S510J	3121233122
S156J	2432133132	S227J	2442231342	S298J	2442324312	S369J	2434422342	S440J	3113434422	S511J	3113122313
S157J	2433231342	S228J	2433433122	S299J	2442124334	S370J	2434313234	S441J	3122131123	S512J	3113322423
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S219J	2432331134	S290J	2442342342	S361J	2443212434	S432J	3121322312	S503J	3121221342	S574J	2443243242
S220J	2433122134	S291J	2442312124	S362J	2442134324	S433J	3122123132	S504J	3121332342	S575J	2443242312
S221J	2432323242	S292J	2434243422	S363J	2442433122	S434J	3121313224	S505J	3113133122	S576J	2443324242



Now you can easily  
"Price for Profit!"



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# New GM Code Series

## S000A-S711K, Part 3

S861J	3121123312	S932J	3132321242	S004K	3123242213	S075K	3124223324	S146K	3123133442	S217K	3122431242
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S864J	31133242313	S935J	3132124313	S007K	3124224434	S078K	3123223242	S149K	3123113132	S220K	3122343434
S865J	3113112434	S936J	3132234212	S008K	3122134212	S079K	3122313113	S150K	3123324423	S221K	3123312434
S866J	3113342434	S937J	3132134312	S009K	3122421134	S080K	3124232324	S151K	3124223112	S222K	3123242324
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S868J	3121331312	S939J	3131313123	S011K	3124221342	S082K	3123124422	S153K	3123244242	S224K	3122133124
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S870J	3113344234	S941J	3131224313	S013K	3122334242	S084K	3123113423	S155K	3123234342	S226K	3123231342
S871J	3121332433	S942J	3131231213	S014K	3122434422	S085K	3123433242	S156K	3123123122	S227K	3123123342
S872J	3121231132	S943J	3124423422	S015K	3124233224	S086K	3123421334	S157K	3124234422	S228K	3124242434
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S931J	3131323113	S003K	3123344242	S074K	3122312442	S145K	3122332443	S216K	3122423234	S287K	3131223112

# New GM Code Series

## S000A-S711K, Part 3

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S299K 3132242132	S370K 3213242313	S441K 3131211242	S512K 3211233132	S583K 3213211342	S654K 3212122342
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# THE CASH STATION

by Mark Gerhardt

## NCR 5088

**Manufacturer**

NCR

**Model #**

5088

**Handle Type**

Square

**Handle Location**

Below dial center

**Handle Rotation**

Clockwise

**Dial Center to Handle Center**

6-1/4 inches

**Dial Location**

Left side of door

**Number of Locking Bolts**

3

**Door Locking Bolt Locations**

6-3/8", 17-3/8", 28-3/8"

down from top of door

**Door Locking Bolt Diameter**

3/4 inch

**Door Thickness to Bolt Center**

2-1/4 inches

**Door Thickness to Lock Case**

1-5/8 inches

**Door Thickness to Back of Lock**

2-3/4 inches

**Lock Type**

LaGard 3330, UL Group 2 with alarm switch

**Lock Case Thickness**

1-1/8 inches

**Number of Wheels**

3





# THE CASH STATION

## NCR 5088

### Driver Location

Rear drive

### Lock Handing

Vertical Down (VD)

### Drop in Location

72

### Forbidden Zone

0-20

### Lock Opening Procedures

4xL to first number. 3xR to second number. 2xL to third number. 1xR until dial stops.

### Lock Drill Point

7/8-inch from dial center at 72.  
Align wheel gates at lever fence.

### Lock Relock Trigger Type

Wire spring. Activates when combination lock cover is removed or punched.

### Lock Relock Trigger Drill Point

7/8-inch right of dial center. 1-5/8 inches down. Hook with a wire and pull towards front of safe.

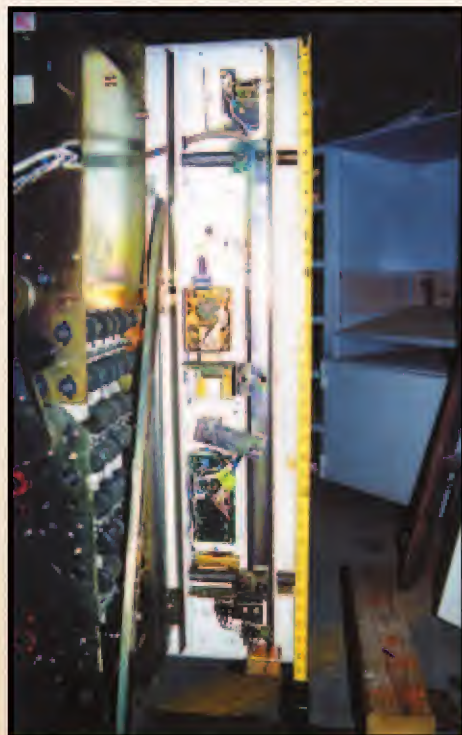
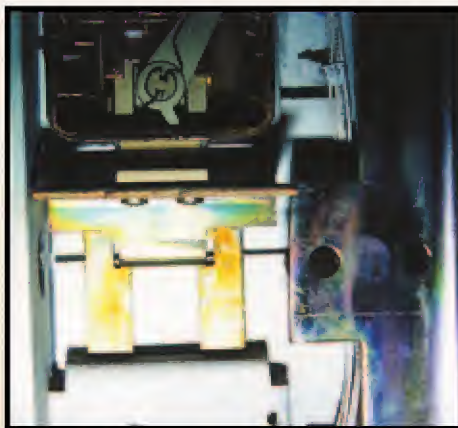
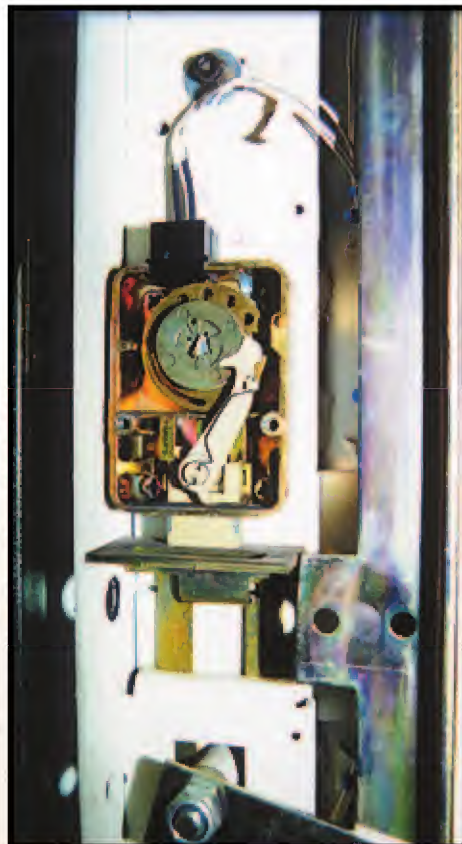
### External Relock Device Type

This unit has an unusual relock device. Attached to the combination lock bolt is a plate that blocks and unblocks and carrier bar. Attached to the bolt plate is the relock device plate, which slides down to the bottom door locking bolt. If the lock is punched the relock device plate disengages and drops down to block the carrier bar at the bottom door locking bolt.

### External Relock Device Drill Point

3-1/2 inches down from dial center on center. Lift relock device plate up to open.

**Special Notes:** The problem with the relock device drill point is you will be drilling through a split in two pieces of hardplate carefully placed to damage drill bits. An optional drill point would be to side drill at 2-1/4 inches back from door surface and 27-1/2 inches down from the top of the door. Use a small screwdriver in the hole and bend the relocking bar up. It only needs to be bent up about 1/8 inch to clear and open. This option is much easier unless the ATM is enclosed.



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## TEST DRIVE!

Every once in a while a tool comes along, that is so simple in its design, that you pass by and don't give it much notice. Then you see someone using the tool and you are amazed at how well it works. It has no moving parts, and is by no means automatic. As a matter of fact, it's about as basic as a stick. The tool in discussion is the Universal Wafer Lock Reader.

### CONSTRUCTION:

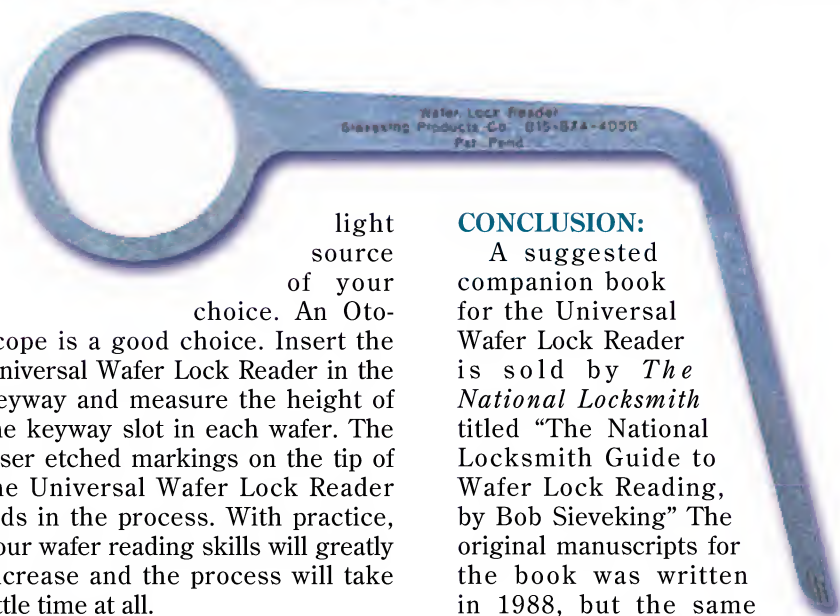
The tool is made of hardened stainless steel, so it will never rust and will last a lifetime. It is laser engraved with permanent wafer depth markings at the tip. This one simple tool can be used to read nearly all readable wafer locks. The Universal Wafer Lock Reader comes with a small fold-up booklet that explains the basic concept of wafer lock reading, shows how to use the tool, and gives directions for a few of the more common auto applications.

### HOW IT WORKS:

Wafer lock reading is not a new concept. Wafer lock reading was once a commonly learned and utilized technique for originating keys. Over the generations, however, the technique of wafer lock reading seems to have lost popularity to key impressioning. Many don't really understand the power of the concept, so they skip over the principals and file it under the general heading "things I'll probably never use." Opting instead to choose the key impressioning method when in actuality, wafer reading is easier, faster and causes less damage to the lock.

The wafer lock reading concept is easy. First light the keyway with a

# Universal Wafer Lock Reader, by Sieveking Products Co.



light  
source  
of your  
choice. An Oto-

scope is a good choice. Insert the Universal Wafer Lock Reader in the keyway and measure the height of the keyway slot in each wafer. The laser etched markings on the tip of the Universal Wafer Lock Reader aids in the process. With practice, your wafer reading skills will greatly increase and the process will take little time at all.

### COMMENTS:

When coupled with some basic knowledge and a little practice, the Universal Wafer Lock Reader, will allow you to make keys for 7 and 8 wafer Chryslers, 10 wafer GM autos, 8 and 10 wafer Fords, and most wafer tumbler cam and desk locks in minutes. You don't need to disassemble a door to search for the code on the cylinder, that may or may not be there. You don't need to disassemble a cylinder to make a key and you don't need to struggle trying to identify impression marks.

As a precursor to impressioning, wafer lock reading will cut your impressioning time in half. When you become proficient, you might want to read a door cylinder and make a key as a means of opening a car. It is one way to avoid the liability of using a tool in a door that has been worked on by some non-locksmith.

### CONCLUSION:

A suggested companion book for the Universal Wafer Lock Reader is sold by *The National Locksmith* titled "The National Locksmith Guide to Wafer Lock Reading, by Bob Sieveking" The original manuscripts for the book was written in 1988, but the same principals still apply today.

The information is still as powerful today as it was when the book was written. Probably more so, as the Chrysler and Ford pin tumbler cylinders fade into obscurity and the newer "wafer locks" take their place. The National Locksmith Guide to Wafer Lock Reading, and the Universal Wafer Lock Reader should be a part of every locksmiths "kit." The Universal Wafer Lock Reader will fit easily in any pick case. The skill is one that should rank right along with picking and impressioning.

For more information contact:  
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P.O. Box 4287  
Rockford, IL 61110  
Phone: (815) 874-4030  
Fax: (815) 874-5713  
Circle 290 on Rapid Reply. **TRU**

### IN SUMMARY:

**PRICE:** Retail Price for the "Universal Wafer Lock Reader" is \$24.00.

**DESCRIPTION:** The Universal Wafer Lock Reader is a tool used to depress the wafers in a wafer lock, allowing the locksmith to judge their relative height, and determine the key cuts for the lock.

**COMMENTS:** The tool is easy to use and the instructions are well written and illustrated.

**TEST DRIVE RESULTS:** The tool works quite well. However, you will need to practice to become proficient.