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# The National Locksmith<sup>®</sup>

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**CODES!**  
GM 5000A-5711K, part 1  
page 156



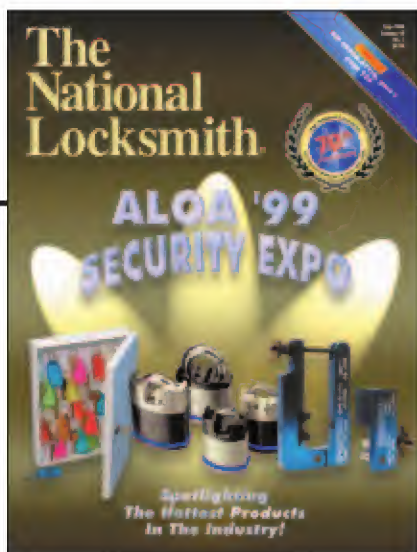
## ALOA '99 SECURITY EXPO



*Spotlighting  
The Hottest Products  
In The Industry!*

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**On The Cover...**



Cincinnati, Ohio is the host city for this year's ALOA Security Expo featuring such products as the HPC KeyKabs, Mul-T-Lock Padlocks and Singertech's Lever Neutralizer.

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# COMMENTARY



## A Bumper Crop of New Books

A bumper crop of new books has just been released by *The National Locksmith*. First, the long wait is over for a new Dave McOmie safe book. In fact, now you have two new ones to choose from.

Dave McOmie on Bank Vault Doors and another volume on Fire and Plate Vaults are hot off the presses. They both cover details on some of the toughest, but most profitable openings ever. You'll find more information on pages 99 and 123. Be the first locksmith on your block to collect them both!

Additionally, we've just published a new automotive book by Tom Thill. Called the GM Sidebar Lock Decoder System, this manual will show you exactly how to make a key for the GM six cut lock with no code, and without touching the steering column. Now you can make a key for the over 140 makes with that lock in about eight minutes with no disassembly! Check out the ad on page 53.

By the way, you can learn more about both of these books in our Online Store. Just go to [www.TheNationalLocksmith.com](http://www.TheNationalLocksmith.com) and register yourself as a user. Then you can see sample pages and place secure orders online. While you're there, stop in to the Locksmith Forums and exchange ideas and tips with your fellow locksmiths. You wouldn't believe how rapidly you can get answers to vexing questions online.

Also, you can learn information that will save you money. An old scam is apparently back in a new form, and this story surfaced first in the web site forum. A supposed "rotary pick" is being telemarketed again by a company which has been banned from advertising in this magazine for abusing its customers. They use a high pressure phone sales call to try and convince you to order the pick. The first time they did this, a few years ago, it was supposed to open high security locks.

Now they say it opens car locks.

Anyway, they won't let you pay with a credit card, only by check in advance or COD. Then they cash your check, and do or do not ship you the product, which doesn't work anyway and you have no way to get your money back.

Personally, I don't like telemarketing in any shape or form. But there are legitimate companies who use that technique. So just be sure that anything you purchase on the phone is something you really want, and use your credit card. If they don't accept credit cards, then the chances of being ripped off skyrocket.

That's because you have a lot of consumer protection when charging to your card. Here is a personal example: I saw an ad for an electronic exercise machine. Attach the electrodes and it's like going to the gym, right? Wrong. It was a plastic piece of garbage. They wouldn't refund my money, so one letter to my credit card company got my money back. I felt dumb, but would have felt a lot worse if I had paid with a check and lost the money.



Have questions? Want free technical help?  
Free Locksmith Forums!

[www.TheNationalLocksmith.com](http://www.TheNationalLocksmith.com)

**Marc Goldberg**  
Publisher

# Mango's Message

**I**t's no secret that to many locksmiths, the words "Sales & Marketing" are as vulgar and repulsive as a four-letter word. They would rather talk to you about anything under the sun, other than a sales and marketing strategy, even though it is what many need the most. Now I'm not going to waste your time telling you how important sales and marketing is for your business and what measures you can take to improve this critical business aspect. I know you've heard it all before and you don't want to hear it any more because you're a locksmith and not a salesman! O.K fine. Instead, I will tell you what measures some manufacturers and distributors have taken to compensate for the lack of poor locksmith sales and marketing skills.

Just as it is no secret that many locksmiths lack sales and marketing abilities, it's no secret that some manufacturers and distributors will bypass the retail locksmith for product distribution and sell directly to the consumer. It's one of those dirty little secrets that no one likes to admit, but everyone knows it exists. It should come as no surprise, however, that if a manufacturer and distributor have product to move and the locksmith can't or won't move it, they will find an alternative method. Selling product direct is one way, selling through a mega hardware store is another.



The lack of poor product sales and distribution, however, is not always blamed on the locksmith. Some manufacturers feel that distributors fall short and end up bypassing not only the locksmith, but the distributor as well, taking their product directly to the consumer themselves. In each of these scenarios someone is either left out or hurt in the process.

Realizing that many locksmiths do not have the presence, fortitude, skill or even the desire necessary to sell merchandise, Clark Security Products developed an alternative approach to bypass the locksmith and sell direct. The strategy is actually quite clever because Clark has devised a way to sell directly to the consumer without eliminating or hurting anyone in the process. It's called SecureRite.com

## Manufacturers & Distributors Selling Direct

SecureRite.com is a new division of Clark Security Products. Through the Internet, SecureRite.com offers a wide array of home security products as well as security tips and information on improving home safety. At SecureRite.com, consumers can identify their home security needs through a fun and interactive home safety evaluation, then conveniently purchase whatever they need from SecureRite.com's huge line of brand name products. SecureRite.com, however, is much more than a variety of home security hardware and product lines. It is also an educational site, offering a wide array of information relating to home security and personal safety issues, including trends in home security, detailed product information and home security improvement tips.

At secureRite.com there are several product categories covering everything a homeowner will need to assure his home is safe and secure. Various categories include: Alarms, Door Hardware, Gate Latches, Keys & Accessories, Lighting, Padlocks, Safes, Vehicle Locks, Window Locks and Child Safety products to name a few.



*Greg Mango*

**Greg Mango  
Editor**



Continued from page 6

To become an authorized SecureRite.com dealer, a locksmith must:

- Have a full-time locksmith business.
- Be a member of a local or national locksmith association.
- Register a domain name with InterNIC, the World Wide Web address agency, at [www.internic.net](http://www.internic.net) (\$70 fee for 2-year registration).
- Set up a new merchant account for credit card processing over the Internet (set-up charge for linking account with on-line credit card processor).
- Sign an authorized dealer agreement.

If a locksmith dealer already has a web site, SecureRite.com requires linking between the two sites. However, if a locksmith dealer currently lacks an Internet presence or web site, Clark Security Products will set-up and maintain a web page for any locksmith interested and there are no commissions or fees required for the service.

Clark Security Products charges nothing to participate in any part of this pull-through marketing campaign and network. The only costs required for participation are those associated with

setting up an Internet page and an Internet credit card account. The locksmiths involved will own their own web site whether Clark designed it or not. In the event that a locksmith no longer wants to be a SecureRite.com dealer, he can use his own domain name to establish an independent presence on the web.

**N**ot unlike the success of a business, the success of a web page is based on attracting and maintaining a large consumer base. The more people are aware of and visit a web page, the greater its chances of influencing a sale become. To build a customer base, SecureRite.com will advertise to consumers and promote home security and personal safety. Its national direct marketing efforts are designed to attract consumers, homeowners, and small business owners, (among other potential dealer customers), to the SecureRite.com web site. Not only will Clark Security Products promote SecureRite.com through traditional media, but it will also build traffic to the site using Internet advertising and marketing efforts, including banner advertisements on most major Internet search engines.

Once a customer has browsed the SecureRite.com web site and has decided to purchase products or arrange for product installation, the web site will prompt the consumer to either select his or her authorized SecureRite.com dealer or to choose from a list of dealers

situated near the customer's zip code. Once a dealer has been selected, the customer will provide his or her credit information to process the transaction, and the credit card sale will be deposited directly into the dealer's electronic merchant account. The SecureRite.com dealer will then authorize Clark Security Products to ship the product directly to the customer on behalf of the selected dealer.


Though SecureRite.com markets the Internet site and fulfills orders from its 12 warehouses across the country, sales transactions are electronically completed through the account of an affiliated locksmith. So even though SecureRite.com is marketed directly at the end consumer, the locksmith dealer remains in the loop on a personal and financial level. As a result, the locksmith is not bypassed or hurt and Clark Security Products moves merchandise by not relying on the locksmith to make the sale or market a product line, SecureRite.com does it for them.

This is a brilliant idea. Clark found a loophole in the unwritten three-step distribution law and is exploiting it.

They recognized the locksmith's weakness and the growing business opportunities available through e-commerce and designed a way to reach the consumer without severing the locksmith relationship. I have to hand it to Clark Security Products, there was a real snake charmer behind this idea. Who would have thought that a lock/hardware manufacturer or distributor could have devised a way to sell direct to the consumer and have locksmiths happy about it! That's what marketing is all about.

If you have Internet access I encourage you to visit the SecureRite.com web site and see what it's all about. It is a beautiful web site that is creative, easy to navigate and informative.

Selling direct and then pulling sales through a locksmith dealer is not unique to Clark Security Products and its SecureRite.com web site. Medeco and Mul-T-Lock for example, also offer similar programs where sales are made by the manufacturer and then pulled through a Medeco or Mul-T-Lock locksmith dealer. Each program is unique to the given manufacturer, but the end result is the same, the locksmith remains in the mix whether he is responsible for the sale or not.

I believe you will be seeing more manufacturers and distributors offering similar programs where they reach the consumer directly and then pull the sale through a locksmith dealer. Not every aspect of such an arrangement is beneficial to the locksmith, but it sure beats being eliminated altogether. 



# Letters

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

## It Smears Us All

Mr. Farriss' letter in the April, 1999 issue regarding his experience with a code software supplier paints with a wide brush when he criticizes his former code program supplier. By not naming the target of his dissatisfaction, he is pointing blame at four companies. For the record: Mr. Farriss has never been a customer of ours.

*Roger Weitzenkamp  
Blackhawk Products*

## A Union Advocate

I had to write and let you know how much I agree with Mango's Message "Uncle Locksmith Wants You" commentary in the April, 1999 issue of *The National Locksmith*.

I was in the U.S. Air Force for 10 years as a locksmith. The USAF doesn't recognize the job title of locksmith, so myself and the others that I served within that capacity were officially recognized as carpenters. After the first years of learning to be an Air Force

carpenter, I was given the opportunity to learn the task of being a locksmith. It was an opportunity for me, and I accepted the offer to learn a much more interesting occupation, full of security and technical aspects that being a carpenter didn't offer me.

I was sent to schools around the country to learn locksmithing, and am as qualified a locksmith as you will find anywhere, thanks to Uncle Sam.

Now that I've been out of the military for a number of years, I am working for the state of Wisconsin as a locksmith journeyman. I am getting paid more money than I have ever made which is exactly half of what the carpenter down the hall from my shop makes. Having done both of these jobs, I can assure you that my job is not only more technically demanding, but also carries a great deal more responsibility. To be paid half of what other tradesman make has made me wonder why?

In town, there is a carpenter's union, a plumber's union, as well as one for electricians. The state, as an employer, can simply call these offices to find out what the going rate is for any of these trades, making it easy to set a pay rate. On the other hand, the career field of locksmith has no such central office where inquiries can be made. Because of this they figure we are basically repairmen who happen to work on locks, as opposed to toilet paper holders.

If there was a union of locksmiths, we may get the recognition we deserve. Until that day, we continue to be overlooked



for pay to those trades that are represented.

*Jerry Jones  
Wisconsin*

## Just a Lube Job

The other day I had the unfortunate pleasure of listening to a sales pitch for a product compared to WD-40, only better, named "Lube-Job". Right then I figured that by the end of the call, that was probably what I'd be getting. The representative started out by saying this product was better than WD-40, and they can send out a case of 24 cans on a 30 day trail at \$1.69 a can. If I was unsatisfied I can keep one can as a sample and send the rest back. I requested that they send me one can as a sample, but the Lube Job representative stated that UPS charges them the same prices if they ship a case of 24 or one. That's nonsense!

I replied by saying how ridiculous that statement was. How can one case be the same as one can and why should I get stuck with the return postage and handling? Again he

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

stated that's the way it is, take it or leave it. That's not too smart to tell a potential customer.

After about five minutes of his nonsense haggling back and forth, I told him I wasn't interested in the case, just send one can then maybe we can talk. He abruptly replied F—Y—, then hung up. I don't know where this company is located, but its sales tactics and verbal abuse are definitely not a plus. I recommend anyone who gets a call from "Lube Job" to stay away because that's probably what you'll get in the end.

*Ron Nayda  
New Jersey*

### Schlage "L" Lever Detachment

Hello fellow locksmiths! We at the California State University have been trying to remedy a situation that is occurring with the Schlage "L" series lever locks with the "L" escutcheons; and could use your input.

The situation we are experiencing with the "L" lever locks is the inside lever pulls off the mounting plate. We contacted the Schlage Lock Company and they can not seem to duplicate our scenario. The doors are 1-3/4" thick wood doors with a normal lock installation. The reason we believe this is occurring is either the escutcheon is too thick or the mounting plate threads that extend through the escutcheon are not long enough. Because of this it does not allow the handle turn nut to completely secure the handle to the mounting plate. This is what we believe the problem to be.

The Chief Quality Control Engineer - Chung He Snover, at the Schlage factory states that we are the only facility in the U.S. experiencing this problem. I find that hard to believe. Schlage has sent us five replacements and the replacements suffer the same problem.

This has been an on-going ordeal for the last year and a half. Schlage is currently manufacturing a fixture to determine if a problem exists and if so establish a remedy.

If you have experienced this situation with the "L" series Schlage lever locks, please contact the Chief quality control Engineer - Chung He Snover at: (719) 390-5071 ex. 2605. Or

VATS #	Chevrolet	Oldsmobile	Pontiac '93-'95	Pontiac '96-'98
1	None Used	None Used	None Used	None Used
2	CN	CN	CN	YT
3	FW	FW	FW	JB
4	GP	GP	GP	EJ
5	KA	KP	KA	UR
6	N5	N5	N5	Q3
7	UN	UN	UN	KH
8	XB	XB	XB	ZB
9	GA	GA	GA	Q3
10	NP	NP	NP	YJ
11	FY	FY	FY	JH
12	C5	C5	C5	ZR
13	XY	XY	XY	KM
14	KB	KB	KB	ET
15	UW	UW	UW	U3

**Illustration 1.**

you can e-mail me, Dan Kern, at: uskernd@csus.edu or Steve Smith at: smiths@csus.edu.

Thank you for any light that you can shed on this situation.

*Steve Smith & Dan Kern  
California State University  
Sacramento Locksmiths*

### VATS Resistance Number Conversions

From time to time I find it expedient to get GM key codes through a local dealer. I do this because I have not been able to get GM to release key codes when the current owner is a used car dealer. When I receive the code, the VATS number is often also in the code. I have successfully used the following conversion list that I received from a Chevrolet dealer. This chart (*see Illustration 1*) may be valid only for the 1098AV keyway; a different set of codes may be in use for the double-sided keys.

I hope that this will be useful to others.  
*Raiford Ball  
Tennessee*

### Response to VATS Conversion Numbers

Pontiac includes VATS resistance values on dealer invoices for a variety of models. A two-digit code consists of two alpha or one alpha and one numeric code to improve vehicle security. These codes will be printed on the dealer invoice in a row of asterisks below the vehicle identification number and the

vehicle invoice number. This two digit code requires the following VATS code conversion chart:

#### 1993/1994/1995

2=CN, 3=FW, 4=GP, 5=KA, 6=N5, 7=UN, 8=XB, 9=GA, 10=NP, 11=FY, 12=C5, 13=XY, 14=KB, 15=UW

#### 1996/1997/1998

2=YT, 3=JB, 4=EJ, 5=UR, 6=Q3, 7=KH, 8=ZB, 9=QM, 10=YJ, 11=JH, 12=ZR, 13=KM, 14=ET, 15=U3

Oldsmobile includes Pass-Key resistance on the dealer invoice. A two-digit code will be printed on the dealer invoice along with the dealer identification number and the key code to indicate the resistance value of the pellet. This two-digit code requires the following conversion chart:

2=CN, 3=FW, 4=GP, 5=KP, 6=N5, 7=UN, 8=XB, 9=GA, 10=NP, 11=FY, 12=C5, 13=XY, 14=KB, 15=UW

The only difference between the Pontiac 1993/1994/1995 conversions and Oldsmobile conversions seem to be the #5 resistance, for reasons known only to General Motors. Although I haven't done any VATS work on Buick's or Cadillac's, I suspect they will probably be similar. I haven't had the opportunity to get changes (if any) for 1999 models.

*Garth Meredith  
Alberta, Canada*



# SHOWSTOPPERS SHOWSTOPPERS SHOWSTOPPERS SHOWSTOPPERS



## AUTOMOTIVE TOOLS

### Aable Locksmiths Ford Ignition Removal Kit

This kit is designed and patented



CIRCLE NUMBER  
341

by Frank Markisello of Aable Locksmiths, will enable you to remove the Ford 8-cut ignitions in less than 5 minutes, fit key and reinstall the same lock with no damage to lock. Or you can use the side breaker tool and turn the ignition to the on position in less than 60 seconds, and remove lock. You do not damage the wafers, so you can still decode the lock, install the wafers in the new plug and you have a key to all the locks. This kit will pay for itself on the first job.

**BOOTH #539**

### BWD Premium Pack Lock Kits

BWD's Lockcraft™ brand Premium Pack Lock Kits come complete with lock, lock components, tumblers, tumbler springs, tumbler caps. Just add the customer's existing key and you have a quality coded lock without purchasing a service kit. While costing a bit more than their coded and uncoded cousins, Lockcraft™ Premium Pack Lock Kits reduce inventory and eliminate the unwanted



CIRCLE NUMBER  
342

purchase of seldom used pinning kits. No more running out of parts while on the job! All this while meeting the keying needs of every customer.

**BOOTH #433**

### Curtis Transponder Duplicator



CIRCLE NUMBER  
343

The Curtis CI-4 Transponder Key Management Device, which allows unlimited copies of keys and can duplicate transponder codes in seconds. The unit reads, detects programs and stores codes and can make transponder keys for Acura,

Buick, Cadillac, Honda, Jaguar, Mazda, Oldsmobile, Pontiac and Porsche. All functions work through an easy to use menu driven LED display. The portable unit includes battery and charger.

**BOOTH #254**

### DETERMINATOR™ for Foreign Cars



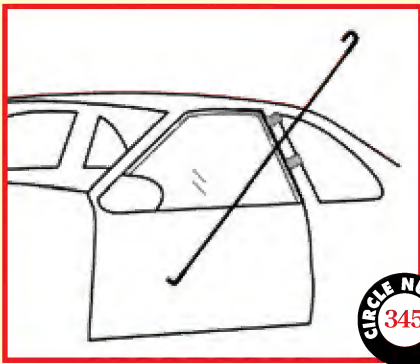
CIRCLE NUMBER  
344

The Car Openers Inc. has introduced a new DETERMINATOR™. The newest addition is the Japanese DETERMINATOR™. It can help a locksmith decode the locks on vehicles using the X176, X184, and the X185 keyways. This covers vehicles made by Mitsubishi, Geo, Isuzu, Suzuki, and some Hondas using these keyways.

The DETERMINATOR™ is quick, simple and reliable.



**Lock Technology**  
**6" Super Jimmy Kit**



CIRCLE NUMBER  
**345**

\* The Super Jimmy allows you to open the vehicle with the door handle, lock button or the electric lock switch. Opens Most Vehicles.

\* No disconnection of linkage or airbag activation problems.

\* Comes with 2 plastic wedges of safe easy use.

\* The Super Jimmy easily bends to fit every vehicle design and breaks down for easy storage.

**Lok-ITT**

CIRCLE NUMBER  
**346**



The Lok-ITT Company is introducing the new low profile Auto Lok. The Auto Lok is a mechanical auto security device, which prevents breaking into the steering column and turning of the steering wheel. It works on Chevy trucks up through 1998, General Motors vans and trucks up through 1997.

This mechanical security device has a built in locking mechanism and comes in three pieces. Two of the sections bolt together and create a metal sleeve around the steering column. The third section has a built in lock and slides into place to provide a metal cover for the ignition switch and a metal anti-steering bar to prevent turning of the steering wheel. This third section is used only when the vehicle is parked.

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**Slide Lock Z-Tool System**



CIRCLE NUMBER  
**347**

With 132 new vehicles being introduced in the past three years alone, and with most of the models seen in showrooms three years ago no longer being sold, the need to maintain an up-to-date car opening manual is more important than ever.

The Z-Tool System Manual is now in its 11th edition. Current owners can call for an update, or whole new systems are available from Slide Lock Tool Co.

**Steck BigEasy™**  
**Lockout Tool Kit**



CIRCLE NUMBER  
**348**

The BigEasy from Steck is a complete Lockout Tool Kit for all cars and light trucks. It eliminates the danger of airbag activation and disconnected linkages because none of the tools enter the door cavity. The BigEasy is always visible as the technician actuates the interior buttons, slides or handles so not extensive training is required.

The SureGrip Knob Lifter is used on vertical lock buttons.

**Strattec D.A.R.T.**

Q: If a hi-tech security system is integrated with the vehicles computer, does that mean only the dealership can service it?

A: Definitely not! With the proper tools, those profits can go to an independent locksmith like you.



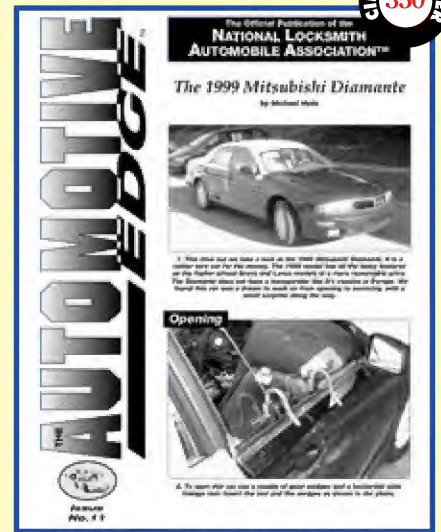
CIRCLE NUMBER  
**349**

Chrysler vehicles equipped with the Sentry Key Immobilizer System require both the correct mechanically cut key and transponder to start the vehicle. Strattec's Diagnostic and Programming Tool (D.A.R.T.) will let you program the vehicle to accept new key codes (up to eight per vehicle). Pre-programmed codes can also be deleted if keys are lost or stolen.

Built for years of rugged use, the D.A.R.T. is simple to use, with an easy-to-read LCD display and multiple-function keypad to move quickly through operational menus. This new system includes everything you need to handle the Chrysler S.K.I.M. as well. It's your key to the next generation of vehicle security. **BOOTH #333**

**The National Locksmith**  
**Automobile Association™**

CIRCLE NUMBER  
**350**



Packed with page after page of foreign and domestic auto service/opening details, from domestic to foreign and high security, The National Locksmith Automobile Association (NLAA) is a front row seat to servicing today's cars. Each membership offers a farmable certificate, NLAA photo ID card, and a \$10,000 membership bond for automotive work.

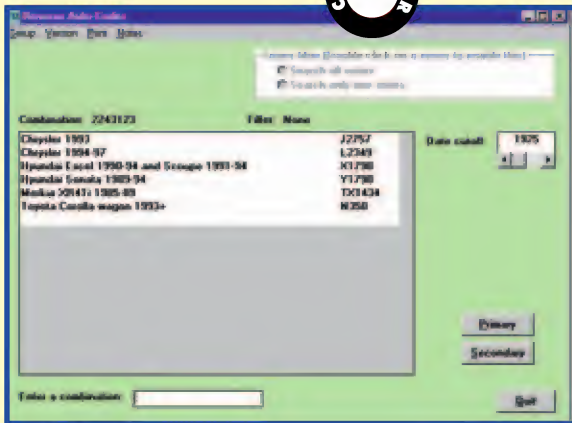
With your membership you receive 12 monthly issues of the most step-by-step detailed service procedures on ignition locks, door locks, trunk locks and glove box locks available. Nothing is left to the imagination. Also included are opening procedures on every vehicle covered. The NLAA takes you by the hand and walks you through every procedure in a splendid photographic display.

As a bonus, with every NLAA membership, you receive free The Automotive Edge™. This is a detailed car manual offering over 500 pages of information on foreign and domestic car service. Loaded with hundreds of photographs and step-by-step opening and service procedures, it's a great addition to your reference library.

**BOOTH #277**

## COMPUTER SOFTWARE

### Blackhawk's Reverse Auto Codes Software



Blackhawk's Reverse Auto Codes (RAC) takes in a combination and returns the code number fast. You don't need to select a code series first—it looks up the cuts right away, for every car! You can also filter out unwanted series for even faster response.

**BOOTH #419**

### Framon Masterkey Program

Framon Manufacturing will be introducing a new Masterkey program at this year's ALOA trade show. The new program makes setting up & maintaining a masterkey system easier than ever. The Windows-based program works seamlessly with the FRA-2001 Computer-Driven Code

Machine or as a stand-alone system.

**BOOTH #118**

### InstaCode

One of the most comprehensive computer code programs available, InstaCode includes standard features never before available in a code software program. Standard features include: prints code cards for the HPC 1200CMB™, print code cards for the HPC 1200PCH™, all Framon cutting specifications, all Curtis clipper and A-1 Pak-A-Punch data, prints entire code series, works with ink jet and laser printers, easy to use Windows interface, Y2K compliant, shows picture of profile and cut key, includes search and progression for partial bittings, integrates fully with Silca Unocode and ITL machines, lets you store and track customer codes and notes and much more.

And now InstaCode is easier than ever to own and operate. There are three roads to InstaCode, you can either buy it outright now, charge it to your credit card and pay it out over 12



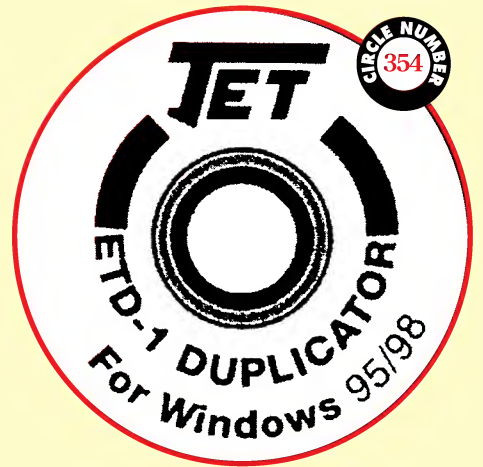
months on the EZ Pay Plan or rent the software on the EZ Rent Plan. Whatever suites your finances best, there is a plan that will work for you.

Besides being easy to own and operate, InstaCode offers one of the most comprehensive code databases anywhere that is updated annually. It is available on both a CD-Rom and 3.5" disk.

If you're still not convinced that InstaCode is all this and more, download a free demo at: TheNationalLocksmith.com

**BOOTH #277**

### Jet Software for the ETD-1



Software for the ETD-1 Electronic Transponder Decoder and Duplicator is now available from Jet Hardware. The operating system is Windows 95/98. Updates that include a sample transponder key blank to fit the new release will be handled directly from Jet Hardware.

The software is sold as is and updates may be purchased. Or, it is available for a slight extra cost and users will automatically receive for a period of one year, the updates along with a sample transponder key blank that the new release covers. Yearly contracts are available. **BOOTH #104**

## DOOR HARDWARE

### Dorma 9000 Series



The Dorma 9000 Series heavy-duty panic and fire rated exit devices provide durability for high-use applications. A heavy-duty chassis provides strength, while a reduced projection design minimizes catch hazards, improving traffic flow. With a standard freewheeling and optional clutch-style trim, the devices are highly vandal resistant.

The series includes rim, mortise, concealed and surface vertical rod options. All are ANSI Grade 1, UL-listed and are available in panic and fire rated versions. **BOOTH #139**

**LCN Closer Beats the Heat.**



CIRCLE NUMBER  
356

LCN has introduced a new line of door closers designed for fire rated openings. These special closers have been certified by UL to be in compliance with UBC 7.2 (1997) and UL 10C. When exposed to extreme temperatures, petroleum based hydraulic fluid in some closers can expand and be forced out through seals. The petroleum-based fluid, which is combustible, can create a flame on the non-fire side of the door. If the flame lasts more than 10 seconds, the closer fails the test and is not certified. LCN closers passed this rigorous fire test. Success is owed to the combination of new cylinder components and a new heat resistant, hydraulic fluid. These special features, designed by LCN engineers, are exclusive to LCN.

**BOOTH #325**

**Marks USA Survivor Lever Lockset**



CIRCLE NUMBER  
357

Marks USA has enhanced the "Survivor" cylindrical lockset, enabling them to operate in a greater range of door conditions. Installation in older, poorly maintained doors or hollow metal doors with insufficient lock reinforcement can now be done without requiring sensitive adjustments. The lockset, which is self-adjusting within 1-5/8" to 1-7/8" door thickness, installs with just two #10 through bolts.

Also available are models for doors up to 1-1/4" thickness, and spacer kits for the doors of 1-3/8" thickness. The "Survivor" series is available in both the "American" and the more rounded "Crescent" style levers. Both feature a clutch mechanism in ANSI grades one and two, and are available with either conventional or IC cylinders.

**BOOTH #366**

**Sargent Introduces 7 Line Cylindrical Lock**



CIRCLE NUMBER  
358

Sargent Manufacturing is introducing a new 7 Line Grade 2 key-in-lever lockset. This cylindrical lock has been tested over 1,000,000 cycles and exceeds ANSI 156.2 Grade standards. It is extremely durable when used in medium frequency commercial applications.

Thru-bolts that fit within a standard 161 door prep combined with an anti-loosening support plate virtually eliminate rotation within the prep. The lock is non-handled and is available with IC, high security and Sargent's patent Signature cylinder. Made in USA.

**BOOTH #235**

**SiteLine Electronic Lockset**



CIRCLE NUMBER  
359

Medeco announces the introduction of the SiteLine electronic lockset. Developed as an addition to the SiteLine product line, it incorporates many of the features and benefits of the award winning SiteLine SDC. Easy to install, the SiteLine electronic lockset is a battery powered stand-alone lockset unit that mounts directly on the door. It utilizes the unique "dual technology" sitekeys and also offers portable database programming.

**BOOTH #105**

# InstaCode

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Your total code and code machine management program.

**CLICK HERE TO LEARN MORE**

#IC - 2001

## ELECTRONIC SECURITY

### Adams Rite 7300 Electric Strike



CIRCLE NUMBER  
**360**

Adams Rite Manufacturing Co. has introduced the 7300 Series, its most compact electric strike yet. Designed with an internally mounted solenoid and a low-profile case, these strikes are easy to install and are strong and secure. The 7300 Series is ideal for applications where space behind the jamb is tight, such as narrow stile or wood door jambs. The ultra-compact mechanism fits into jamb sections as shallow as 1-3/16".

The 7300's are listed for burglary resistance, have a holding force of 1500 lbs. and are tested to one million cycles. Each unit is field reversible from fail-secure to fail-safe. The strikes have a low current draw, come in 12 or 24 Volt DC and are available for steel, wood and aluminum jambs for Adams Rite or cylindrical latches.

**BOOTH #422**

### Aiphone Adds Tilt to Color Video Sentry

CIRCLE NUMBER  
**338**

The Aiphone compact  
 20 • The National Locksmith

video door answering system that sees in color now has tilt!

The Aiphone color Video Sentry Tilt System features a tilt camera at the door, which moves 40 degrees up and down for a better view of your entrance. This system also includes a 4-stroke electronic chime, Instant-On reception, built-in automatic illuminator LED's, high contrast TFT color monitor, backlit call button with door release, volume, brightness, tint, color and illuminator LED controls.

As soon as the chime sounds, the Instant-On feature allows you to immediately hear and see who's at the door before picking up the handset to speak.

The color Video Sentry Tilt Set includes a door station camera, room station monitor with handset and 24 V DC power supply. **BOOTH #334**

### DCI Access Control Products



CIRCLE NUMBER  
**361**

Door Controls International has introduced a complete line of access controls to complement the revolutionary RDM LOCK™ Electromagnetic Lock. This patented Grade 1, UL listed magnet is recommended where security is a priority.

For controlled egress, use our RDM Lock, 1400 Series Electromagnetic Lock with Passive Infrared Detector (PIR), PS17 Power Supply, and 300 Push Button with Time Delay. DCI offers other products to meet all your requirements for access control.

**BOOTH #442**

### Door Motion MK V

Door Motion Technologies, known for the Dura Swing MK IV on Demand commercial door operator, introduces the MK V full time, header mounted operator.

The MK V, is a header-mounted door operator, featuring a cast-iron



CIRCLE NUMBER  
**362**

multi-featured hydraulic closer and a quiet, permanently lubricated all-steel geartrain, sealed in an aluminum gearcase. Coupled to the gearcase is a power 3" diameter DC servomotor, assuring long-term reliability.

The MK V features a complete access control relay interface, with power terminals for electric lock strike, magnetic lock and full automatic sensor operation. Wireless receivers are standard (built-in).

This model is in-swing and out-swing ready, is field rehandable in 20 minutes and features a rugged all-steel construction with a choice of powder coat finishes. One person can install all units in one hour.

### HES Versatility in One Strike Line!

HES is proud to announce the addition of the 5700 to their 5000 series electric strike line. The 5700 series adds an innovative electric strike body to this popular series. Now the installer can choose one of two electric strike bodies, the 5000 or the 5700. The 5000 series provides a low-profile, heavy-duty strike and the 5700 series provides an adjustable keeper and latch bolt monitoring. Both electric strikes accommodate a 1/2" latch-bolt.



CIRCLE NUMBER  
**363**

These two bodies along with eight faceplate options and four extended lips are all interchangeable. Once again, HES has developed an electric strike system that allows the installer to be prepared for the variety of applications he may encounter.

**BOOTH #241**

**Locknetics Battery Powered Electric Strike Systems**

The innovative Locknetics 9100BP and 9200BP battery powered electric strike systems provide new solutions to security problems, with no external wiring.

9100BP is used with cylindrical and non-deadbolt mortise locks, 9200BP with rim exit devices. 4AA batteries provide 80,000 activations. PRO versions allow 20 codes; CM models allow 500 users and audit trail.

**BOOTH #163**

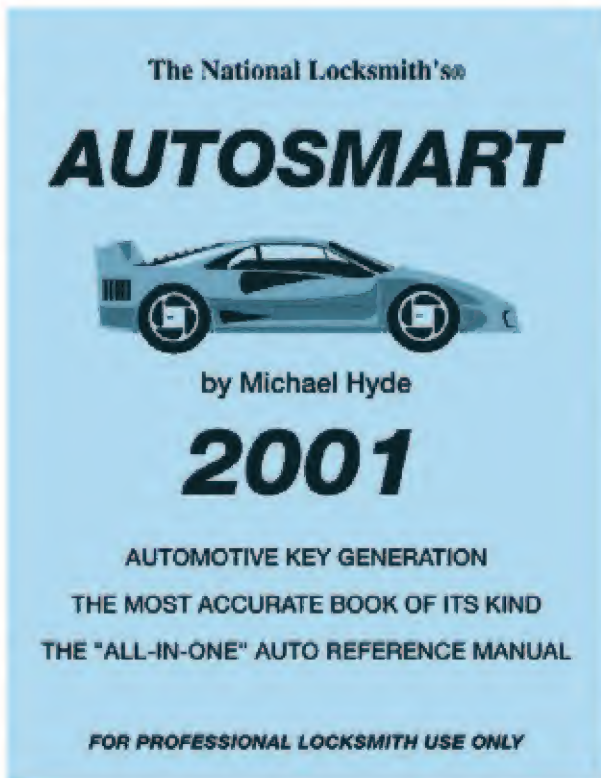
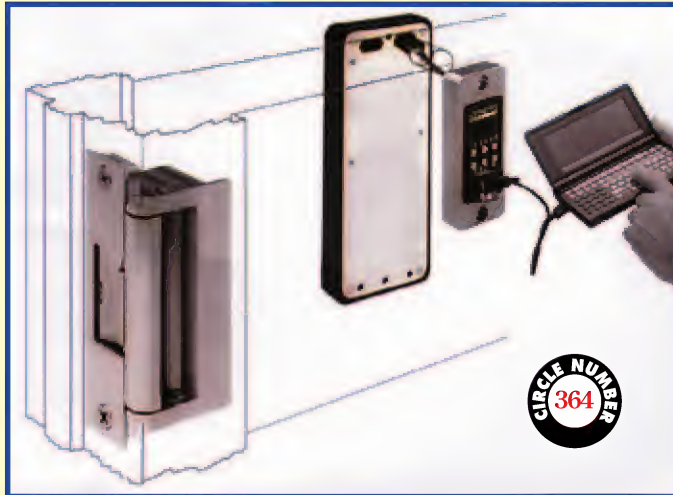
**RCI's Easy Read Cardless Reader**

RCI's Easy Read "cardless" reader is creating quite a stir in the industry. It allows you to use your own mag-stripe credit card or existing access entry card, so you



don't have to keep track of an additional card. The Easy Read series is incredibly easy to program and accommodates up to 1,000 users. Its sleek design complements any setting, while its rugged, weather-resistant housing is perfect for outdoor use. It's available as a stand-alone unit or can be integrated into an existing access control system.

**Security Door Controls Electric Strikes**



**AutoSmart**

A MUST  
 for every  
 locksmith!



**CLICK HERE TO LEARN MORE**

The SDC 20 Series electric strikes are designed for use with cylindrical locks with up to 9/16" latchbolts and is available with four different interchangeable faceplates to meet different application needs.

Features include dual 12/24 VDC with low current draw, fail-secure reversible for failsafe and plug connector. The SDC 20 series exceeds 750,000-cycle test a 1500 lb. pull test and are UL listed under Auxiliary Locks and Burglary Protection.

**BOOTH #518**

### Super MDC 16 to 80 Zone Control Panel

The Super MDC handles high-end commercial and residential security



applications with ease and finesse. Super MDC is UL listed for residential and commercial burglar and fire without any additional modules.

Built-in features include: two phone line and bell supervision, up to 11 output terminals, 512 event buffer, on-site printer output, and pager and fax compatibility. Super MDC also has up to eight partitions or arming groups, remote diagnostics (voltmeter) displays at keypad and downloading, high speed modem compatibility, and high speed data compression.

### Videx TouchAlert™ and TouchAccess™

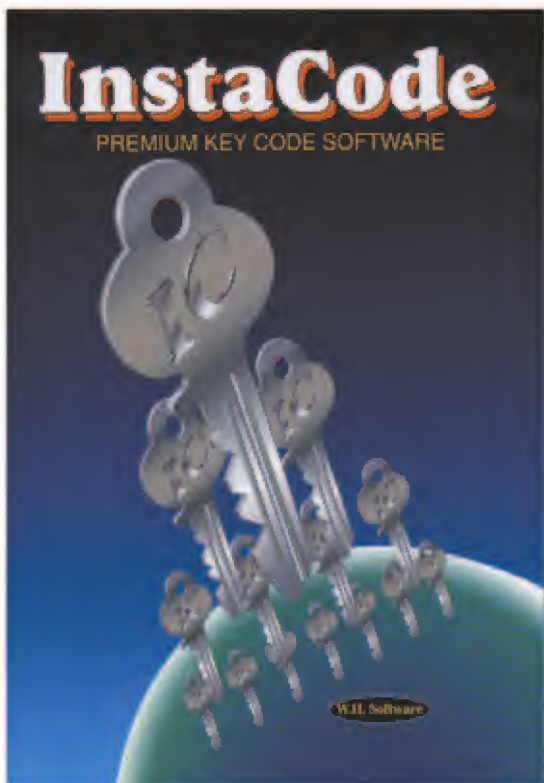
Videx announces two new controlled access products that can be installed on file cabinets; doorways, toolboxes, and anywhere that controlled entry are desired.

TouchAlert is an access monitor that tracks each authorized entry by recording the ID number of the key holder, the access type, and the date and time access was made. When unauthorized entry is

attempted, TouchAlert emits a local alarm, alerting everyone in the surrounding area. An LED then flashes rapidly; indicating that unauthorized access was attempted.

TouchAccess provides all of the same capabilities as TouchAlert, plus incorporates a mechanical lock and is programmable with user-defined access times, allowing you to establish at what times and on which days an authorized key holder has access.

TouchAlert and the TouchAccess lock are the perfect answer for managing and tracking authorized access in a wide variety of applications. **BOOTH #455**



#IC - 2001

## InstaCode

Your total code and code machine management program.



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**Yortec, Inc.**  
**PB9600 Push-Button**



Yortec's new push-button PB9600 is an illuminated momentary switch, provides normally open and normally close contacts with color leads. Mounted on the solid aluminum plate makes it strong and durable and can be used with any electrical lock.

**MISCELLANEOUS**

**HPC Key Control**



The HPC Color-filled Key Control Series is a new and exciting way to keep track of your keys. This vibrant series includes an eight capacity plastic KeyRack, and a 20 capacity high-gloss white metal KeKab™. All three models come with brightly colored



plastic key tags that pop open revealing an area for you to write the description of your key.

The tags come in two styles: standard (for SlimKabs and KeyRacks) and slotted (for HPC KeKabs). The slotted tags fit in all existing HPC KeKabs. The Color-filled KeyRack holds eight different colored tags, the Color-filled SlimKab holds two each of the 10 different colored tags, and the Color-filled KeKab contains three each of the 10 different colored tags. The Color-filled tags are also available separately. **BOOTH #141**

**Keedex Weldable Gate Boxes**



Keedex has expanded its line of weldable gate boxes. Keedex now has more than sixty different boxes, which are used for mounting locks, electric strikes and other hardware on gates. The Keedex boxes are available in both steel and aluminum. **BOOTH #123**

**Keys Plus Millennium Keychains**

Capitalize on impulse keychain sales with Millennium 2000/Y2K

keychains from Keys Plus. The keychains, which come in eight distinctive styles, highlight the buzz of conversation these days as consumers look forward to the millennium change. The Millennium keychain series is one of hundreds of different keychain styles offered by Keys Plus.

**RA-Lock**



RA-Lock now has a full line of trailer hitch locks available for all styles of utility trailers. The model TL20 pictured here is one of the many styles available. **BOOTH #140**

**PADLOCKS & SPECIALTY LOCKS**

**ABLOY FX220 Series Padlock**

The new ABLOY FX220 series padlock with plastic coated stainless

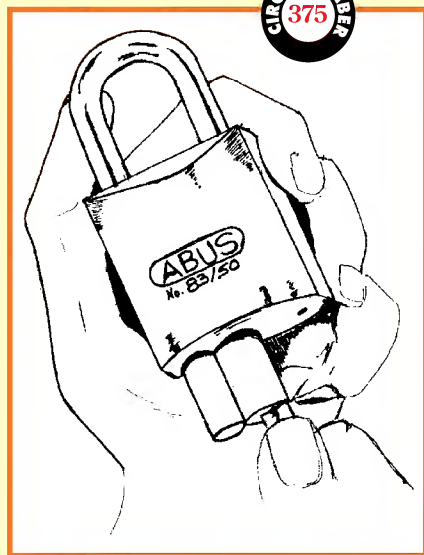


steel cable gives you the ability to control your route keys. Once locked, keys cannot be removed from this cable without an authorized key to open the lock.

ABLOY FX-Series padlock features the reliable ABLOY Detainer Disc Cylinder, which is virtually pickproof and provides extensive masterkeying capabilities. The mechanical operation ensures lasting durability, even in extreme environments. Chrome plated brass lock body provides resistance to corrosion.

Heel & Toe Locking provides the strength needed to stand up against prying and pulling. The stainless steel ball bearings dead-lock the shackle at both ends for a strong hold.

**Abus 83/50**



The heavy-duty brother to the famous 83/45 features a larger nickel-plated brass body and thicker core hardened steel shackle. It has all the same great features of the 83/45 including:

- \* "Z" bar converts to either key retaining or non key retaining in seconds.

- \* One of the fastest cylinders to be re-pinned on the market.

- \* Fast easy cylinder exchange in the field.

Technical specifications include a 2" wide nickel-plated brass body that gives the illusion of a steel body with the weatherability of brass. A 3/8" core and a hardened steel shackle is now harder to cut than on the 83/45. Shackle height is currently only available in the standard 1" vertical clearance.

**BOOTH #117**

**CCL Gun Lock**



In response to the demand for firearm safety and the worldwide, stricter gun laws, CCL Security Products recently introduced the CA12 Sesamee® Cablelock. The CA12, an addition to the current CCL line of firearm security, including the K38 Gun Blok® and the K39 Trigger Lock™, is a "set your own combination" cablelock, which helps to prevent loading, unloading and firing of most lever action and pump action shotguns.

With a pressure cast, black metal finish and plastic coated steel shackle, the CA12 offers 1,000 possible set and reset combinations, fitting most pistols, rifles and shotguns. It is ideal for places where a rigid shackle padlock is not practical.

**BOOTH #417**

**Chicago Lock's High Security Padlocks**

Chicago Lock Company offers two high-security padlocks called the "RC" series, available in two sizes, 40mm and 50mm. Each has a removable core and shackle with an extruded brass body. Hardened steel shackles resist cutting and sawing. Cylinders and shackles easily removed and



reinstalled. The only tools required are 5/64 and 3/32 hex wrenches.

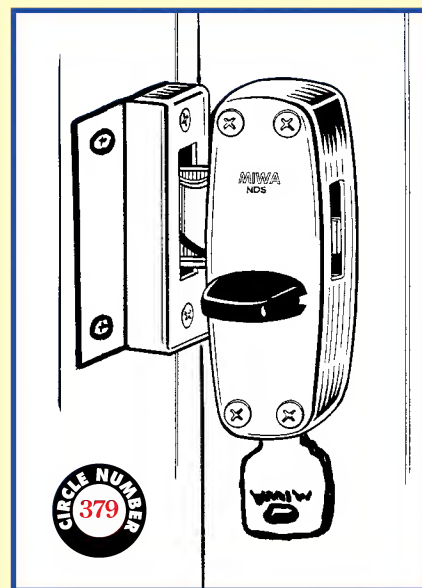
**BOOTH #440**

**Federal Lock Model 4070**

Federal Lock Company has introduced their new Model 4070 stainless steel shackleless padlock. The solid stainless steel padlock provides maximum protection against drilling, sawing, crowbars, and prying. The padlock is easily rekeyable, and features a pick resistant 6-pin cylinder for increased security. Restricted keying is available with this lock.



**MIWA Inside Lockable NDS**





Miwa has introduced the new NDS inside lockable universal lock. The NDS product along with the other four NDS models can be applied to approximately 21 different applications. These E-Z applications can include pool safety for children, refrigerator and deep freezer installs, camper tops and shells, and cabinets that swing.

**BOOTH #535**

**New Standard Shackle Additions**



New Standard Manufacturing Company, inventors of the dual-function padlock and makers of the world's largest selection of large-section rekeyable padlocks and shackles, announces two new lengths to their extensive shackle line. Shackles are available in three materials; hardened steel, stainless steel and brass, in seven lengths' 7/8" through 6" clearance.

The new additions are stainless steel in 8" and 12" clearance. Both lengths are available for the New Standard Model 1750 padlock with 1-3/4" body width and 5/16 diameter shackle, or the Model 2000 padlock with 2" body width and 3/8 diameter shackle.

New Standard has padlock models which accept all widely used key-in-knob and interchangeable core cylinders and are available in low-cost key retaining only model, or the patented, dual-function, key retaining or non-key retaining convertible model.

**Noble Security Corner Lock New Way To Padlock**



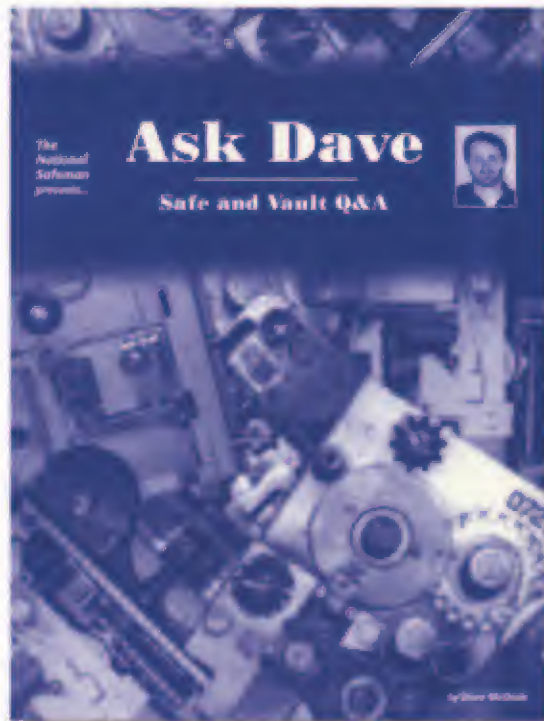
Noble Security systems has introduced a unique and exciting new way to secure doors.

The NGL-200 corner lock is intended to replace the traditional padlock and hasp setup. Two short rails will be attached to adjoining surfaces. When the door is closed and the two parts are aligned the lock body will slip over the top and be locked in place. No shackle or bolts would be exposed. It also uses knob style cylinders and is re-keyable.

**BOOTH #108**



# Ask Dave



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

**CLICK HERE TO LEARN MORE**



#AD - 1

**Tufloc's Roll-Up Door Lock**



In an ongoing effort to provide the highest security locks for delivery vehicles, Tufloc has developed a new lock using technology from its original design. Like its predecessor, the new lock contains no shackle or hasp and is virtually impregnable. The locks also employ a Medeco cylinder. Tufloc's design allows for misalignment and warp between the door and jamb while still allowing the lock to operate.

**SAFES & SAFE PRODUCTS**

**Adesco Safe**



Adesco's latest addition to their deposit safe family is the all-new 3314 body size. This B-Rated double-door safe is available in two deposit styles-The "RD" (rotary hopper) or the "PD"

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(front load). Both styles boast a large deposit opening to handle large bundles.

The bottom compartment is perfect for storing tills, receipts, and operating cash. The 3314 are available with combination or dual key locks, and can be retrofitted with electronics.

**BOOTH #467**

**Fort Knox Security Products**



Fort Knox offers thirty models of quality, UL Listed gun safes, home safe and vault doors at affordable prices. Certified fire protection, lifetime warranty, modular interiors, seven colors, state of the art locking mechanism and many options and accessories make Fort Knox truly, "Americas Best"!

**Gardall Safe Corporation**

The new Gardall safe model FL1218 offers all of our standard depository features. Now with a front load for under the counter applications



and overall height of 28". This product comes with both single and double doors. All electronic lock options are available.

**Iico 515 Electro-Mechanical Safe Lock**

Iico Unican's 515 electro-mechanical safe lock provides more security for less investment. It is UL listed Type 1 and has four security levels; programmable dual custody, time delay, open window, tamper shutdown, and lockout.



There are several patents on this product, which include the new Convert-A-Bolt technology, providing the locksmith with field-selectable deadbolt or springbolt operation. The bolt is manually retracted and extended, accommodating push-pull attachments.

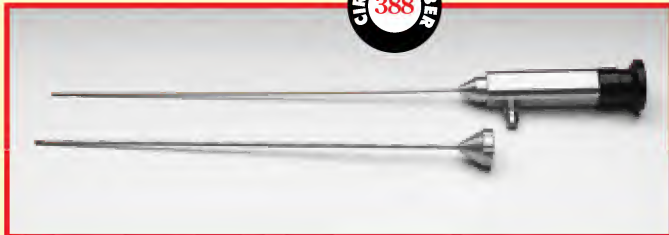
**BOOTH #205**

**Lectro-Truck**



Lectro-Truck, the motorized battery operated stair climbing dolly, now makes it easier to move those low heavy safes with the newly designed slide plate and balance box. Move up to 1500 lbs. up/down stairs or on/off trucks is ease when you use the Lectro-Truck. **BOOTH #547**

**Lockmasters Power-View Ultra Thin**



The Power-View Ultra Thin borescope from Lockmasters comes in a 10", 19" or 29" length, offering a straight view and 90° (right angle) mirror view. The outside diameter on the straight view is 2mm, and with the mirror sleeve is only 2.5mm. This small diameter allows a lot of maneuvering room in a 1/4" hole. Most importantly, the scope offers a terrific view of all three wheels.

Its construction offers durability that surpasses any other scope we

have ever offered. (However, if you happen to damage any Power-View scope, it can be repaired).

Lockmasters' new scopes come in two styles, the "Thin", and "Ultra Thin". **BOOTH #313**

**MDS Borescope**

MDS Incorporated recently introduced a new Borescope for high-tech safe openings. According to the manufacturer, this new state-of-the-art scope will allow the safeman to view through the change keyhole with ease!



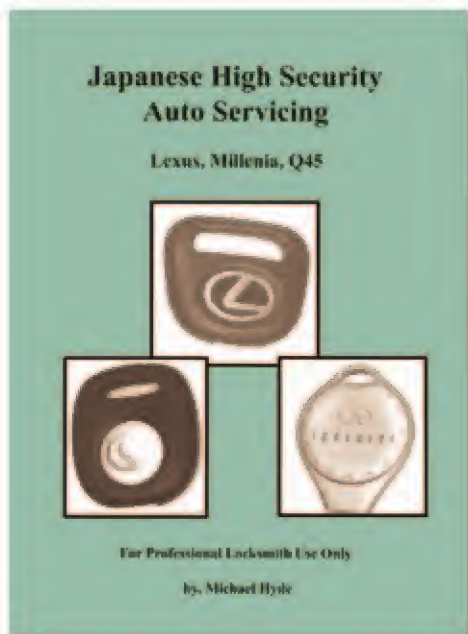
**Features Include:**

- \* Small diameter-5mm
- \* Medical, rod lens construction suitable for video display.
- \* Long 24" length
- \* 65° angle view eliminates the need for mirror tubes.
- \* 95° field-of-view.
- \* Lowest cost in today's market.

**BOOTH #427**

**Palmer Security Products Wall Safe**

Palmer Security Products recently made some significant improvements to their wall safe.



# Japanese High Security

Some of the most profitable cars are also the trickiest to work on.

**CLICK HERE TO LEARN MORE**



#JAP - 1

The Simplex push button lock has been recessed; thus, the face of the wall safe remains flush, allowing concealment behind a picture or mirror. In addition, they improved the mechanical design to resist forced entry. With the recent upgrades even if the hinge pins are cut entry is prohibited.

**BOOTH #262**

**R.Q. Associates**



CIRCLE NUMBER  
391

New from R.Q. Associates is a flexible fiberscope Auto Kit. It is 8mm x 26" long with a field of view of 55 degree. The direct view flexible probe also comes with a 90-degree mirror tip for side viewing. A steel sheathing protects the fiberscope. (comes complete with a 100-watt illuminator and adapters to run off a 12-volt battery.)

**BOOTH #572**

**Sargent & Greenleaf  
Comptronic™**

Comptronic™ electronic locks from Sargent & Greenleaf with audit trail provide solutions to safe management problems. The audit trail feature gives management the tool to know who



CIRCLE NUMBER  
392

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accessed the safe and when, and to identify when security procedures are being circumvented. The Comptronic's new keypad extension base and Windows® bases management software makes retrieving, recording and managing individual audit trail files quick and simple.

**BOOTH #235**

**StrongArm Inc. Ball Buster**



CIRCLE NUMBER  
393

StrongArm Inc. has developed a new drill bit to penetrate ball bearing hard plate quickly and cost effectively. This new tool and technique will save you drill bits, time and frustration when drilling ball bearing barriers. The ball buster can be used over and over and is available in 1/4" & 5/16" diameter.

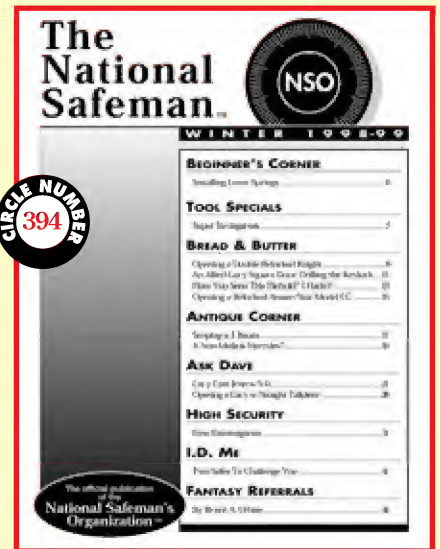
**BOOTH #467**

**The National Safeman's  
Organization™**

Together, The National Locksmith and safe expert Dave McOmie, operate the National Safeman's Organization (NSO). With over 1600 members globally, the NSO is the largest group of its kind in the world!

Your NSO membership delivers to your door a wealth of information and instructions on how to change combinations, perform safe service and respond to lockouts. The NSO will help you build profits in this field.

With each membership you receive a framable, personalized membership certificate, a photo ID card, \$10,000 bond for safe work, big discounts off safe manuals, a 50 plus page quarterly newsletter, The National Safeman, packed with drill points and service procedures and bi-monthly technical

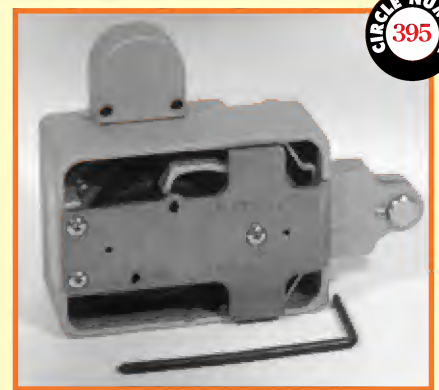


CIRCLE NUMBER  
394

bulletins to make openings a snap. With your membership you receive free, a copy of Safe Opening Volume 5, containing hundreds of photographs and drill points for almost 200 new safes.

**BOOTH #277**

**TMI Series 2050 Vault Lock**



CIRCLE NUMBER  
395

TMI® vault locks incorporate old world lock making with modern design and manufacturing techniques. The Series 2050 vault lock features include 410 stainless steel wheels, phosphor bronze wheel post, brushed nickel plating, direct and indirect drives, and manipulation resistant false gating on wheels.

## TOOLS & ACCESSORIES

**Major Manufacturing**



CIRCLE NUMBER  
396

The HIT-32VD2 by Major Manufacturing is designed to install Von Duprin 22 Series panic hardware on both wood and hollow metal doors. The drill guide, attached to the door by use of self-drilling screws, has indicator marks to locate both rim and vertical rod devices. Screw holes are covered by device once installed.

**Singertech Neutralizer**



Singertech's lever neutralizer is a new tool that allows disassembly and opening of doors with Schlage Rhodes and other Grade 1 and 2 levers without working keys. No special technique is required. It enables the user to consistently defeat levers in less than sixty seconds without damage to the lock. It is also a great time saving tool for opening locks with high security cylinders and locks that will not yield to picking attempts.

**Truecraft Tools  
 Long Reach Pliers**



For those hard-to-reach places, Truecraft now offers professional extra long 11" Long Reach Pliers. The pliers are available in two versions: straight nose (Item #411) and 45° bent nose (Item #412) or as a two piece set (Item #6782).

The extended length of these pliers allows access to small confined areas. They are ideal for many applications in the automotive industry and HVAC/Refrigeration service work.

Truecraft's 11" Long Reach Pliers feature textured cushion grips to reduce hand-fatigue. In addition, they are forged from quality alloy steel for durability and protection against corrosion. Furthermore, the extra long serrated jaws increase grabbing capacity.

**ZAG® Mobil  
 Tool/Parts Box**

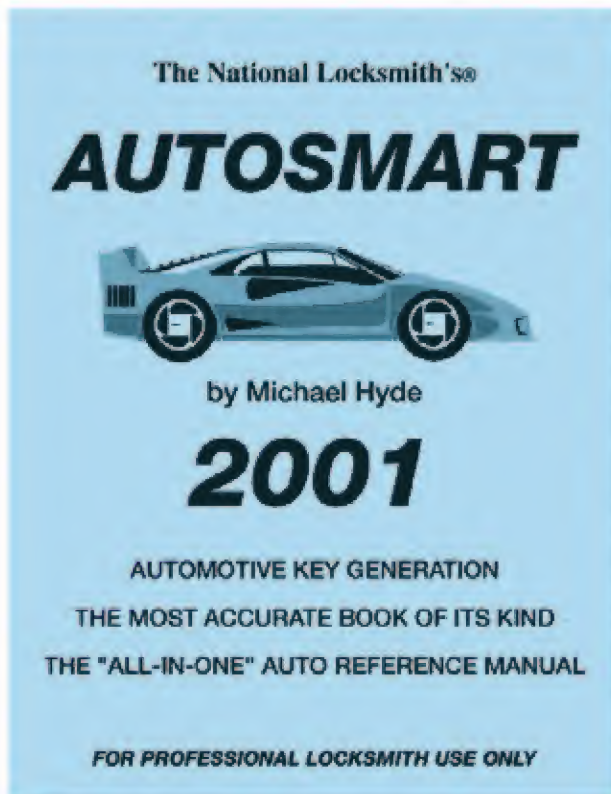


This versatile tote features two rear wheels and an

extendible comfort grip handle for easy transport. It has two removable compartmentalized trays with transparent covers, plus a removable full-length compartmentalized tote tray. A built-in cable holder is located on the rear of the box. The rugged polypropylene container measures 26" x 11" x 11", and has a built-in padlock eye.



# AutoSmart



A MUST for every locksmith!

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# ALOA 1999 Security Expo Exhibitor Listings

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Barantec Inc .....	348	Henry Squire & Sons Ltd. ....	271	MDS Incorporated .....	427
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Camden Door Controls .....	135	Hurd Corporation. ....	148	Mul-T-Lock U.S.A. Inc. ....	247
CCL Security Products .....	417	IDN Incorporated .....	429	National Auto Lock Service. ....	276
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# Modern Safe Opening



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#MSO - 1

# The Unican 1000 Mechanical Lock



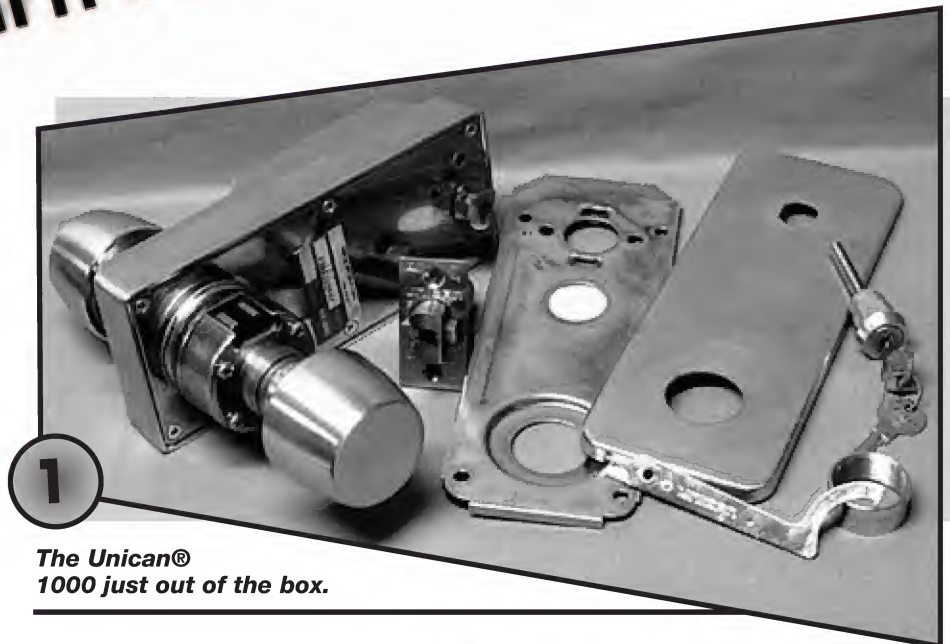
by Sal  
Dulcamaro,  
CML

While most new access control products are electronic, over the years there have been a variety of different mechanical push-button combination locksets. While most of the mechanical push-button locks find very limited use, the Unican® 1000 remains a popular competitor for the electronic push-button locks. One reason might be the simplicity and speed of combination changing. Other mechanical push-button combination locks require removing the lockset from the door and then partially disassembling the lockset itself. With only the removal of a key actuated threaded plug, the Unican® 1000 allows combination changing with the lockset still on the door. The combination can be easily reset in a matter of minutes.

Part of the Simplex®/Unican® family of mechanical access control products; the Unican® 1000 is the heftiest and most substantial of the group. There have been some changes over the years and a number of different versions are available in the 1000 series. While I will only be installing and servicing one version of the 1000 series for this article, I will try to cover a few of the notable variations of some other versions.

## Installing the Unican® 1000

Photograph 1, shows the Unican® 1000 in parts, just out of the box. The rectangular shaped front lock unit is somewhat large and heavy. The lock chassis with its latch retractor piece looks quite similar to other cylindrical locksets, and it will typically fit through the standard 2-1/8" diameter crossbore door preparation. Additional mounting holes are required, though, to secure the upper part of the rectangular front



1  
**The Unican® 1000 just out of the box.**



2  
**A lock mount prepped for a standard cylindrical lock.**

lock unit. A paper template is included with the lock instructions for locating those additional mounting holes.

A lock mount prepped for a standard cylindrical lock is shown in photograph 2. Next to it is an installation



3  
**The lock mount with the three additional holes required for installing the Unican® 1000 lockset.**

jig made by A-1 Security Manufacturing Corp. While the additional mounting holes are not overly difficult or complicated to make without a jig, the jig can help speed up an installation and can make a big difference in time when more





4

The lock is ready to install.

5

The latch has been installed and the front lock unit with chassis is in place.



6

The reinforcing plate is positioned and the mounting screws have been partly tightened.



than one or two of these locks are being installed for the same customer.

For a retrofit from a standard cylindrical lockset with the crossbore hole already in place, the bottom 2-1/8" diameter hole of the jig will be used merely as a guide. The jig hole would be positioned over the hole in the door (as a locator), and then the additional mounting holes would be made properly spaced from the main 2-1/8" crossbore hole. Since the Unican® 1000 is only available with a 2-3/4" backset, doors already prepped for a 2-3/8" backset will have to be modified. The bottom 2-1/8" guide hole of the jig would be helpful in that regard. A hole saw could be guided (by the inside walls of the 2-1/8 inch hole of the jig) to the repositioned backset without having material in the center for a pilot drill to grab. While such a widened hole might be a problem with a standard cylindrical lockset, the wide plates of the Unican® 1000 would cover the oversized hole from both the inside and outside.

Photograph 3, shows the lock mount with the three additional holes required for installing the Unican® 1000 lockset. The larger 1-inch diameter hole in the center of the two small holes is to allow the combination change sleeve to enter from the outside and the threaded plug to enter (and interconnect) from the inside. The two 1/4-inch holes (to the left and right of the 1-inch hole) allow the two mounting screws to tie into and secure the front lock unit. When using the jig on doors with a beveled edge, it may be wise to use the jig just to trace the hole locations and then shift the hole centers further in toward the hinge side of the door. Then drill free hand.

The lock is ready to install in photograph 4. One more modification of the door prep is required first. The need for this additional step for wood doors will depend on which style latch is used. The anti-friction style latch, seen in the photograph, has a raised portion on the inside of the latch plate. The mortise around the edgebore hole must be modified to account for that raised portion in order for the latch to seat properly and operate smoothly. If the lock you are installing doesn't have that style latch, that additional step can be omitted.

The latch has been installed and the front lock unit with chassis is

7

The standard unified trim plate and threaded ring is next to install.



in place in *photograph 5*. The outer knob on a Unican® 1000 uses a type of clutch mechanism. Make sure that there is no excess binding and that the latch operates smoothly when using the lock's combination. The lock can be tested by depressing the factory set combination. First, depress the 2 and 4 buttons simultaneously, release, and then press the 3 button. You should feel and hear a slight clicking when inputting each number of the combination. Turn the knob, and the latch should retract. Using the combination only allows the lock to open one time. It re-locks immediately and requires the next user to also input the access code. When the wrong combination is depressed, the knob will still turn. The clutch action will allow the knob to rotate (or slip) but not retract

the latch. Turning the knob also acts to reset the buttons, if the buttons were operated out of sequence or incorrectly.

The reinforcing plate is positioned and the mounting screws have been partly tightened in *photograph 6*. With the mounting screws fully tightened in *photograph 7*, the standard unified trim plate and threaded ring is next to install. After positioning the trim plate, the threaded ring is tightened in *photograph 8*, with a spanner wrench. Only the plug assembly and the inside knob are needed to complete the installation.

The plug assembly is a threaded bolt connected to a disc tumbler plug. The operating key (code #DF-59 is standard for all Unican® 1000 locksets acts like a screwdriver to tighten the bolt (rotating clockwise) in *photograph 9*. After fully tightening the plug assembly, the inside knob is being installed in *photograph 10*. Using the opposite side of the spanner wrench, the knob retainer is being depressed to allow the knob to be pushed into place. The inside knob is caught and held securely in *photograph 11*.

*Photograph 12,*

**After positioning the trim plate, the threaded ring is tightened.**

8



**The operating key acts like a screwdriver to tighten the bolt.**

9



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#DMCD - 2

**10** After fully tightening the plug assembly the inside knob is being installed.



**11** The inside knob is locked in place.



**12** Outside view of the Unican® 1000.



After removing the six small screws, the back plate assembly can be removed.

shows the Unican® 1000 from the outside. A standard Unican® 1000 wouldn't have key bypass. This is among the different versions that allow a bypass key to open the lock without inputting the combination. This unit will accept a Best-style (now, also referred to as SFIC- Small Format Interchangeable Core) I-Core. Key bypass is accomplished only with an interchangeable or removable core for these Unican® locksets. The Unican® 1000 is also available for Schlage (standard), Medeco, Yale and other brand formats.

**Inside the Unican® 1000**

All the mechanical parts that make the combination function and the knob turn to open (or slip when the clutch device prevents unlocking when the wrong combination is input) are found inside the front lock unit. The back of that unit can be seen in *photograph 13*. The spanner wrench is pointing toward the combination change sleeve, which is part of the back plate assembly. That part is the reason for the one-inch hole that was added above the main cross bore hole. Changing the combination requires access to the combination change sleeve. When the

**13** The spanner wrench is pointing toward the combination change sleeve.



**14**

(combination change) plug assembly is removed, the pointed end of the spanner wrench is inserted through the one-inch hole to actuate that mechanism to reset the combination.

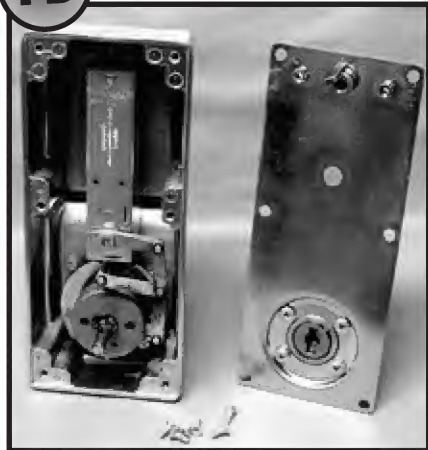
After removing the six small screws, the back plate assembly can be removed as in *photograph 14*. The two embedded nuts (one to each side of the combination change sleeve) are where the two mounting screws go through the 1/4-inch holes in the door to tie into the

front lock unit. There is a small hole, underneath and in line with the combination change sleeve. There was a matching position 1-inch diameter guide hole in the A-1 installation jig. That additional one-inch hole would have been made if you were installing a Unican® 1000 with the passage set feature. In that second one-inch hole, a thumb piece or keyed disc tumbler cylinder (depending on the option chosen) would interact with a mechanism that would allow the lockset

to be put in passage mode. *Photograph 15*, shows an inside view of the back plate assembly.

The stock Unican® 1000 was designed for installation into doors ranging in thickness from 1-5/8" to 1-7/8". It can be changed for thinner or

**15** *An inside view of the back plate assembly.*



*The four screws that attach the back plate to the lock chassis.*

**16**



*The end of the spanner wrench fits into a slot on the outside end of the sleeve.*

**17**

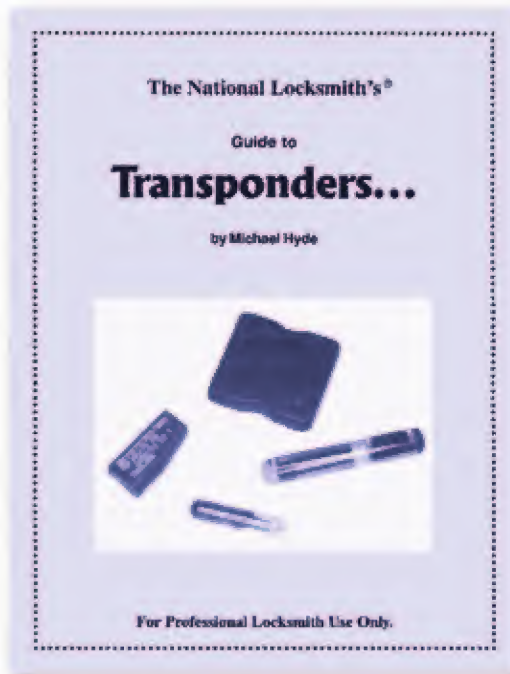


thicker doors by removing or adding spacers. *Photograph 16*, shows the four screws that attach the back plate to the lock chassis. Those screws would have to be removed and shorter or longer screws would be used in reassembly depending on whether a spacer is removed or added. A matching modification would be required of the drive shaft (still assembled to other parts inside the front lock housing), by repositioning the cross pin.

The lock is currently set as left hand. The hand of the lock can also be changed. When those four screws are

removed (instead of removing or adding spacers), the lock chassis would be rotated 180 degrees and the screws would be reattached. Once the back plate assembly was reinstalled, the lock would then be right handed and could be installed on a matching handed door. No mechanical alteration would be required for in or out swinging doors, only reversing the latch. It is my understanding that the lever handle version of the Unican® 1000 is not field reversible. It would be necessary to order the lock with the handing already matched to the door.

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#TS - 2001

*Photograph 17*, shows how the combination change sleeve works. The end of the spanner wrench fits into a slot on the outside end of the sleeve. Rotation will then actuate the inner part of the sleeve, in order to push down on the lockout slide of the combination chamber. In *photograph 18*, I'm pointing toward the top of the lockout slide (and the button just below it), on the currently installed combination chamber.

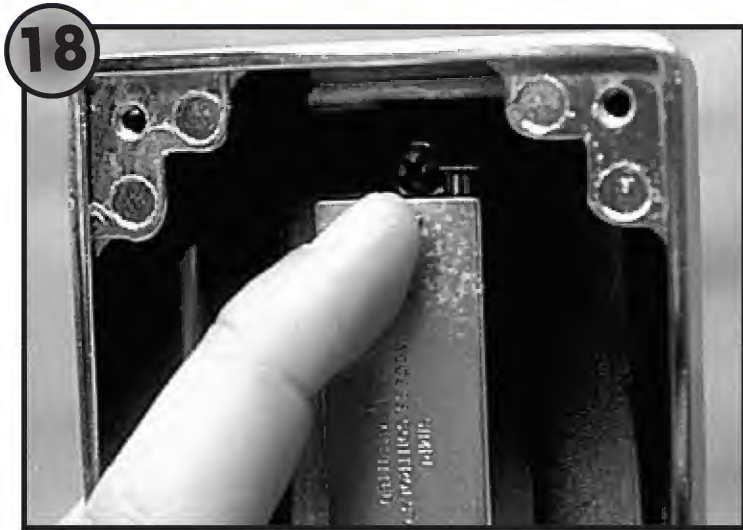
**The Combination Chamber**

*Photograph 19*, shows a separate combination chamber from the one assembled inside the front lock housing of the Unican® 1000 lockset. I will illustrate the internal workings of the combination chamber, while showing the outward operation of the lock itself. That way you will see the matching internal movements that coincide with specific external movements for lock operation or combination changing. A side view of the combination chamber is shown in *photograph 20*. The cover is being removed, in *photograph 21*, to reveal the operation of the gears and other parts inside.

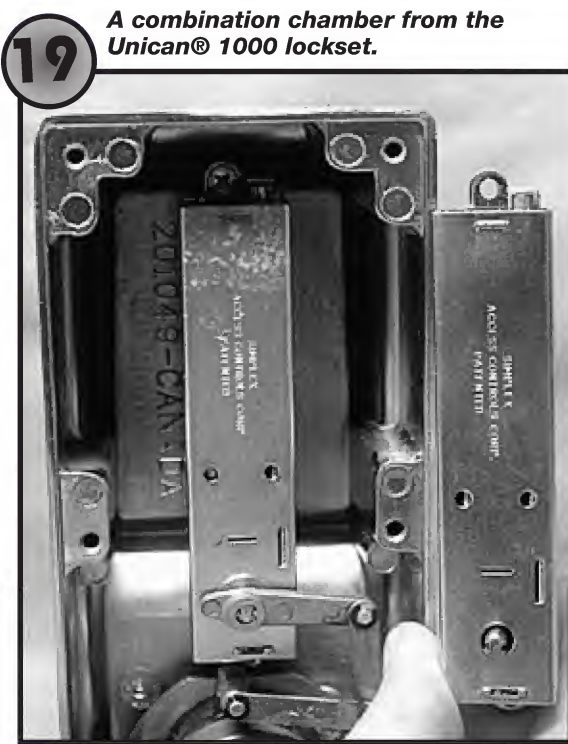
With the cover removed in *photograph 22*, the side view reveals five gears and the five toes of the unlocking slide lined up just below each of the gears. This shows the normal position of the gears with the original factory set combination (with no buttons pushed). The combination is to first press the #2 and #4 buttons simultaneously, and then press the #3 button. Take note that the slots (or gates) of the top (#1 button) and bottom (#5 button) gears are already in the unlocked position. This is an indication that the #1 and #5 buttons are not used in the combination. A lost combination condition would normally require removal of the combination chamber and removal of the cover to view the gears and decode the combination.

*Photograph 23*, shows me pressing the #2 and #4 buttons together. Take note that this is not #2 then #4, or #4 then #2. They must be pushed at the same time, as the gears in the combination chamber are timed by sequence. The timing of the gears must be matched exactly or the lock will not open.

I am pushing the same number sequence in *photograph 24*, but this time directly into the combination chamber itself, instead of transferring the motion from external buttons. If you look at the second and fourth gears (from the top), you will notice that the gates are



**The top of the lockout slide and the button just below it on the combination chamber.**



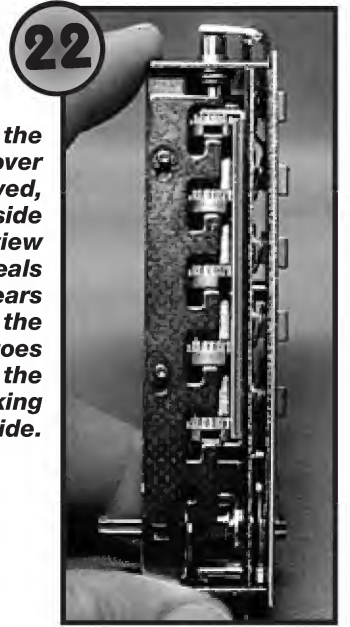
**A combination chamber from the Unican® 1000 lockset.**



**A side view of the combination chamber.**



**The cover is being removed to reveal the operation of the gears and other parts inside.**



**With the cover removed, the side view reveals five gears and the five toes of the unlocking slide.**

identically positioned and rotated furthest away from the open position. When decoding for a combination chamber (with unknown combination), you can identify the sequence of the numbers to be pushed by identifying the gears that are rotated furthest away as the first to be pushed. Any gears with gates in identical positions must be pushed together, whether it is only two gears or as many as five gears. Each number can only be used once in an operating combination. The chosen combination is flexible, though. You can use as few as one button (for a one number combination) or as many as all

five, with every variation in between in singles or multiples.

The #3 (last number of the combination) is being pressed in *photograph 25*. The same is being done directly on the combination chamber in *photograph 26*. Note that the second and fourth gears (for the previously pushed together #2 and #4 buttons) are just short of having their gates directly under their corresponding toes of the unlocking slide. When the #3 button is fully pressed, it will slightly rotate the third gear to position its gate under the toe of the unlocking slide. Although their buttons are not pressed again, the #2 and #4 gears will also rotate slightly because of a timing gear at the back of the combination chamber. Once a button is pushed, the corresponding

gear moves slightly every time another button is pushed. That is why the gears with the gates furthest away from open must be pressed first.

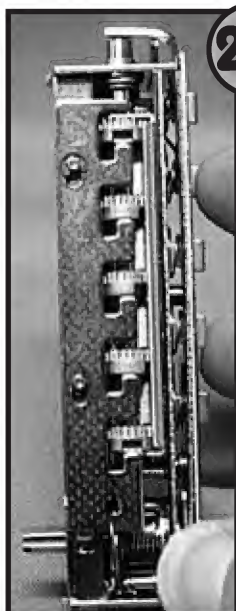
With the combination completed, all the toes of the unlocking slide will be directly under a gate of one of the gears. The first and last gears (corresponding to buttons #1 and #5) were there from the start, because they were not needed in the combination. The other three gears (corresponding to buttons #2, #3 and #4) are in place because their corresponding buttons were pressed in the proper sequence (#2 and #4 together, followed by #3). With the combination chamber set, the Unican® 1000 should now be ready to unlock.

*Photograph 27*, shows inside the front lock housing. This is how it looks before the knob is rotated. The clutch mechanism ties the motion of the knob to the operation of the combination chamber. The proper combination will allow the knob rotation to actuate the mechanism and retract the latch (opening the door). The wrong combination will cause the clutch mechanism to allow rotation of the knob, but cause slippage and not retract the latch. The gears would normally reset, and then the combination could be retried. If the combination was input correctly the next time, the lock would open.

I am directly actuating the mechanism on the combination chamber in *photograph 28*. Rotation moves the toes of the unlocking slide into the gates of all five gears, which allow unlocking (or retracting the latch,



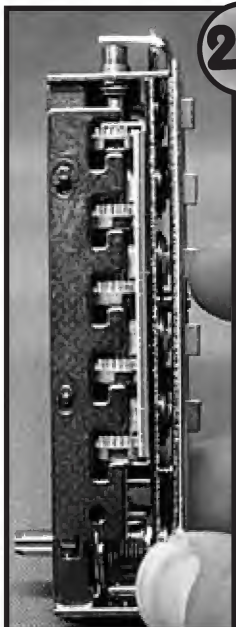
**23** Me depressing the #2 and #4 buttons together.



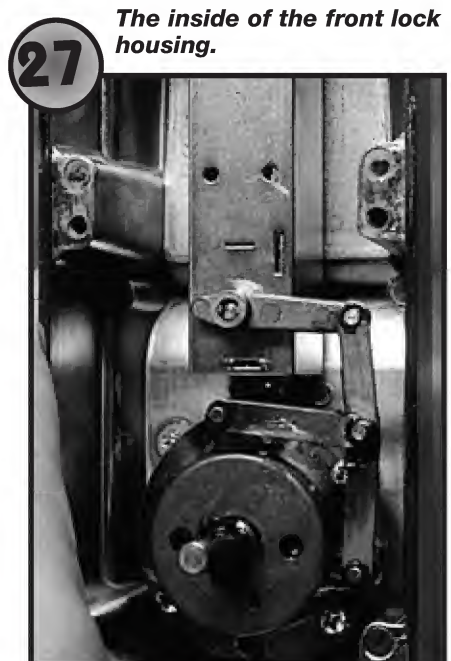
**24** The second and fourth gears are identically positioned and rotated furthest away from the open position.



**25** The #3 is being pressed.

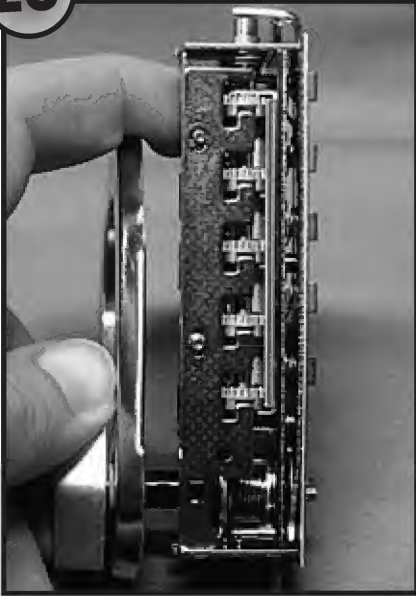


**26** Note that the second and fourth gears are just short of having their gates aligned.

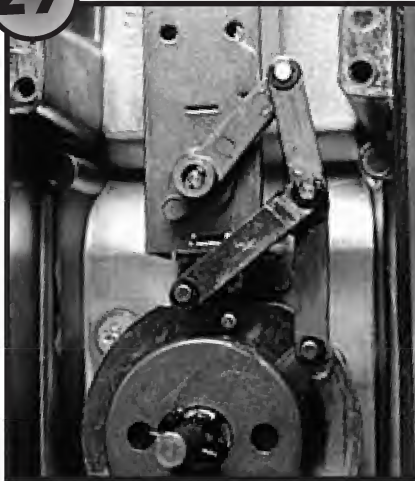


**27** The inside of the front lock housing.

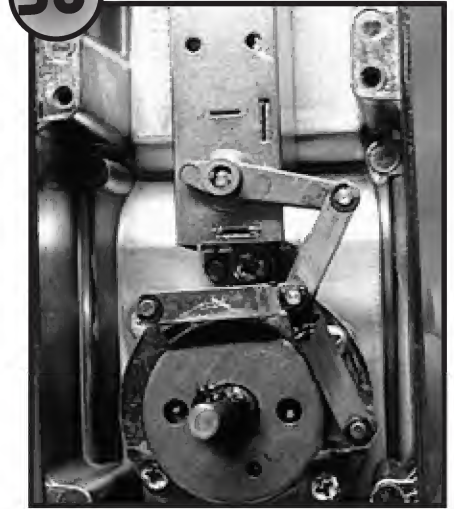
**28** Rotation moves the toes of the unlocking slide into the gates of all five gears.



**29** Inside the front lock housing during the operation on the assembled lock.



**30** Rotation of the knob with a wrong combination is illustrated.



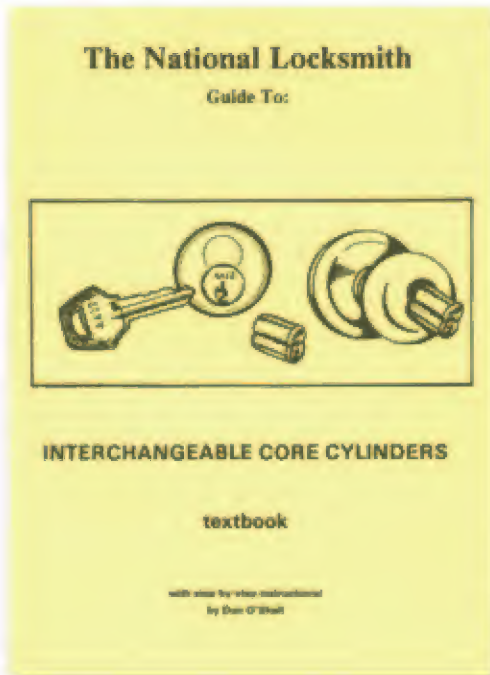
if it was connected to the lock properly). *Photograph 29*, shows what it looks like inside the front lock housing during the identical operation on the assembled lock. With the correct combination, the combination chamber does not resist the rotation and the lock would open. An identical rotation of the knob with a

wrong combination is illustrated in *photograph 30*. The combination chamber resists the rotation of the knob. Instead the mechanism slips, and if the knob rotates far enough, it will actually rotate the mechanism of the combination chamber in the opposite direction causing the gears to reset.

#### Combination Changing

To set a new combination, you start out as if you intend to unlock the lock.

Input the current combination. The gears will be aligned and rotating the knob will unlock the lock. Do not turn the knob at this point. Instead, first unscrew the plug assembly with the DF-59 key, until it comes completely out. Insert the spanner wrench through the one-inch access hole and engage the combination change sleeve. *Photograph 31*, shows the lock unmounted, with the tool engaged. You should turn gently



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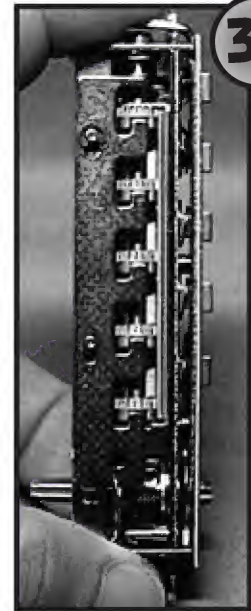


#ICB - 1



31

The lock unmounted with the tool engaged.



32

Manually operating the lockout slide and moving it downward.

clockwise until you feel and hear a slight click. That is the sound of the lockout slide being pushed downward by the combination change sleeve.

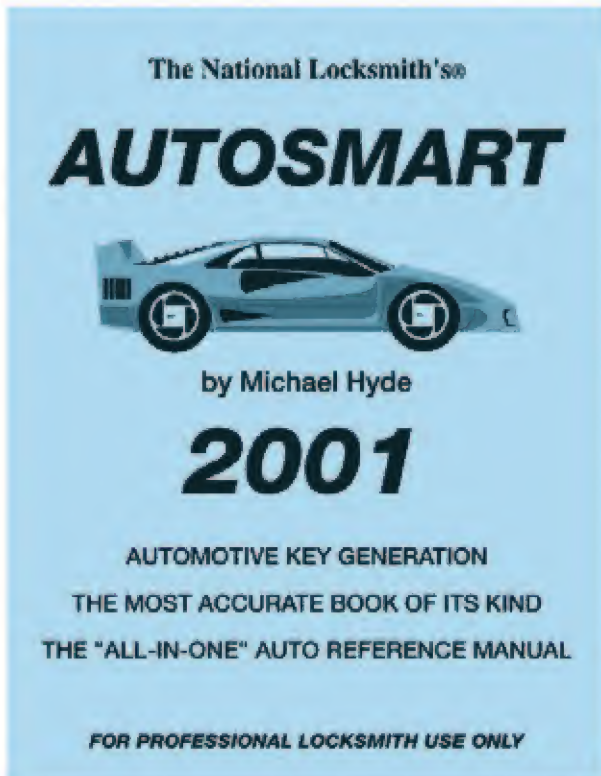
In *photograph 32*, I am manually operating the lockout slide and moving it downward. The toes of the unlocking slide are engaged with the gates of all five gears. In this case, the unlocking slide did not move upward to engage the gears. Instead, the gears moved downward to engage the unlocking slide.

The next step is to rotate the knob clockwise all the way until it stops. *Photograph 33*, shows what goes on

inside the front lock housing. It gives the appearance of behaving much the same as when a wrong combination has been input. The clutch mechanism resists the attempted clockwise motion and converts the clockwise motion into counterclockwise motion. Being this is a backside view everything is reversed. What appears to be clockwise from this side's perspective is actually counterclockwise from a front side (outside face) view. The motion is nearly identical to when the gears get reset. *Photograph 34*, shows what occurs inside the combination chamber. The lockout slide has been reset so that it moves back up again. The gears remain

down and engaged with the unlocking slide. What looks like a button remains pushed down. You can see a slight gap (at the top) between the lockout slide and that button.

It is now time to reset the combination. The last step is fairly simple, but you must pay attention to what you are doing. You input a new combination, consisting of any



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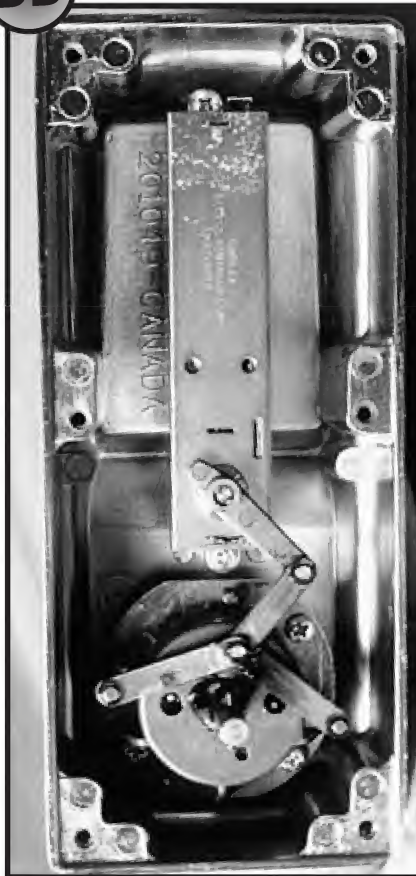
arrangement of the numbers 1 to 5, so long as you only use any number one time. The numbers chosen can be in any arrangement as singles or multiples. It is a good idea to write down the combination first, so you don't lose track of the numbers that you pressed. The numbers should be pressed firmly and they should generate a slight clicking sound when pressed.

After you input the combination, turn the knob clockwise all the way until it stops. *Photograph 35*, shows how it looks inside the front lock housing. The knob rotation both opens the lock and sets the combination at the same time. A more detailed view of what happens inside the combination chamber can be seen in *photograph 36*. The button at the top moves back up, as do the gears while setting the new combination. If you happen to push different buttons (or in a different order) than what you wrote down, whatever mistaken combination you pressed will become the combination. If you are unable to remember or figure out what combination you set, you will need to take the lock off the door and remove the combination chamber to decode the current combination.

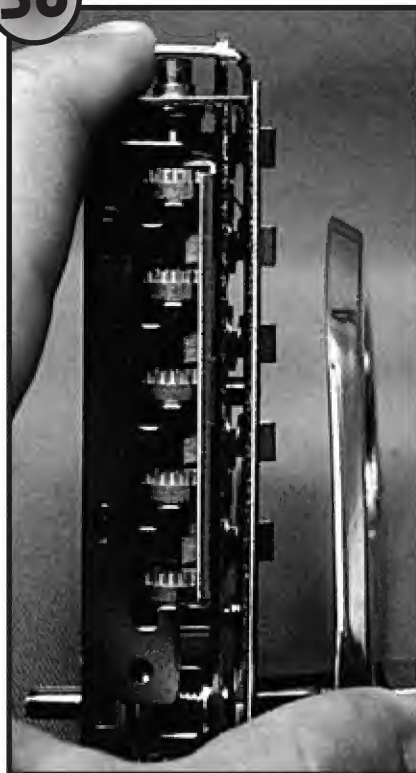
**35** The knob rotation both opens the lock and sets the combination at the same time.



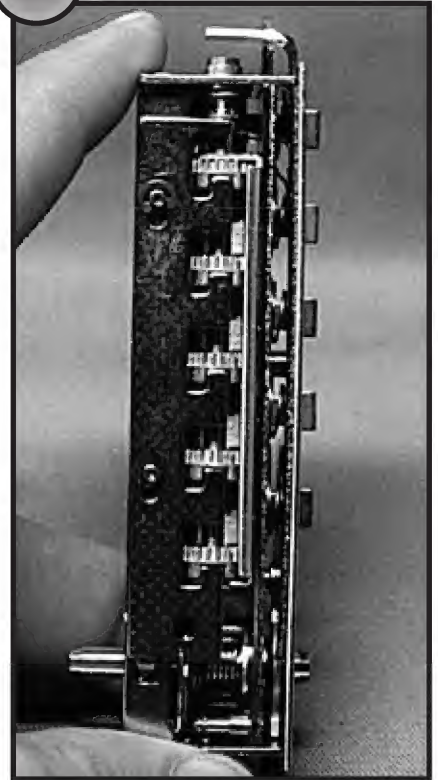
**33** Inside the front lock housing gives the appearance of behaving much the same as when a wrong combination has been input.



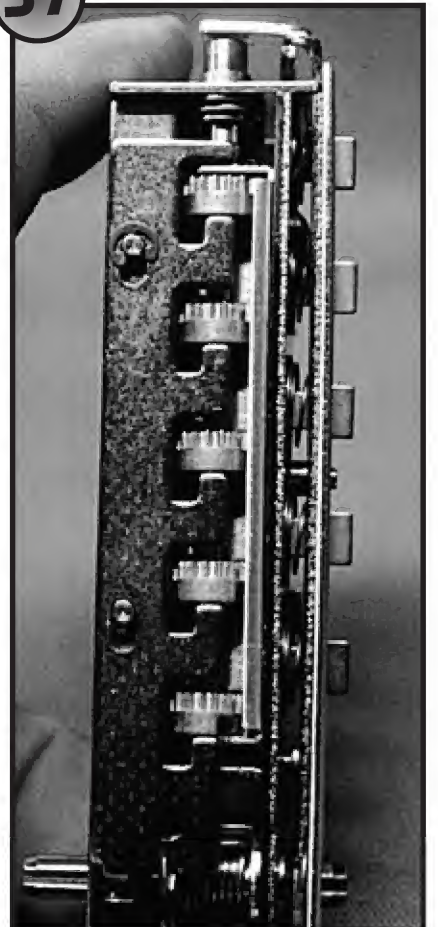
**36** The button at the top moves back up, as do the gears while setting the new combination.



**34** The lockout slide has been reset so that it moves back up again.



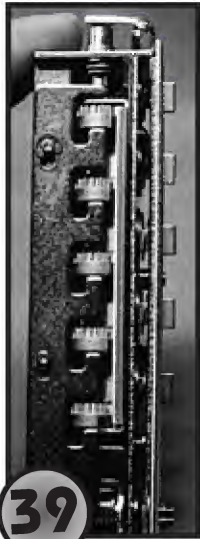
**37** Only the gates on the bottom two gears are clearly visible.





38

At the left side you can see a long vertical bar that acts as a timing gear.



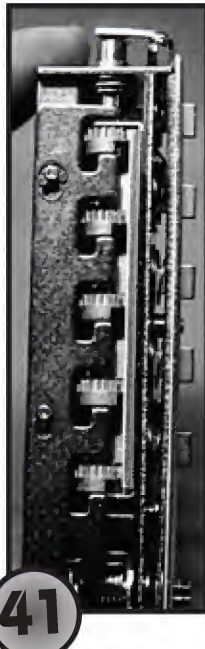
39

The very edge of the gates of the top two gears are just barely visible.



40

Pushing the #2 button directly rotated the second gear and indirectly moved the first gear.



41

The #3 button has been pushed advancing the third gear one step.



42

The timing gear rotated further and only the last two gears still unmoved.



43

The top four gears are all lined up.

### It's All in the Timing

The combination chamber is the heart of the Simplex®/Unican® mechanical push-button locksets. Looking at the gears and other parts inside, it makes you think of a watch or clock. I'll reset the combination to: 1-2-3-4-5, and I will illustrate what happens inside the combination chamber after each number of the combination is entered. A side view will show the position of the gates of the gears, and a back view will show how a timing gear puts the process in motion.

The button positions on the combination chamber run from top to bottom (the same as on the external buttons of the Unican® 1000) and are numbered 1 to 5 in that order. The #1 button has already been pushed in *photograph 37*. Only the gates on the bottom two gears (for buttons #4 and #5) are clearly visible from the side view, at this point. The gates of the other gears will become apparent as buttons are pushed and the gears rotate to reveal them. If you look from the back in *photograph 38*, at the left side you can see a long vertical bar that acts as a timing gear. Just to its right, five individual gears from top to bottom are also involved in the mechanical operation of the

combination chamber. Only the top gear has rotated so far.

After the #2 button is pushed in *photograph 39*, the very edge of the gates of the top two gears are just barely visible. Pushing the #2 button directly rotated the second gear and indirectly moved the first gear by way of the timing gear, which is more obvious in *photograph 40*. Once a button is pushed, the related gear goes into motion. Each additional button that is pushed advances previously moved gears (by way of the timing gear) one additional step. The gear furthest out of phase must move the furthest to reach the unlocked position.

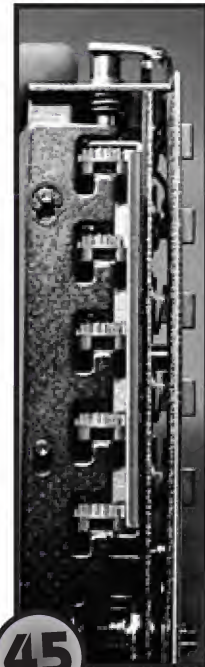
In *photograph 41*, the #3 button has been pushed, advancing the third gear one step. The first and second gears follow suit by way of the timing gear. The gates of the first three gears are aligned and are clearly visible. The gates of the fourth and fifth gears have been visible from the start. The back view, in *photograph 42*, shows the timing gear rotated further and only the last two gears still unmoved.

*Photograph 43*, shows the side view with the #4 button pushed. The top four gears are all lined up. Although the last (fifth) gear is not perfectly matched to the other four, all are just



44

Although the last gear is not perfectly matched to the other four, all are just one step from the unlocked position.



45

All the gates in the gears are aligned with the five toes of the unlocking slide.

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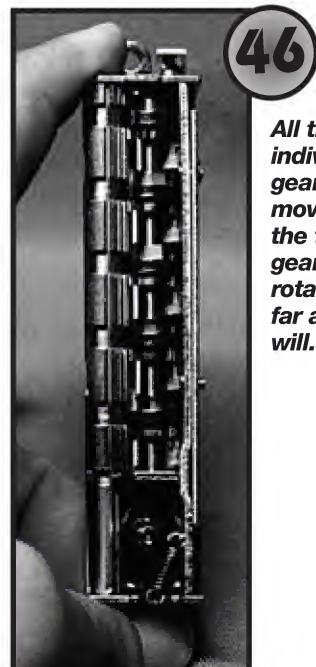


This is THE source for automotive technology, safe opening techniques, electronic security and much, much more.

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#SUB - 1,2,3,4,5,6



**46**  
All the individual gears have moved and the timing gear has rotated as far as it will.

one step from the unlocked position. The back view is in *photograph 44*.

After the #5 button is pushed in *photograph 45*, all the gates in the gears are aligned with the five toes of the unlocking slide. From the back in *photograph 46*, all the individual gears have moved and the timing gear has rotated as far as it will. At this point, there are two options. If the knob is turned, the lock will unlock and then reset itself to the locked position. If the lockout slide is depressed, the combination can be changed.

The Unican® 1000 and other Simplex®/Unican® mechanical access control products should be available from most locksmith supply companies. Although of different external appearance and construction, they are all built around the concept of the combination chamber and work on the same principle. They are generally easy to operate and easy (and fast) to change the combinations.

*For more information on the Simplex®/Unican® line of push-button keyless locks contact:*

*Ilco Unican Corp.*

*Unican Lock Division*

*2941 Indiana Ave.*

*Winston Salem, NC 27105*

*Phone: (336) 725-1331*

*Fax: 800-346-9640*

*E-Mail: info@win.ilcounican.com*

*Web: http://www.ilcounican.com*

*Circle #310 on Rapid Reply.*

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# THE 1998 CHRYSLER SEBRING CONVERTIBLE PART 1



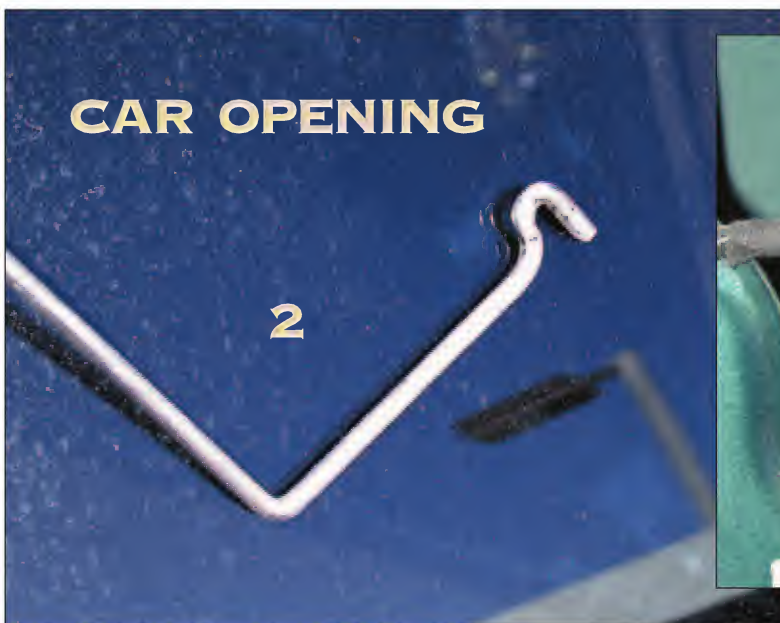
BY MICHAEL HYDE



The Chrysler Sebring is available in two separate models, a convertible and a hardtop. There are two very unique differences between the versions. The hardtop model is made by Mitsubishi and is the brother to the Dodge Avenger. The convertible model is made by Chrysler. Only the convertible model has the optional Transponders system.



We used two good wedges and inserted the tool on the passenger side door about 8 inches from the edge.



The linkage rods are unshielded and can easily be found. The lower of the two rods is the one you want. Slide the rod forward and the car opens.

This car is pretty easy to open. We chose a horizontal slide linkage tool to open this car.



## IGNITION LOCK

The ignition lock cylinder is mounted to the steering column.



This model does not have a transponder system module attached to the column. The ignition lock is the same whether it has a transponder system or not. The trim on the front of the ignition housing does not interfere with removing the lock cylinder.



Remove the two Phillips head screws on the bottom side of the two piece plastic column shroud.



To remove the cylinder insert the working key and turn it to the ON position and depress the active retainer found on the bottom of the column.



The ignition lock removed from the car. The active retainer can be seen on the side of the lock.



There is still a screw in the back of the shroud, but by gently separating the front of the shroud there will be just enough room to access the ignition lock cylinder. Just remember to take your time and don't force things.



To disassemble this lock you will need a working key. Rotate the lock to where it would be in the ACC position in the car or just turn it counter-clockwise. Depress the stop pin to rotate the plug far enough to line it up with the ward and remove it.



12

A look at the plug with all 8 tumblers and a side bar.



13

There is a very small buzzer actuator mounted in the plug. If this actuator is not there the car will not start.

The buzzer actuator works with the white plastic indicator at the end of the plug. The indicator interacts with a small device in the ignition housing to activate the buzzer circuit and act as a vehicle anti-theft device.



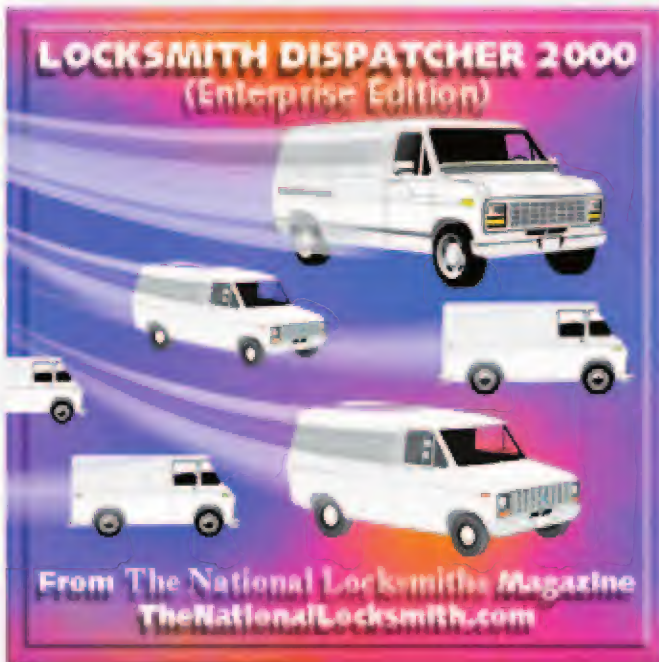
14

## DOOR LOCK



15

The door lock cylinder is mounted to the door skin underneath the outside door handle.



# Locksmith Dispatcher 2000

Controlled Service  
dispatching software  
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#DIS - 2000



A view of the inside door panel that must be removed to access the door lock cylinder.



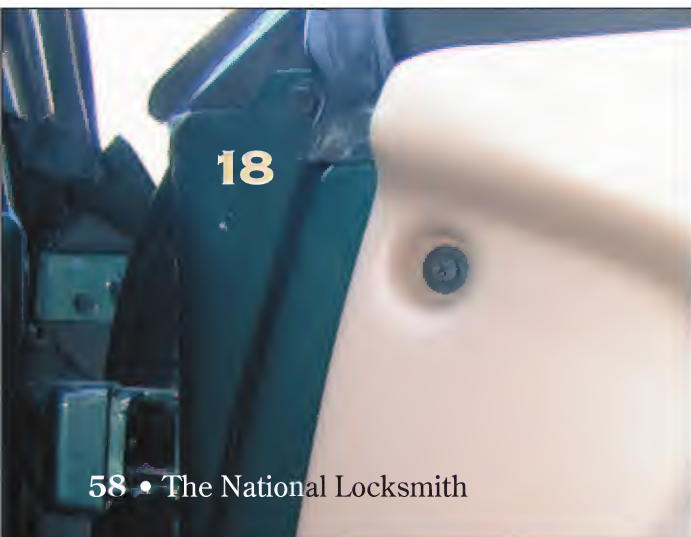
Inside the door pull cavity is 2 screws that must be removed.



First remove the small trim cover that conceals the screw for the inside door release handle.



Near the rear of the panel is trim cover that hides a panel screw that must be removed.



Remove the screw for the front upper section of the panel.

Remove the speaker grill. It is held in place by three snap fasteners.

23



22

There is a speaker grill located on the front lower section of the panel.



24

Underneath the speaker grill is 3 panel fastener screws that must be removed.

## Guide to Motorcycles



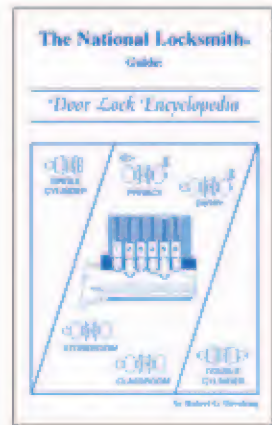
For years locksmith have begged for a comprehensive service manual on motorcycles and its finally here!

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#MOT - 2

## Door Lock Encyclopedia

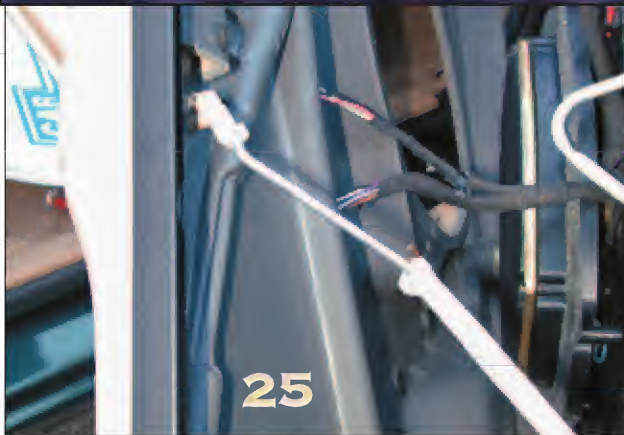


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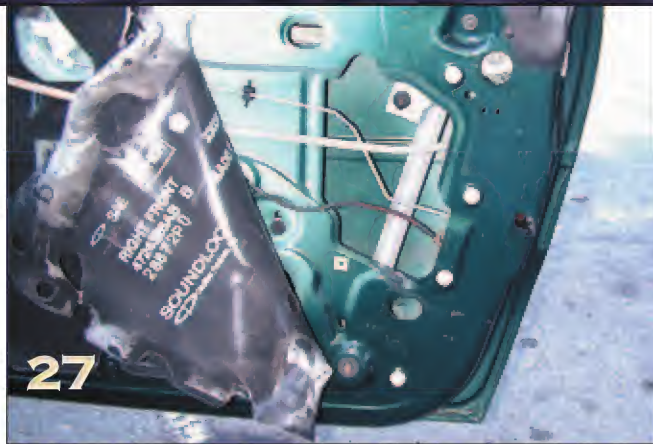
#DLE





25

The panel is now ready to be removed. Once the panel screws are removed you can gently unsnap the lower section of the panel and lift it off the door. Be careful of the inside door release handle linkage rod, it must be disconnected along with any panel electronics.



27

A view of the horizontal linkage.



26

To give you easier visual access it would be a good idea to remove the rubber end cap on the rear edge of the door. It has four plastic fasteners that can be reused.



28

Once the panel is removed you will see the plastic weather barrier. They must have used a real good glue on the one I took apart. Work the glue edge loose to move it aside.

## 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

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



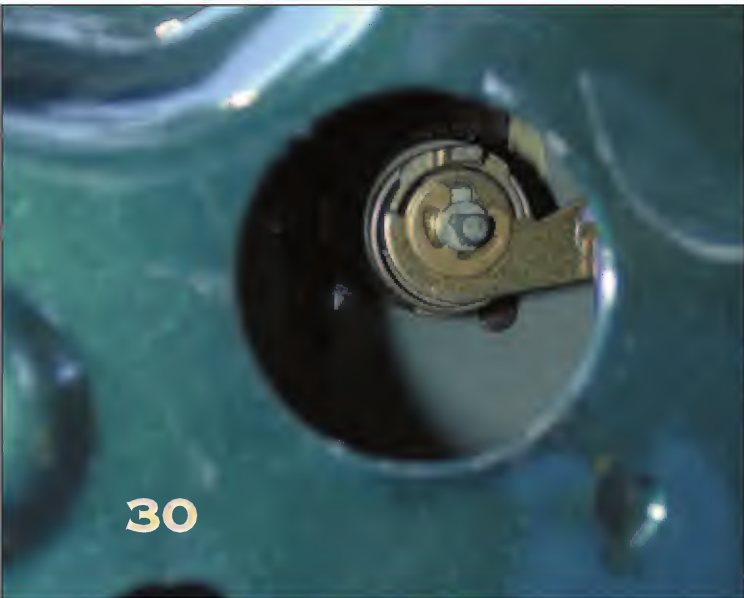
29

A look down at the lock cylinder from the top rear edge of the door.



32

Disconnect the outside handle linkage rod. This view is from the top of the door looking down.



30

A look at the door lock from a window track access hole. This door lock can be a real pain to get out. The window track is right in the way of getting to the door lock cylinder. You will have to remove the outside door handle to get at the lock cylinder.



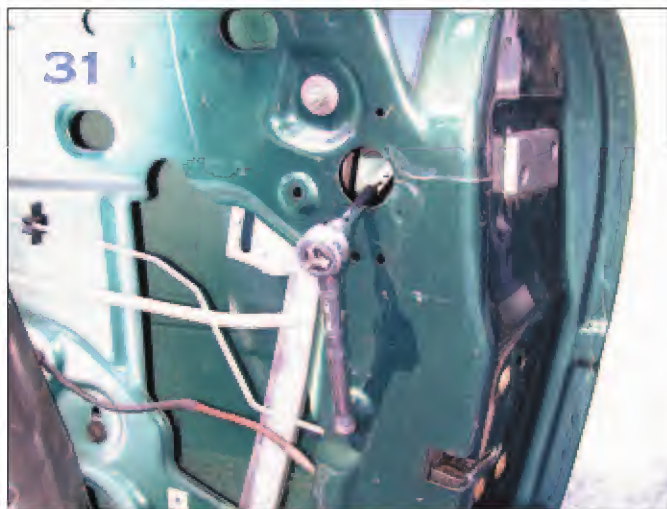
33

Raise the window back up to get to the forward handle 10mm nut.



34

A view the outside handle removed.



31

Lower the window all the way down to access the rear handle 10mm nut.



35

The lock cylinder linkage rod can now be disconnected.



36

Remove the horseshoe clip and slide the lock out.



39

The door cylinder plug contains 7 tumblers in positions 2 through 8.

The face cap must be removed. The replacement face cap part number is Strattec #321847 (chrome). The dust shutter assembly is of a modular design with two springs.



40



37

The door lock cylinder removed.



38

To remove the plug, remove the "C" clip on the rear of the lock.



41

The door lock disassembled.

Next month we conclude this article covering the trunk, glove box and center console locks, as well as programming the keys. See you then.

TNL



#ALS - 1

# Auto Lock Service

Covers opening and service techniques.

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# How to Grow Your Locksmith Business

The number one question asked of us here at *The National*

by Marc Goldberg

*Locksmith* is, "How do I grow my locksmith business?" It's the question we all want answers to and is a darned ticklish question as well. That's because asking how to grow a locksmith business is kind of like asking, "How can I dress well?" The answer is going to be different for every individual. You may look and feel your best in a suit and tie, while I may look better in a pair of khakis and a polo shirt.

Yet, to prosper in the business world, we must all concentrate on acquiring and keeping more customers. We must grow or we will shrink. So even though this is a messy topic, let's dig in, get our hands dirty together, and look at some of the ways locksmiths can do more business in the next year.

The first thing you can do to increase your business is to increase your skills. While we will not spend a lot of time on that subject in this article, we do have to mention it. Adding new skills to your trick bag is a sure-fire way for many locksmith companies to grow.

For example, do you work on safes? If you do not, is that simply because you don't know how? How many times have you had to refer away business when someone needed a safe serviced? Once you send your customer to another locksmith because you cannot do the job, chances are quite high that you may

lose all of that customer's future business as well as the job of the day.

If you do not service safes, as an example, and if that is due to a lack of training, take the steps available to you to correct that situation. By the way, I am using safe work as an example of how to grow your business because many locksmiths avoid that work. They are afraid they will not know what to do and will make a mistake. At the same time, though, safe work is one of the more profitable areas of the industry.

Here are a few resources to help you learn about safes. First, there is combination changing. That is one of the easier and most common type of safe job requested of locksmiths. *The National Locksmith* publishes Mark Bate's *Modern Safe Locks* book. The book sells for under \$100 and it shows you pictures and details on how to troubleshoot and do combination changes for almost every safe lock under the sun. It even tells you what tools you need for each lock.

The average price a locksmith charges for changing a combination is about \$40. The change key tools are inexpensive, and are available from your distributors. Learning to change combos is relatively fast and easy, plus it's cheap to get the information you need.

Once customers know you can change their combinations, they will also use you to open their locked safes and will also refer you to their friends. Although I don't want to commercialize much more, I will also mention that we publish two other books for beginning safe technicians. One is Carl Cloud's *Drilling Safes* for under \$100, and the other is Bob Sieveking's *Modern Safe Opening* for under \$60. Both of these books teach you how to

drill open locked safes if the combination is lost or if the safe is damaged. For more advanced safe work, see the Dave McOmie series of books, which give you all the exact drill points.

If you just invest in a bit of training and reference materials, you can be in the safe business. The average price locksmiths charge for drilling opening a locked safe is \$220. You can see the profit potential in this area. Yes it requires knowledge, but that information is available to each of you. Additional resources include the National Safeman's Organization (NSO) and classes by schools like Lockmasters, Mark Bates Associates or Foley Belsaw to name a few.

The NSO, run by Dave McOmie and *The National Locksmith* publish newsletters and training information to help you learn more about how to work on safes. Annual membership costs about half of what locksmiths make from opening one safe.

Just like safe work scares off many locksmiths unnecessarily, so to do many 'smiths avoid car work. But once again, automotive locksmithing is one of the single most profitable aspects of the industry. The problem for many locksmiths is that they don't know how to find the information they need on cars, considering that there are hundreds of makes and models on the road.

Mike Hyde's *AutoSmart*, which we sell for under \$100, will tell you what you need to make keys for virtually every car on the road. The *AutoSmart* has done more than any other tool to take the fear out of automotive locksmithing. So if you're not working on autos now, add that skill and your income will certainly increase. For example, the average price

locksmith's charge to fit a key to a GM VATS lock is \$115.

John from John's Locksmithing is mobile only. He says that just rent in his area would cost over \$1,000 a month. He started to visit car dealers. He found that many had problems with locked up cars. Here's John's story:

"I found an interesting thing at car dealers. Say they have a car locked up on the lot. If they call a tow truck driver to open it, the tow truck driver has to bill for a call at \$50 or more.

"If there are no keys in the car, assuming it's a type the dealer sells, they have to tow the car into the shop. Then a mechanic has to pull the ignition at his high rate of labor. He pulls the door lock to make a door key, assuming they have someone there who can make keys. This costs them at least 45 minutes.

**W**hat if they are a GM dealer and they have a Ford? They can't touch it. Now you can see where I get my business. I have three new car and four used car dealers I work for. They pay once a month, without fail. Besides, I get the parts I need at a discount because I help them out."

If you would like to learn more about the various training opportunities and manuals available to help you grow your business, visit The National Locksmith's web site at [www.TheNationalLocksmith.com](http://www.TheNationalLocksmith.com). You will want to visit the online store where you can read sample pages of many of the books sold online.

OK, enough of that. Now let's assume that you do have a wide range of locksmith skills under your belt, but you still want to grow your business. How do you do it? The answer is both simple and complex. Simple because I can tell you how to do it in one word. That word is marketing. Complex because there are a million ways to market, and you have to choose what works for you. So let's look at some of the ways your fellow locksmiths have been successful in marketing their businesses.

Customers do not live in your van or under your counter. They are out on the street in their homes and businesses. Marketing is all about reaching out to the potential customer and making them aware of who you are and what you do. There are many ways of doing this, so let's take a look at a few of them now.

First there is the Yellow Pages. You contract for an ad in your local book or books, and the bill appears on your

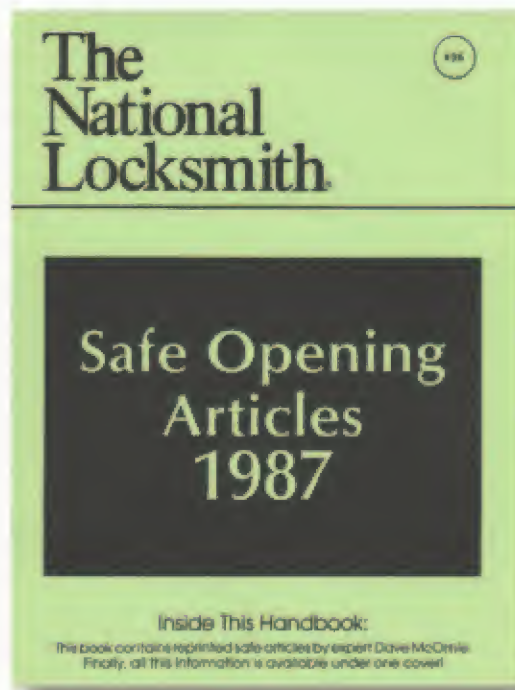
phone bill every month. Every locksmith I know has a different opinion about the Yellow Pages. I know some very successful locksmiths who have full-page ads in color. The bill might be a couple of thousand dollars a month in a metropolitan area, but they swear it is well worth what they pay. Other profitable companies I know don't do any YP advertising at all! They do just fine from word of mouth and other marketing approaches.

So what is the right tactic for you when talking about the Yellow Pages? All I can do is to tell you my own opinion. I do think it is a good idea to advertise in

the phone books serving your immediate area. However, I would definitely not purchase an ad with a monthly cost higher than what I can easily afford to pay in a low to average month. That way I am not a slave to that one bill. I'd go for the bold faced listing, and a small display ad at best.

**I** know a lot of people don't agree with me here, and that's fine. But I personally would rather put my money into more personal ways of contacting customers. So get into the YP, but don't over spend. Be prepared for the hard sell, by the way. YP salespeople work on commission, and they may pressure you

## 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

to spend more on a larger ad by pointing to all the competition. Just stick to your guns. Many customers who use the YP are just price shopping for the lowest rate anyway.

**T**he Yellow Pages is one of the most expensive marketing methods available to you. So let's look now at the other end of the scale. What is the single cheapest marketing tool ever invented for locksmiths? The answer may surprise you. Business cards. Yes, the simple business card is the one cheaper-than-dirt method guaranteed to help you build more business. But there's a catch.

The catch is you can't just print up those cards and throw them on your counter or dashboard. You've got to give them out! That sounds like stupidly simple advice, but think about it for a moment. When was the last time that you had to re-order 500 business cards because you gave all yours out? If you only have to order business cards once a decade, you are missing the boat on new business.

First, be sure that your business card will work for you. Again, this may sound dumb, but you wouldn't believe the number of locksmith cards I have seen that don't say much more than locksmith on them. Sometimes they don't even have the area code to go with the phone number.

In most parts of the country now, if you drive for one hour you may pass through three area codes. So be sure to put yours on the card. Moreover, don't leave anything to the imagination. List the services you offer such as: car, house and boat keys; safework, combination changes, locked safes opened; auto, home and business lockouts; car lock repair and keys. The fact is that locksmiths offer a zillion services that the customers don't even know about. One thing is for sure; they won't know what you don't tell them.

Make it your personal project to blast through 500 business cards a month. That's right, a month! Pretend you're selling Amway or insurance, and talk to every friend, neighbor and relative you have. Give them a few cards, and ask them to give one out to their friends. When you're out on a job, give your client a couple of cards and ask them to give them to their neighbors. When you pass a car dealer, stop in and give your card to the parts manager and used car sales manager. You don't have to take a lot

of their time, just say hi, lay a few cards on them, and let them know you can help them out.

Do you see where we're going with this? I tricked you, didn't I? It's not just the properly worded business card we're discussing here. Yes, you need the cards, 500 of them a month, but most importantly of all, I am telling you to hand them to another human being and to talk to that person for a moment. Don't be shy. If you want more business, all you have to do is ask for it. That 60 seconds of human contact with the business card as a reminder is going to make you a lot of money if you will do it.

Let George H., a locksmith, tell you in his own words that this will work for you. Here is George's story:

"I know it is sometimes difficult to ask for business. I remember when I was starting out. I went into a store to give a card to the manager, and as I tried to hand it to him, he moved away and said rather rudely, 'I already have a locksmith.' There were two other people behind the counter with him and I felt really embarrassed as I turned and started out the door.

"About half way out, something inside me made me turn and go back to the counter and I looked that rude manager right in the eye and said, 'What happens if your usual locksmith is unavailable, it could happen you know.' I laid my card on the counter and left.

"Three weeks later that manager got fired and one of those guys standing with him got to be manager and he called me. He said that my leaving that card made him remember me. That card, by the way, has paid my rent many times in the past ten years."

Here is another simple trick that I learned from a growing locksmith. This person has had to expand to a larger store twice in the last ten years, and now his biggest problem is finding locksmith employees to handle all the customers he has attracted.

This locksmith, Andy, has a number of business friends and contacts in town. He put together a little club including his friend the plumber, the Real Estate agent, the heating repair guy and the insurance salesman. None of these people compete with each other, but all are small companies with the same problems. Each of these small businesses printed up an inexpensive

envelope stuffer. They traded stuffers so that each guy had 1000 copies of all the other guy's stuffers.

Every time they mailed an invoice or a statement to their own customer, they also included this small packet of papers in the envelope. You know what? Business began to grow. Yes, the locksmith had to take the trouble of stuffing a few extra sheets into his envelopes. But meanwhile, the plumber was sending him customers, and so was the Real Estate guy, and so on. It's so easy that it almost sounds stupid, but this is an effective method to reach out for new customers. So start talking to your buddies, and make it happen.

Another manner of reaching out to new clients is direct mail. This can be a confusing method if you don't have anything fancy to actually mail the potential customer. At *The National Locksmith*, we took a look at that problem a while back, and we designed a solution.

**W**e put together a program called Security Solutions which sells for under \$100. The program is a newsletter. We give you all the artwork to print your own locksmith newsletter. You mail or give this newsletter to your clients and potential accounts. There are four issues per year and you just get them printed economically at a local quick printer. We left a place for you to put in your name and phone number, so you could have your own informative newsletter ready for customers instantly.

Security Solutions is meant for commercial accounts. Those are the most profitable kind of customers to have, so we wrote it for them. Just print as many of each issue as you like, and drop them off or mail them, one issue every three months. This establishes you as the security expert and shows the wide range of security solutions you, as a locksmith, offer your customers.

There are many ways that you can market yourself and win new customers. You can offer more skills. You can advertise. You can mail a newsletter. You can print business cards. All of that will help.

But you know what will help the most of all? Get out there and talk to people. Hand them a business card with your own five fingers and say hello. It only takes a few seconds to do that. And if you do it 500 times a month, I guarantee that you'll win customers and make more money. **TNL**

# Multi-Tracker

Master key system management for the locksmith

by BBEwards@thelockman.com

We all know that it is one of our jobs to keep track of the master key systems that we install. We just have a hard time finding a way to do the record keeping. DLA Inc. has come up with an easy approach for us to use. A computer program called Multi-Tracker for the PC and Macintosh was designed with the special needs of the locksmith in mind.

There are two options of entering the data you need to keep track of:

1. Type it in from the keyboard.
2. Import a file made by one of the DLA master keying programs.

The DLA master keying programs produce key systems based upon the SPF (Standard Progression Format) and the Multi-Tracker has entry points for all the keys produced using that format, including the incidental master keys. The labels used for the keys are based upon the SKCS (Standard Key Coding System) with the exception of the Block, Row, Vertical Group and Horizontal Group Master Keys.

Since it isn't possible for the program to know in advance which of these keys will be used within the system, they are labeled to indicate their potential position in the key system hierarchy and if you have a good knowledge of system design you should not have a problem understanding the use of each key.

As you can see in figure 1, there are many different options presented on the first screen when you run the program. There is also a pull down menu in the upper left corner, which lists these options as well as others.

Naturally the data files are empty when you start and the first thing you want to do is create a new copy of the database so you can begin your data entry.

This program is designed to allow you to keep information on all of the key systems you may produce. Each system is kept in a separate database. In order to always have an empty database to start with, the initial database supplied with the program should only be used as a template to create new system records. With that in mind, the first thing to do in creating a new system is to select the menu item "Create Clone Copy." (See figure 1).

This menu selection will present you with a standard file selection

window and you can supply the name of the new database here. The suffix name will be supplied automatically by the program.

Once you have the new database established, you can exit the original database and start the new one.

There are a couple of options you can use here. You could put the name of each different database into your Start menu. I would suggest a folder header of Key Systems or something similar - or you can just use the file manager to locate the database and double click on it to run.

After you have the new database up and running, you can import the data for a new key system. If you don't have an importable file, then you must do the data entry by hand. First you want to fill in the system details. Figure 2, shows the form available for that information. As always, when entering information by hand, you need to read each page of information after it has been entered to ensure correctness. This form also has places where you can indicate special features about different High Security key systems and special inter-changeable core features that might be involved.

Enter the overall system information, then you will need to enter all of the key combinations. I would suggest entering all of the key combinations starting with the change keys and working your way up through the lower level master keys toward the TMK. Data entry is very repetitive and it is easy to make mistakes. The best insurance against mistakes is to double check your work. One wrong combination in a master key system can have devastating effects on the access control the system should offer.

The data entry itself becomes fairly easy since most of the data entered is



1. The first thing to do in creating a new system is to "Create Clone Copy."



2. First you want to fill in the system details.







**6. You can see the pinning information for a change key. This is also a scrollable listing of all keys in the system.**

useful to him if he has experienced a loss from some area. By clicking on the 'Print Client Key Listing' button on the main menu you are presented with the choices of printing him a list of only keys with location information.

You can also get a complete listing of all keys in the database, even if they haven't been used yet. (See figure 7.) Naturally this latter listing could come in handy when he needs to know how much expansion might be available as well.



**7. You can get a complete listing of all keys in the database, even if they haven't been used yet.**

The last item on the main menu will get you to another navigation bar to allow you to select a different system to work with, saving the trouble of having to exit the program to get to the other system data. There is also a second database distributed with Multi-Tracer called Client-Tracker. It's a database for tracking the clients themselves and can be cross-referenced by name, ID number, TMK, control key, etc.

The program comes with instructions in the form of printed documentation

and on-disk, and I suggest reading them completely before attempting to use the program. If you don't you may miss some important features that could save you a lot of time and maybe even make you some money. Aside from that, we all have a little different way of thinking about our record keeping approach and this program may not use the same intuitive approach that you do.

After seeing the program and examining its features I can see where it can be useful to the locksmith in keeping track of his key system work and records. It will also provide you a method of keeping the customers better informed and a computer printout always looks more impressive than a bunch of handwritten notes. If you need to get your record keeping up-to-date, I suggest that you get on the Internet and go to [www.dlaco.com](http://www.dlaco.com) and download a demo. While there, check into their Multi-Tracer program as well. It is designed for the end user to manage a masterkey system as well as personnel key assignment records.

*For more information on DLA Security Systems, Inc. software call: (903) 233-7755, circle 309 on Rapid Reply, or e-mail: [dlasec@pipeline.com](mailto:dlasec@pipeline.com). **TNL***

# High Security Safes Volumes 1 & 2



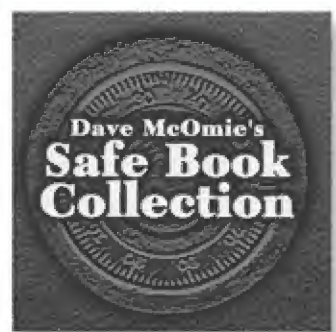


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#HSS, HSS - 2

## Dave McOmie Safe Book Collection on CD



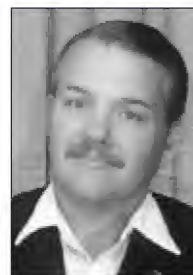
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#DMCD - 1

# BEGINNER'S CORNER

## Mul-T-Lock Products



by  
**Jim  
Langston**

**M**ul-T-Lock was founded in 1973 and manufactures a wide range of patented high security locking systems, fire resistant high security doors, and padlocks. The Mul-T-Lock high security lock concept is a "pin within a pin" tumbler lock mechanism. The drivers have a spring-loaded internal pin creating a sheer line within a sheer line. The drivers operate two part plug pins; these are comprised of external and internal pins. Both the external and internal pin sheer lines must be achieved at the same time to rotate the plug.

### **Mul-T-Lock Deadbolts**

Mul-T-Lock deadbolt locks incorporate many features such as an innovative telescopic pin tumbler mechanism that achieves security levels other locking systems can't beat. The deadbolt body is machined from solid brass and the outside collar free spins for added protection. (See *photograph 1.*)

Mul-T-Lock deadbolts also have a special 2" bolt made of saw resistant steel and is fitted with an advanced steel ball mechanism to prevent jimmying the bolt. (See *photograph 2.*) When the deadbolt is extended into the strike, the steel ball bearings project out of the bolt and locks into the strike receiver cup. The ball bearings remain lock in the strike plate until the deadbolt is drawn back by the use of the key.

The deadbolt lock is available in either 2-3/8" or 2-3/4" backsets. The unit itself is secured together with 1/4" hardened Allen bolts with ball bearings to be driven in the heads to prevent removal.

In *photograph 3*, you will see the single cylinder lock has a cover used to conceal the thru bolts and the thumb-turn is secured by an Allen screw at the bottom of the thumb-turn. The double cylinder also has a cover over the bolt designed to prevent its removal by those unaware of how to access the screws.

**1. The deadbolt body is machined from solid brass and the outside collar free spins for added protection.**



**2. A special 2" bolt made of saw resistant steel is fitted with an advanced steel ball mechanism to prevent jimmying.**

**3. A cover used to conceal the thru bolts.**





4. Each lock also comes standard with an anti fish plate that surrounds the deadlock bolt.

Each lock also comes standard with an anti fish plate that surrounds the deadlock cylinders. This prevents access to the deadbolt through the door, which would allow the bolt to be retracted without a key. (See photograph 4.)

All the lock components can be seen in photograph 5.



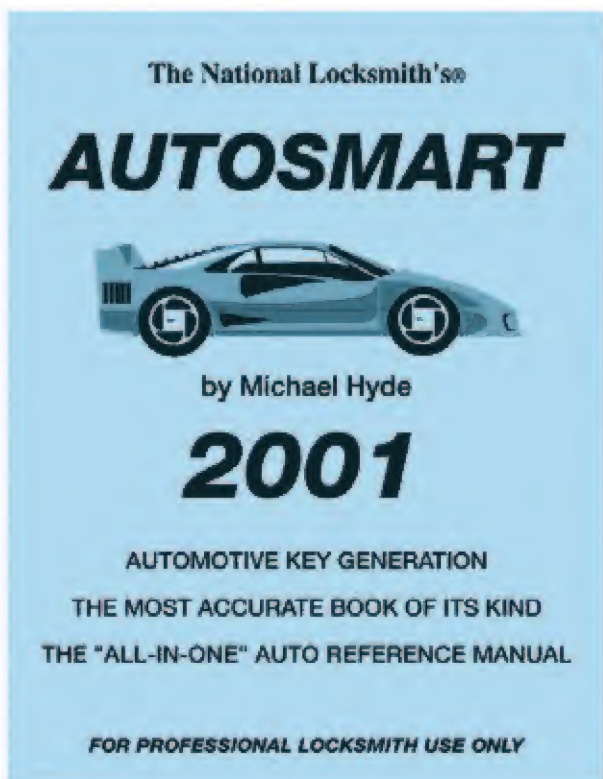
5. All the lock components can be seen.

#### Mul-T-Lock Padlocks

Next, we will briefly cover the Mul-T-Lock high security padlocks. (See photograph 6.) Mul-T-Lock offers a variety of padlocks with several different shackle guards depending on the application. Even though these padlocks provide exceptional security, they are very easy to service.



6. The Mul-T-Lock high security padlock.



## AutoSmart

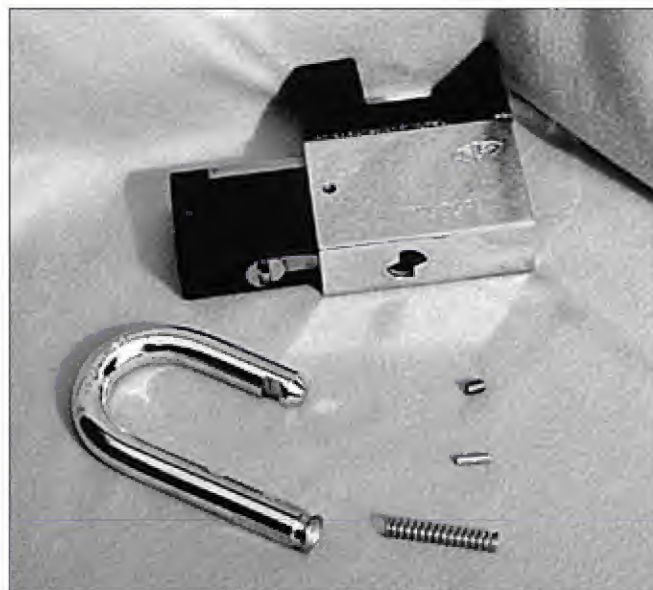
A MUST  
for every  
locksmith!



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**7. To rekey these locks, first remove the Allen screw and steel pin from the face of the lock.**



**8. Push on the side of the padlock body and the inside locking mechanism will slide out.**



**9. You can change the cam on the back of the plug to either a key retaining or a non key retaining function.**



**10. The Mul-T-Lock cam lock.**

To rekey these locks, first remove the Allen screw and steel pin from the face of the lock. (See *photograph 7.*) Once the Allen screw and pin is removed, insert a working key and turn and remove the shackle. With the shackle removed push on the side of the padlock body and the inside locking mechanism will slide out allowing access to the lock cylinder. (See *photograph 8.*)

Once the lock is apart you can change the cam on the back of the plug to make it either a key retaining or a non key retaining function. (See *photograph 9.*)

**Mul-T-Lock Cam Locks**

The last lock I will cover is the Mul-T-Lock cam lock, as shown in *photograph 10.* The Mul-T-Lock cam lock comes in a wide variety of sizes and will fit various applications. The lock comes with a special cap and screw, which fits

on the back of the tailpiece to prevent stripping it off by force.

To rekey any of these locks you will need a Mul-T-Lock rekeying kit. (See *photograph 11.*) The keying kit (pin kit) comes with a decoding card so you can decode the pins and put them back into the kit. (See *illustration A.*)

Every lock comes with a key card that has the coded cuts on it. You will need this card to make original keys or rekey a lock to an existing system.

**Mul-T-Lock Pinning Procedures**

Let me explain a little more about the pinning procedures. The "Combined Pin" is one length and acts

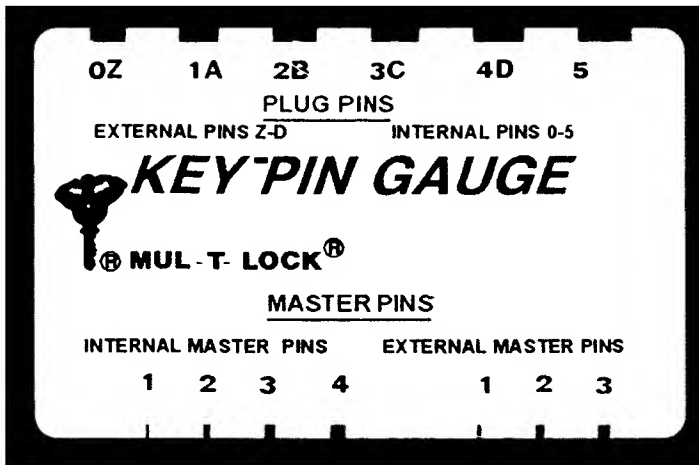


**11. You will need a Mul-T-Lock rekeying kit.**

as the top pin for both the internal and external pins. The external pin stack is loaded in the same manner as a standard pin tumbler mechanism. The difference is the internal pin stack is spring loaded by the Combined Pin. This is a specialized external top pin, which has a spring-loaded internal pin that is permanently built-in.

The external pins are concave

A. The keying kit (pin kit) comes with a decoding card.



shaped to match the contour of the cylinder body. The tops of the external plug pins are convex making a spherical shape, which matches the contour of the plug body. When the body pins and the plug pins are properly aligned they form a three dimensional shear line. This shear line enables tighter lock cylinder tolerances, which in turn improves key operation and provides "Jimmy-proof" resistance.

The external plug pins have four lengths identified by the letters A, B, C, and D. The internal pins have five lengths identified as 1, 2, 3, 4, and 5. The plug pins, both external and internal, are identified by a letter and number combination. For example, an external pin "B" can have an internal pin "2". The complete plug pin would be identified as "B2".

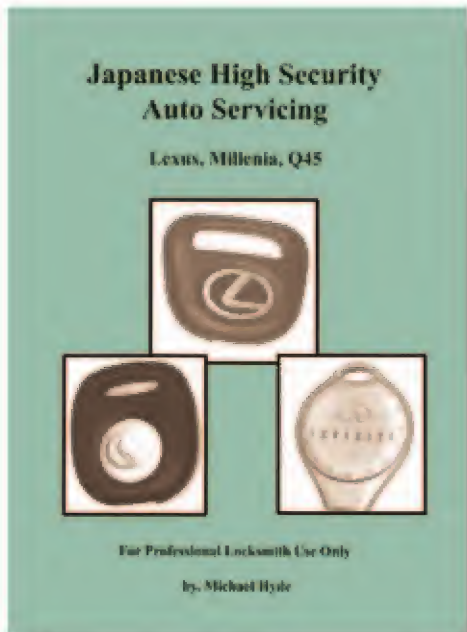
The following external and internal pin combinations are possible:

**External Plug Pins & Internal Plug Pins**

- A1 or 2
- B1, 2 or 3
- C2, 3 or 4
- D3, 4 or 5

B. The pin location chart in the pinning kit.

INTERNAL MASTER PIN 1 CP-INTDISK-1 #000045	EXTERNAL MASTER DISK 1 CP-EXTDISK-1 #0000110	SOLID MASTER DISK 1+ CP-SOLDISK-1 #0000190	FOLLOWER SLICED FOLLOWER	EXTERNAL PLUG PIN A CP-EXT-A #0000008	INTERNAL PLUG PIN 1 CP-INT-1 #0000003	BODY SPRING #2500005
INTERNAL MASTER PIN 2 CP-INTDISK-2 #0000046	EXTERNAL MASTER DISK 2 CP-EXTDISK-2 #0000111	SOLID MASTER DISK 2+ CP-SOLDISK-2 #0000191	RIGHT HAND PRE-FILED SERVICE KEY	EXTERNAL PLUG PIN B CP-EXT-B #0000009	INTERNAL PLUG PIN 2 CP-INT-2 #0000004	BODY SPRING FOR KEY #5800049
INTERNAL MASTER PIN 3 CP-INTDISK-3 #0000047	EXTERNAL MASTER DISK 3 CP-EXTDISK-3 #0000112	SOLID MASTER DISK 3+ CP-SOLDISK-3 #0000192	LEFT HAND PRE-FILED SERVICE KEY	EXTERNAL PLUG PIN C CP-EXT-C #0000010	INTERNAL PLUG PIN 3 CP-INT-3 #0000005	CIRCLIP FOR EURO PROFILE CYL. #0000123
INTERNAL MASTER PIN 4 CP-INTDISK-4 #0000048	COMBINED BODY PIN CP-BODY-PIN #0000153	DRILLED PLUG CAP FOR BURO PROFILE CYL. #0000110	UNION SPRING CATCH	EXTERNAL PLUG PIN D CP-EXT-D #0000011	INTERNAL PLUG PIN 4 CP-INT-4 #0000006	INTERNAL PLUG PIN 5 CP-INT-5 #0000007



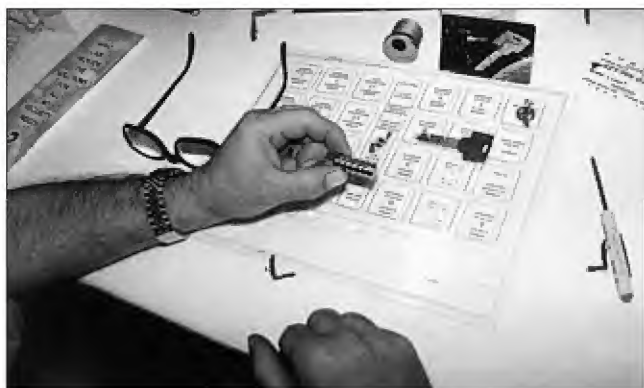
# Japanese High Security

Some of the most profitable cars are also the trickiest to work on.

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#JAP - 1



**12. Insert all the pins in the order on the coded card.**

**13. Mul-T-Lock has a new Interactive Retroactive key cutting machine.**



The "A" external pin can have a "1" or "2" internal pin. The "B" external pin can have a "1", "2", or "3" internal pin. The "C" external pin can have a "2", "3", or "4" internal pin, and finally the "D" external pin can have a "3", "4", or "5" internal pin. (See illustration B.)

You will need the code card for the lock you are re-keying. The card contains the codes for the external and internal pin combinations. Insert all the pins in the order on the coded card and you are finished. It is so simple to re-key; it's almost too easy. (See photograph 12.)

**Mul-T-Lock Key Cutting Machine**

For key origination Mul-T-Lock has a new Interactive Retroactive key cutting machine. (See photograph 13.) The new machine is a lighter and more compact key cutting machine than the old. This super sleek machine really stands out with its modern color and design. Good looks aside, this machine has many technological improvements.

Milling exterior dimples on the key

blank is achieved by means of an eccentric lever and round knob. By sliding the operating arm from side to side and by inserting the adjuster probe's point into each one of the probing position till it stops, the key is cut. (See photograph 14.)

The assembly of depth code tumblers let you cut a key to a desired combination. The left code tumbler disks (letters A, B, C, D) control the depth of the exterior dimples. The right code tumbler disk (numbers 1,2,3,4,5) control the depth of interior dimples. The tumbler disk has to be arranged to the desired combination. The system for side pins cut enable the selective dimple cutting according to the combination of the cylinder.

To cut a key, insert a key blank into the holder on the operating arm and tighten into place. (See photograph 15.) Then arrange the code for the desired combination. After cutting the key check identity between the two sides of the key and correlation of a newly cut key to the cylinder. (See photograph 16.)

The new Mul-T-Lock key cutting machine is fast, simple and easy to use.

*Mul-T-Lock products are known for quality, design excellence and security. For more information circle 308 on Rapid Reply or contact:*

*Mul-T-Lock USA Inc.  
 300-1 Route 17 South  
 Lodi, NJ 07944  
 Phone: 800-562-3511 or  
 (201) 778-3222  
 Fax: (201) 778-4007  
 E-mail: MTLUSA@AOL.COM  
 Web: www.Mul-T-Lock.CO.IL*

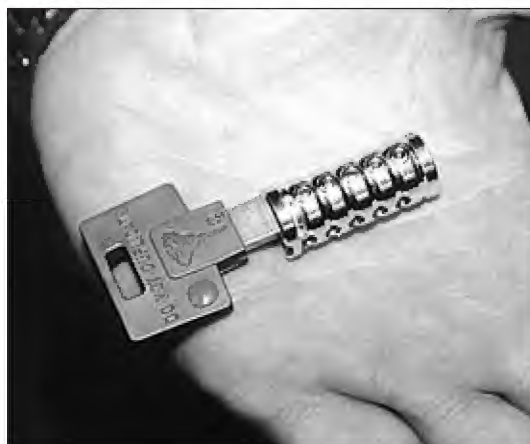
If there are any topics of interest you would like to see covered in Beginners Corner, contact *The National Locksmith* at: (630) 837-2044 or drop us an e-mail at natlock@aol.com. 



**14. Milling exterior dimples on the key blank is achieved by means of an eccentric lever and round knob.**



**15. To cut a key, insert a key blank into the holder on the operating arm and tighten into place**



**16. A newly cut key is checked in the plug.**

# 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



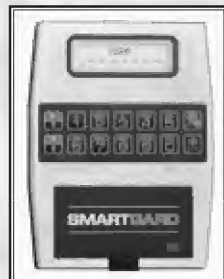
**3rd Prize**

Curtis 2100 Duplicator



**4th Prize**

SDC Magnetic Lock, Keypad  
and Exit Switch



**5th Prize**

LaGard "Smart  
Guard"®



**6th Prize**

\$500 in All Lock Products



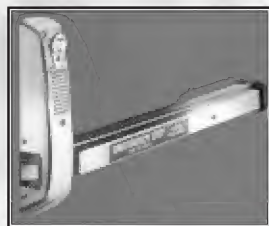
**7th Prize**

\$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



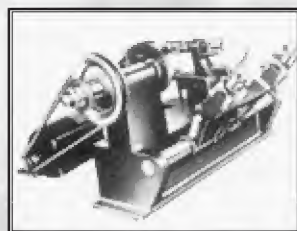
**11th Prize**

Detex ECL-8010W  
Wetlock®



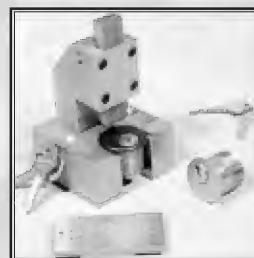
**12th Prize**

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: Natlock@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



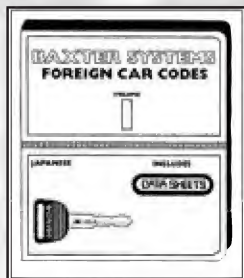
#### 17th Prize

Slide Lock's  
Master "Z" Tool Set



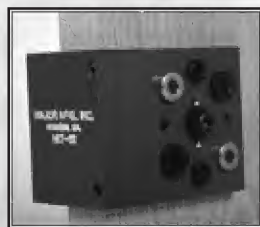
#### 18th Prize

ESP Products Sampler



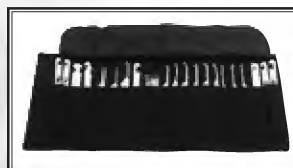
#### 19th Prize

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



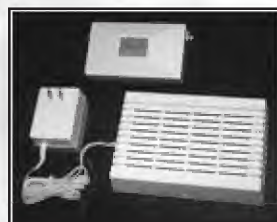
#### 22nd Prize

Sieveking Products  
Squeeze Play



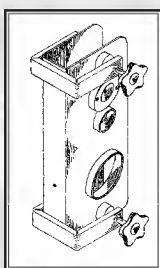
#### 23rd Prize

ABUS Padlock's Marine  
Padlock Display



#### 24th Prize

Rodan's AV 100 Heavy  
Duty Door Annunciator



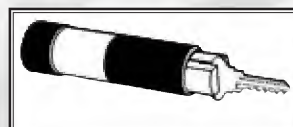
#### 25th Prize

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





**BWD KWIKIT WINNER:  
 Audi Ignition Trick**

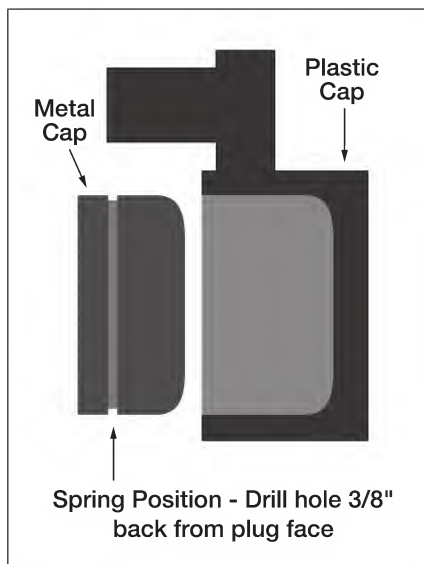
This is a tip on re-keying an Audi ignition plug where keys are missing. Dismantling this lock can be a very puzzling job when you are not sure how to do it. The lock I am referring to is on the latest 1998 Audi range of vehicles (Silca blank number HU66AT5).

First, you have to remove the face cap. There is a black plastic cap, which is machine pressed over a steel cap. The construction of the cap is the same as the present BMW ignition plugs, where there is a ring retainer under the cap. As the cap is pressed on, the ring retainer jumps into place to hold the cap on and the procedure is not reversible.

On the similar BMW caps I would drill a small 1/8" hole in the outer casing to depress the ring retainer to release the cap. This job is difficult because the cap is hardened and the drill bit tends to slip, even when using a tungsten drill bit.

On the newer style of Audi ignition plugs, there is an easier way to service it. What you need is a piece of tubing just large enough to fit the ignition lock in. (See illustration 1.) I use a piece of Hoover Vacuum pipe about 3" to 4" long. The diameter is perfect.

Insert the ignition plug into the pipe and stand the pipe on end. Put a large implement like a big screwdriver down the keyhole (one that is big enough so it fits snug) and drive the ignition plug down into the tube. This allows



**Illustration 1.**

**A Few Words From Jake...**

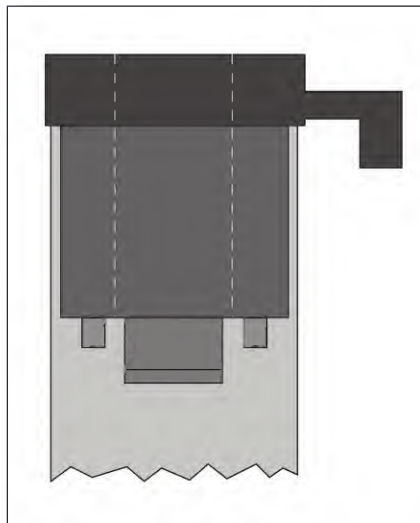
First off, like Mark Twain, the rumors of my demise are greatly exaggerated!

Recently I had to go into the hospital for a triple heart bypass procedure. It was quite an experience, but now I'm out of the hospital and I feel better than I have in a long, long time. Besides that, I had to get home in time to get this column into the magazine to meet the July deadline!

The main thing I want to say, however, is: "Thanks!" Thank You to my readers, tipsters, prize contributors, suppliers, friends and acquaintances that sent cards, E-mail, flowers, get well wishes, jokes and condolences. I appreciated each and every one of them.



**by Jake  
 Jakubowski**



**Illustration 2.**

the black outer cap to separate from the inner steel cap. You can then drill a hole 3/8" back from the plug face which is where the retaining spring is located. (See illustration 2.)

To remove the cap, push the ring retaining spring in and at the same time, pull the metal cap off. Both the black cap and metal cap can be reused.

After removing the cap, if you have the working keys to the lock, it's just a matter of separating the inner plug from the outer body and re-keying the lock. If you don't have a working key, then you have to shim pick the lock.

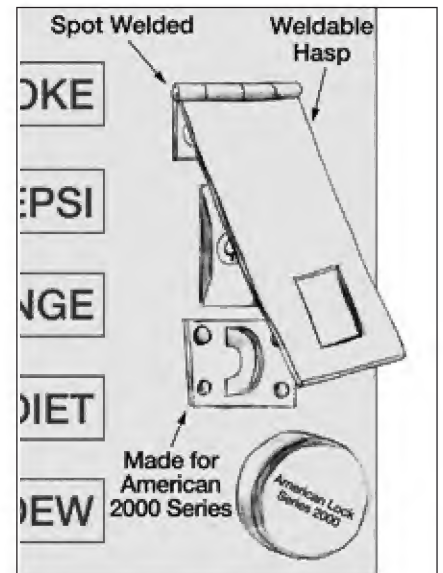
The ignition cap on this lock also contains the antenna for the transponder key. Therefore you need to be fairly careful with the cap removal. This method might also be applicable for the Porsche Boxer, which, when I looked at it, seemed to have the same type of lock.

*G. Watts  
 England*



**WEDGEKO KEY  
 EXTRACTOR KIT WINNER:  
 Security Cover Up**

I had a soda machine at the self-service laundry that was vandalized a number of times. It appeared that the thief was using a dent puller on the "T" handle to overcome the ACE lock. The owner had tried several "covers" for the handles, but found that most posed little challenge to the bad guys.



**Illustration 3.**

After inspecting and measuring the machine, I was able to find a good heavy gauge weldable hasp that I attached to the machine with carriage bolts. (See illustration 3.)

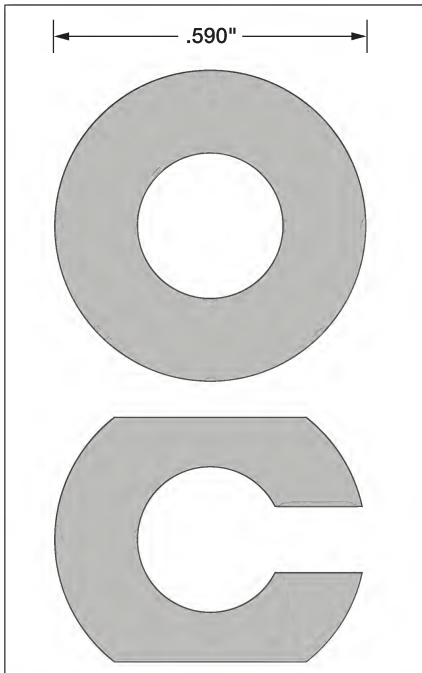
Since installing the heavy-duty hasp and an American 2000 series padlock, there hasn't been another burglar attempt on the machine.

*Gary Tsao  
 California*



**STRATTEC WINNER:  
 Schlage Function  
 Conversion**

I use a specially modified washer to convert a Schlage A53PD, entry lock to an A80PD storeroom function.



**Illustration 2.**

As shown in the illustration, take a standard 3/4" washer at least .060 thick (I find .080 to be the best) and cut a 1/8" slot through one side of the washer. Then file down two sides of the washer (parallel to the slot) so that it leaves about .590 of metal between the two flats. (See illustration 4.)

To use simply remove the inside knob from the lockset, push the lock button in and rotate it to the locked position. Insert the specially prepared washer below the plunger, effectively taking up the space needed to release the button. The blocking spacer can be removed at any time to convert the lockset back to an entry function if desired.

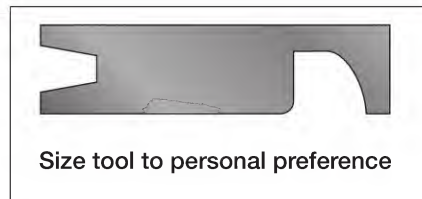
*Rick Miller  
 Missouri*



**HPC AIR WEDGE  
 WINNER:  
 Springlatch Defeat  
 Tool**

Here's how to make a couple of simple latch defeat tools, one from a plastic milk jug and one from a plastic soda bottle.

As shown in illustration 5, cut about a 1-1/2" to 2" wide strip of plastic and "V" notch one end and cut a modified hook on the other. To use the tool, insert the



**Illustration 5.**

tool between the door and frame and rock, while pushing with the "V" shaped end. If that end doesn't work, turn the tool around and use the hooked end. If you want flexibility construct your tool from a plastic milk jug. If you need a stiffer probe use one made from the soda bottle.

This tool will work equally as well on night latches, storeroom/vestibule function, MS locks and key-in-knob locksets as long as the lock does not have an anti-friction device or a latch with deadlocking capabilities. I find both tools to be far superior to credit cards.

*Jack Tom  
 New Jersey*



**SARGENT &  
 GREENLEAF WINNER:  
 Secure Maison  
 Keying**

As we all know, a maison key system is a keying system in which

# 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

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

one or more cylinders are operated by every key in the system; e.g., main entrances of an apartment building operated by all individual suite keys or the building. As a result, maison keying can often result in the outer or main door(s) having virtually no security at all.

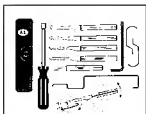
There have been many attempts to solve this problem, but here's an approach I haven't seen anyone else mention.

If the system in question is on a Schlage "C" keyway, use a Primus cylinder for the main entrance door(s) keyed in the maison fashion — mastered to death. As a result of using Primus cylinders maison keyed only on the exterior entrance doors, the integrity of the security falls on the Primus sidebar rather than solely on a single pin stack.

The tenants are free to get standard keys for their own apartments to share with friends living in the same complex, but they have to get a Primus key to open the front door, and they have to get it from you.

In this setup, the greatest degree of key control is on the outer doors. That's the exact opposite of the usual situation with maison keying.

*Joe Kesselman  
New York*



**A-1 SECURITY PRODUCTS WINNER:  
Pak-A-Punch Modification**

I am developing problems with my hands that necessitate modifying some of the tools I work with that may be the source of my aches and pains, such as clipping keys with my A-1 Pak-A-Punch.

The first modification involves the T-handle used to tighten the key in the vice. I used a pin punch to knock the cap head Allen screws out of the plastic 'T'. I then ground a slot in the cap head to accept a key blank head. I use a X243 Nissan head. I braze the



**Illustration 6.**

blank head to the Allen screw with silver phosphorous rod. The new handle makes tightening the blanks in the vice much easier. (See illustration 6.)

The second modification involves the small rubber bumper at the base of the handle that cushions the handles when the punch snaps through the key blade. This rubber bumper keeps the handles from banging together with a jarring "crack!" This bumper wears off in short order.

The door silencers that come with Simplex locks are self-adhesive oval bumpers. Shape one until it is half its original thickness. Place it at or near the worn off bumper and the cushion in the clip is restored.

The handles are a little too narrow for me to grip comfortably so to cushion the back handle and build it up I use some foam packaging from a Lori deadbolt lock packaging. To keep the foam cushion in place, I cut a piece of heat shrink tubing and slide it over the cushion and shrink it with a small butane portable torch or an appropriate heat source.

Because I have several Pak-A-Punches set up for individual systems, I seldom change the punch. I replaced the wheel screw with an oval head Allen screw. (1/4" x 20 x 3/4") There is less to catch the punch on now and the stress is greatly reduced.

Another trick to ease the wear and tear on the hands is to use a good pair of weightlifting gloves with the fingers cut out and padding in the palm. These gloves can save skin loss inside door panels as well.

The Pak-A-Punch is a fine tool and much more durable than my fragile hands. I doubt that I am the only locksmith that struggles to clip deep cuts in most keys without some pain. These tricks work well for me and I hope they might help fellow locksmiths.

*Leo Koulogianes  
Tennessee*



**ILCO KEY BLANKS (100) WINNER:  
Code Conversions**

A previous tip that was sent in by Mr. George Steiner concerning assumptions on HON codes with "E" or "R" suffixes is only partially correct. The ESP wafer lock codes run from 101-125 inclusive. Only MA101-MA150 is the same. Higher numbers in the MA series, which only goes to 200, are different.

MM101-MM225 is identical to 101R-225R and 101E-225E in its entirety, and is the proper conversion series for the application. The conversion can also be used for HON101-HON225.

Incidentally, the "R" suffix designates "One Key" interchangeable core locks that are standard on most all HON products manufactured after February 3, 1997. These locks have a spring-loaded retainer in the sixth position, allowing the plugs to be easily removed for service or replacement.

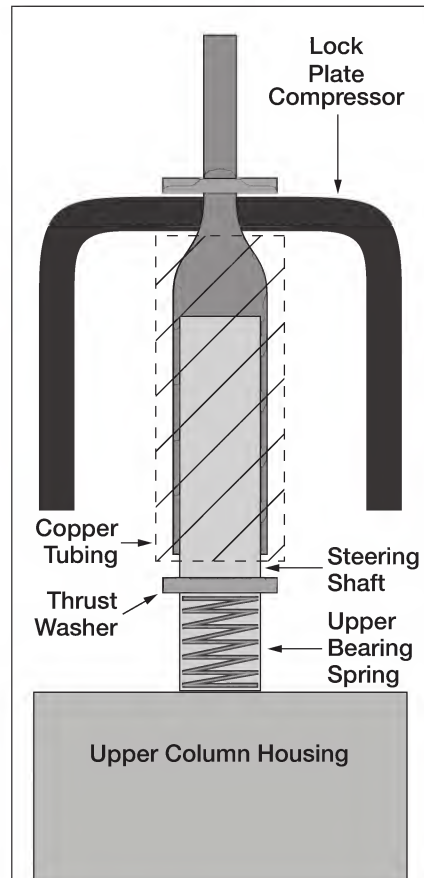
*Peter P. Shifferli  
New York*



**KEDEX WINNER:  
Alternative Wheel Removal**

I am a locksmith for a repossession agency and in the course of a month, see a lot of automotive key work. Recently, while working on a 1990 Oldsmobile Cutlass Supreme, with a square column (non-tilt), I realized that I misplaced my Stramer Ring Removal tool. Having begun the job I decided to do my best without it.

Prying the retaining ring free without the tool proved relatively easy, however reinstalling it proved to be a challenge! The shaft had dropped somewhat and I



**Illustration 7.**

found it very difficult to compress the spring and thrust washer and pull upwards on the shaft simultaneously.

I solved this problem by cutting a piece of 3/4" copper water pipe 3-1/2" long (length may vary depending on your lock compressor size) and placing the pipe above the retainer ring and below my lock plate compressor. (See illustration 7.) This pipe fits snugly over the shaft of my compressor yet was the perfect size to push the retainer ring down and seat it in one easy motion. Simply tighten the nut on your compressor, the ring will click in and you're done!

Kurt Schwebe  
Wisconsin



TECH-TRAIN TRAINING  
VIDEO WINNER:  
**Low Cost Key  
Restriction**

I received a call from the pastor of the church that I attend that wanted to know if I could install inexpensive deadbolts and knoblocks with restricted keyways.

I sat down that night thumbing through my product catalogs, but everything was out of their price range. After some serious thought, I purchased some Grade 3 deadbolts and knoblocks with KW1 keyways.

I then took the keys and cut the top and bottom portion of the bow back about 1/8". The tip of the key then needed to be notched on the bottom slightly to enable it to fully insert. (See illustration 8.)

When I finished modifying the keys, I went to the local hardware store to have the key duplicated and see if my idea worked. Sure enough, it did. They duplicated the key, but because of the modification to the blank, the pin cuts would not line up and the key would not operate the lock.



Illustration 8.

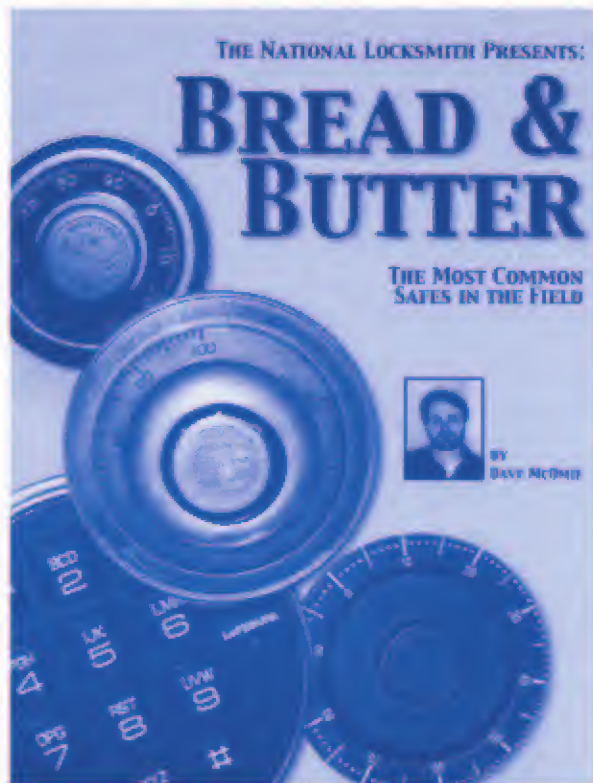
As a result, I installed four deadbolts and three knoblocks with my restricted key blanks for about \$120.00. The church stayed well within their budget and got the restricted keyways they wanted.

Tom Johnston  
Kentucky

Editor's Note: Tom, thanks for your tip. The method you described here will work and I realize that your motivation was to help out your home church. However, this

modification is not a restricted key system in that the keys can be duplicated if the duplicator has the knowledge to do so. I feel that shaving blanks or modifying keys to make them more difficult to duplicate is not the way to go. Especially when you take into consideration that most distributors offer RX keyways at very reasonable prices. However I do understand that each of us has to respond to a given situation in the context of our knowledge, ability and the financial restrictions imposed by the customer.

# Bread & Butter

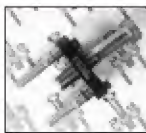


Now here is one amazing value!

[CLICK HERE TO LEARN MORE](#)



#BB - 01



**SIEVEKING PRODUCTS  
GM E-Z WHEEL  
PULLER WINNER:  
Voyager Key  
Removal**

A customer brought over a 1991 Plymouth Caravan with the key stuck in the ignition. I attempted shimmying, tugging, pulling, and pushing, with no success. I even considered pulling the ignition for disassembly to remove the key.

The customer then said, "I had this thing in the transmission shop yesterday; could that have anything to do with this?"

I lifted the column mounted shift lever up, which moved about 1/4". At that point the switch turned back about five degrees, and the key slid right out!

The next time I encounter a similar problem, the first thing I'm going to do is check the shifter for up and down play.

*Matt Eggleton, CRL  
North Carolina*



MAJOR  
MANUFACTURING  
PRODUCTS  
WINNER:

**Helpful Homemade Templates**

I frequently have to install Simplex locks over previous key-in-knob preps or Schlage L-series locks over old K preps or Russwin preps. To make the retrofit easier I take the paper installation template and make a new one on a piece of 1/4" plywood (or even better 3/16" aluminum). Make sure the edges are parallel and the piece is square. Size is not critical.

Lay out all the centerlines all the way across the piece from top to bottom, and then drill all the correct size holes in it. Make sure you include all the holes for all the options!

Now just hold it onto the door and reference whatever holes are already in the door and drill as necessary.

I also find it helpful to make aluminum templates for the mortise body locks that I install, particularly those that may have slightly different configurations from the originals.

These templates carry well in toolboxes, can be flipped over for reverse doors, and have enough room left on them to write notes about installation information. I like the aluminum templates because I can write temporary notes on the template itself, then erase or wash them off later.

*Tad Laird  
UCSF Lockshop*



**SLIDE LOCK'S "Z" TOOL  
OPENING SET WINNER:  
Assume Nothing**

I was on a job where the original installer had apparently ran out of OEM Schlage "F" latches and substituted a latch that, although mechanically compatible with Schlage, when the door was closed the deadlatching mechanism would slip in behind the strike.

The problem was easily solved by installing the proper latch or by relocating the strike plate. However, the real tip here is to assume nothing. The components you ordered might be different than the ones you receive.

It all comes down to the fact that you need to check everything and not assume anything. Including all aspects of operation before you walk away from the door.

*Joe Kesselman  
New York*



**1995  
THE SIEVEKING AUTO  
KEY GUIDE WINNER:  
Authorization Forms**

The following is the wording I use on my authorization forms before I do any work:

"I hereby certify that I have the authority to order the lock(s), key(s) or locksmith work designated above. Further I agree to absolve the locksmith and company he represents from any and all claims which may arise from the performance of such work and/or not to hold that person responsible for any reason whatsoever. I further agree to bear the responsibility to ensure that payment is made for all charges for such work. I also agree to pay a billing fee of \$15.00, along with the interest rate of 1.5% (18% per annum) every 30 days that the net due is late. And to pay for any lost time along with any expense and fees incurred in the course of collection of this invoice. A fee of \$25.00 and bank fees will be charged for all returned checks."

I have every customer sign weather it is a cash, check or charge sale.

*Bob Wyman  
New Hampshire*

Editor's Note: Bob, if it works for you, then it's a great idea. However, I understand that signing authorizations like the above, can be considered as a consent or contract being obtained under duress, since the folks have called you as the result of an emergency. If that is the case, then authorizations of that sort have been known to be nullified by the courts. Yet, each of us has to take steps to protect our interests in the most compelling ways that we can.



**JET KEY BLANKS  
WINNER:  
Easy Reloading  
Procedure**

I am always looking for a better way to reload lock cylinders, especially since I find it more difficult to see nowadays.

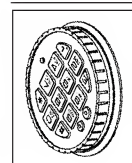
Whenever I need to reload the spring and top pin - or driver - in a cylinder without removing the spring cover cap, I simply reload half the cylinder at a time.

With a 100-watt light above my head and a swivel vice, I load a spring and driver in the #3 chamber first. I then push the follower up to the #2 chamber and repeat the process with the #1 chamber loaded last.

Now I take the cylinder out of the vise and reverse it, slide the follower up to the #4 chamber and do #4, #5 and #6. In other words, I simply reload one half of the cylinder at a time. It's much easier that loading from the end of the cylinder and doing all six chambers in a row.

*Bob Davison  
South Dakota*

Editors Note: Bob, a Mini Mag Silhouette flash light makes a great lighted follower that will take a lot of aggravation out of re-pinning cylinders for those of us that are becoming visually challenged!



**LA GARD WINNER:  
Loose Dial Lockout**

A customer said he could not dial open his round head Major safe. When I checked the unit out, it appeared that the dial would move up and down further than it should. I put the tip of a screwdriver under the dial, pried up lightly and dialed the combination. It opened right up.

I repaired the unit by tightening the dial ring. Loose dial rings are a common cause of lockouts.

*Jimmy Joyner  
North Carolina*



**HIGH TECH TOOLS  
WINNER:  
Paddle Handle Bypass**

I received a call from a store manager that had locked himself out. The door was a double aluminum stile door with an Adams Rite self-latching lock and paddle handle.

Although the fit was very tight, I was able to insert an "L" shaped tool, get the leg behind the paddle and pull the paddle in. While I held the pressure on the paddle, the manager pushed the door open!

*Jess Carver  
West Virginia*

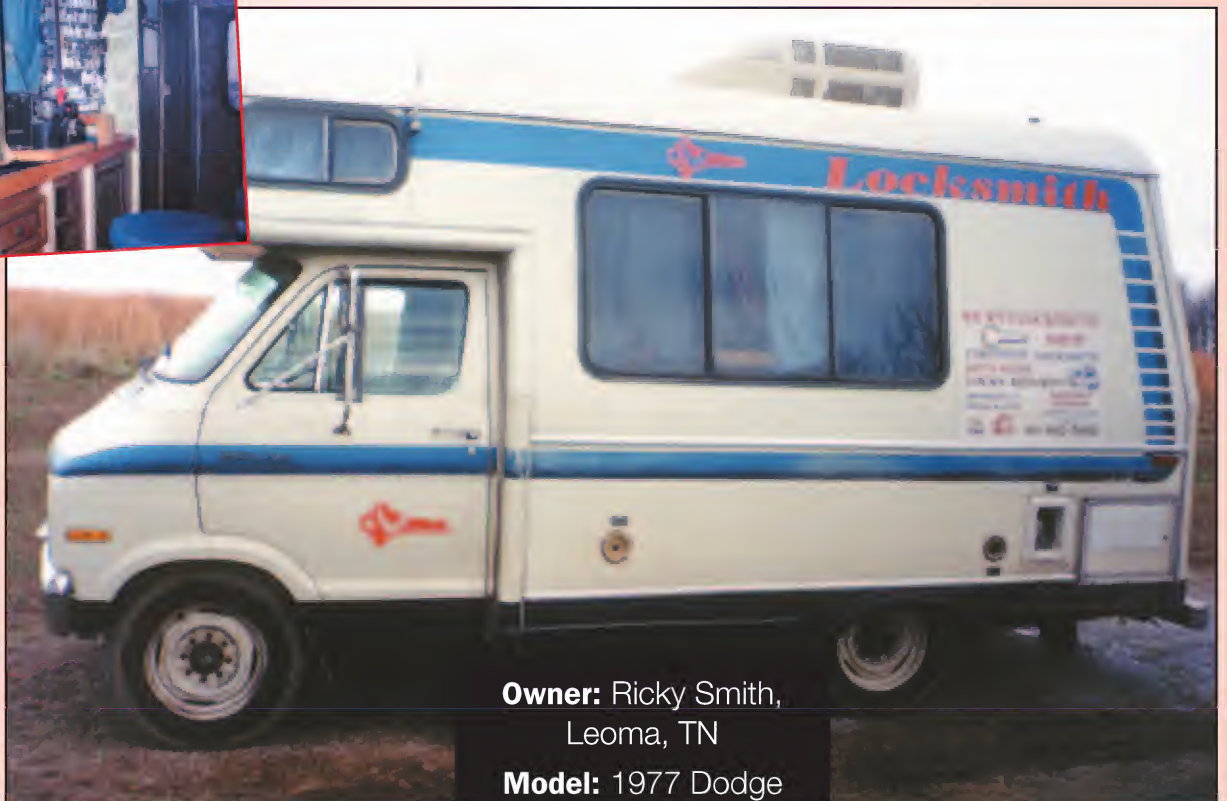
# Road Rally

A showcase of locksmith service vehicles.

If you think your vehicle has what it takes to be featured here, send photographs and descriptions to:  
The National Locksmith, Road Rally, 1533 Burgundy Parkway, Streamwood, Illinois 60107-1861.



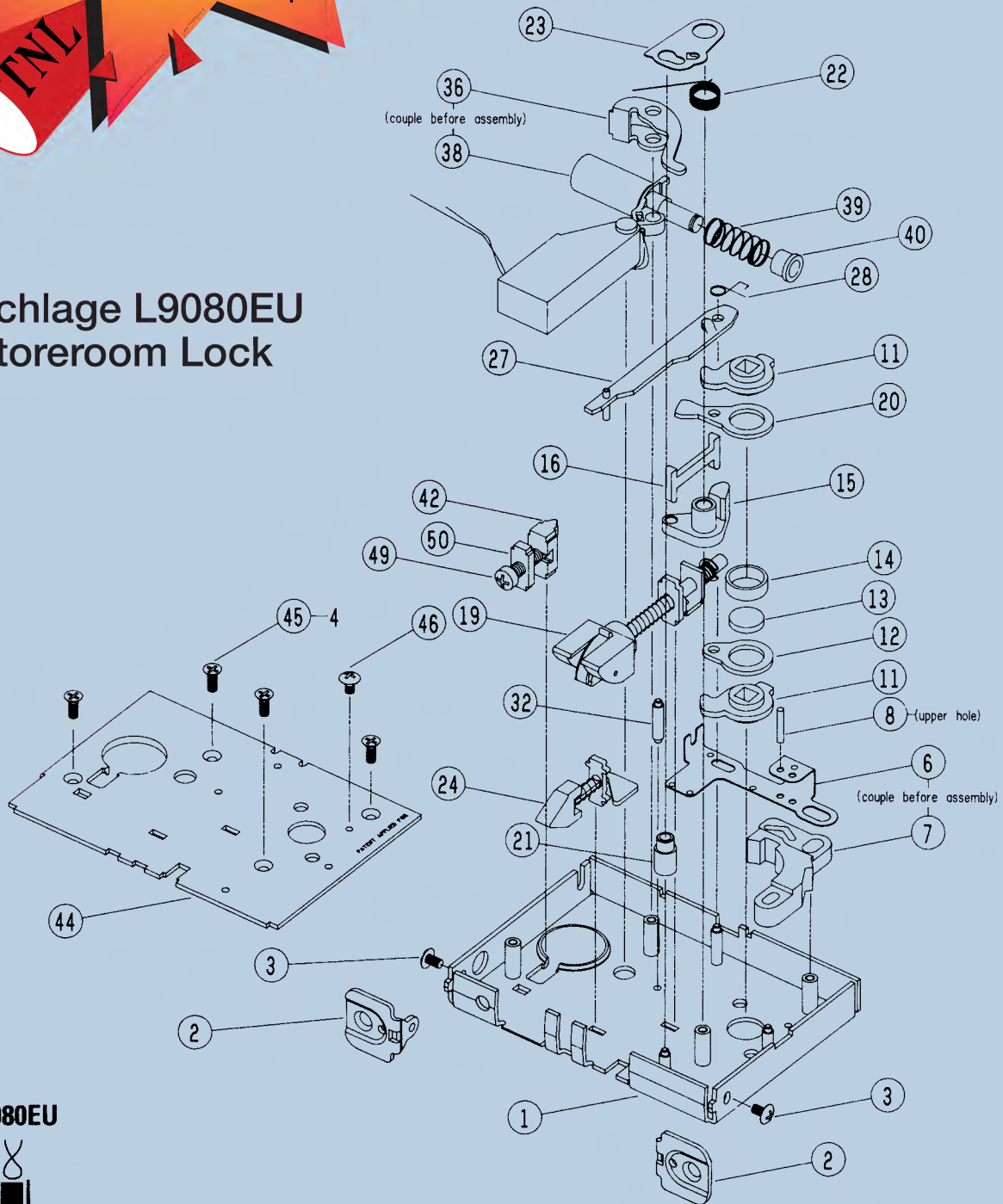
**Owner:** Manny Montesino,  
Winter Haven, FL  
**Model:** 1986 Chevy 20 Van



**Owner:** Ricky Smith,  
Leoma, TN  
**Model:** 1977 Dodge  
Motor Home

# EXPLODED VIEW

## Schlage L9080EU Storeroom Lock



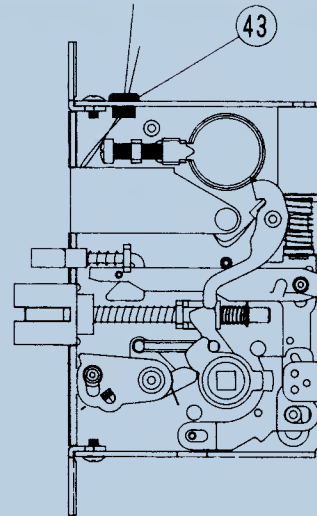
L9080EU



### STOREROOM LOCK

Electrically unlocked. Outside lever or knob unlocked by 24V AC or DC. Latchbolt retracted by key outside or by lever or knob inside. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever or knob always free for immediate exit.

## Schlage L9080EU Storeroom Lock



**SYM. NUMBER DESCRIPTION**

- ① L283-130 LOCK CASE
- ② L583-006 FACEPLATE TAB 1/2 (2)
- L583-007 FACEPLATE TAB 1/16 (2)
- ③ L583-046 FACEPLATE TAB SCREWS (2)
- ④ L583-048 LOCKING LINK
- ⑤ L583-049 ENTRANCE LINK
- ⑥ L583-065 ELECTRIFIED LINK
- ⑦ L583-045 LOCKING CATCH
- ⑧ L583-050 LINK PIN
- ⑨ L583-056 CATCH PIN
- ⑩ L583-047 CATCH SPRING
- ⑪ L583-019 RETRACTOR HUB (2)
- ⑫ L583-022 RETRACTOR ROCKER
- ⑬ L583-023 BLOCKING PLATE
- ⑭ L583-020 RETRACTOR HUB SPACER
- ⑮ L583-025 RETRACTOR CRANK
- ⑯ L583-024 RETRACTOR LINK
- ⑰ L583-057 SPINDLE ANCHOR
- ⑱ L283-063 DUMMY SPINDLE ANCHOR
- ⑲ L283-002 LATCHBOLT ASSEMBLY
- ⑳ L583-021 RETRACTOR LEVER
- ㉑ L583-027 FIRE DOOR FUSE
- ㉒ L583-026 HUB SPRING
- ㉓ L583-028 FIRE DOOR CATCH
- ㉔ L283-006 AUXILIARY LATCHBOLT ASSEMBLY
- ㉕ L583-015 LATCHBOLT GUIDE

**SYM. NUMBER DESCRIPTION**

- ㉖ L583-038 AUXILIARY BAR GUIDE
- ㉗ L283-007 AUXILIARY STOP
- ㉘ L283-044 STOP SPRING
- ㉙ L283-003 DEADBOLT
- ㉚ L283-004 ENTRANCE DEADBOLT
- ㉛ L583-052 TRANSFER LIFTER
- ㉜ L583-004 STANDOFF POST
- ㉝ L583-029 TURN HUB
- ㉞ L583-030 ENTRANCE HUB
- ㉟ L583-031 CAM FOLLOWER
- ㊱ L583-051 TRANSFER LEVER
- ㊲ L583-035 TURN HUB SPRING
- ㊳ L283-053 SOLENOID AND DRIVER ASSEMBLY
- ㊴ L583-064 SOLENOID SPRING
- ㊵ L583-063 SPRING RETAINER
- ㊶ L583-053 SIMULTANEOUS RETRACTOR
- ㊷ L583-480 CYLINDER RETAINER
- ㊸ L510-842 ELECTRIFIED LOCK BUSHING
- ㊹ L583-484 LOCK CASE COVER
- ㊺ L583-454 CASE COVER SCREWS (4)
- ㊻ L583-485 LOCK HANDING SCREW
- ㊼ L283-075 DEADBOLT 65, 66, 73
- ㊽ L583-058 RESTORING/SIMULTANEOUS RETRACTOR
- ㊾ L583-481 SCREW, CYLINDER
- ㊿ L583-482 SCREW PLATE





disappear to  
the right of the hole. The  
safe is unlocked.

The first thought of most safe technicians when faced with the drilling of a safe is: "What is the handing of the lock." Is the lock bolt facing left, up, down or possibly to the right? You know what? It really doesn't matter! If you can drill a hole to view the edge of the wheel pack and can align the wheel gates you can open the safe. If you have misjudged the handing of the lock and there is no fence in your viewing hole, there is no need to drill a second hole, just transfer!

You can make your own transferring ring, but LeRoy Edenburn Enterprises produces a great kit complete with various size magnetic rings and pointers. An illustration of a clear plastic transfer ring that I made over ten years ago can be seen in *illustration A*. It has magnetic tape on the back to hold the ring in position on the safe door. I'll use this ring to illustrate my method of transferring.

As you can see, the ring is divided into one hundred segments, just as a safe dial. Zero is the reference to the center of the viewing hole. There is a spindle and a viewing hole cut through the plastic disc. The disc is place over the spindle and positioned with the viewing hole over the drilled

hole in the safe door. A pointer is attached to the spindle of the combination lock.

With the transfer ring securely in place, turn the spindle (pointer) to the left until the top wheel gate is centered in the viewing hole. Make note of the pointer reading. In *illustration A*, the number is 60. Align the remaining wheel gates in the same manner. Let us say the combination found is 4 turns left to 60, 3 turns right to 80 and 2 turns left to 30. Test the combination by running the pointer to the found numbers. If the wheel gates do not align perfectly in the viewing hole, adjust the pointer to the correct number.

A critical piece of information to remember is: Every time the pointer is turned left four times to 60, the first wheel gate aligns to the viewing hole or the zero reference line. Therefore, wherever the zero reference line is moved, the gate(s) will follow.

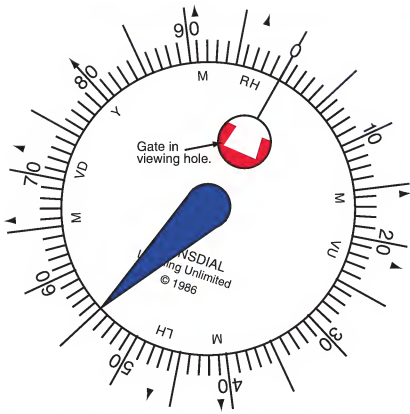
The next step to open the safe is to move the zero reference line to the drop-in location of the lock — the physical location within the lock where the fence enters the gates of the wheel pack. In *illustration B*, the anticipated drop-in location is at nine o'clock or 75. An index line is drawn on the safe door. The transfer ring has been



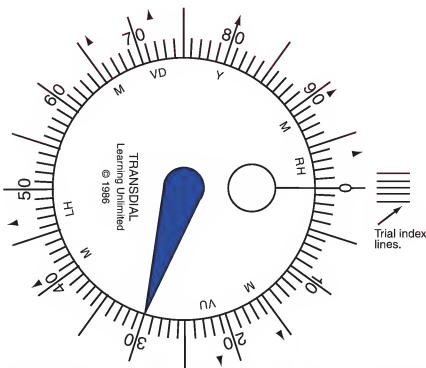
by  
**Carl Cloud**

**T**ransferring seems to be the most difficult operation to comprehend for the apprentice safe tech - and a few old timers as well. The majority of those who are successful in transferring use the old 'add or subtract' numbers method. I get confused with their explanation and find myself reaching for a calculator in an attempt to understand the strategy. Since math was not a subject that I excelled in during my schooling, I devised a much simpler method of opening a safe by transferring. Try it, I think you will like it!

The ideal method of drilling a safe lock is to remove the dial and ring and drill straight into the door. The prime target for the modern safe lock is the fence or drop-in location. For a right hand lock this measurement would be 7/8-inch from the dial center at ninety-seven on the dial. Though this drilled hole you can visually align the wheel gates under the fence by rotating the spindle. While making a final turn you can view the fence lower and



**A. Here is an illustration of a clear plastic transfer ring I made over ten years ago.**



**B. The transfer ring has been rotated so that the zero reference line is placed at the drawn line at 25.**

rotated so that the zero reference line is placed at the drawn line at 75. Remember, wherever the zero reference goes, so go the wheel gates.

Run the found combination of 60, 80, 30 and rotate the spindle right to engage the nose of the lever into the drive cam gate and open the lock. Because of various angles of viewing the wheel gates, your transfer may be off by a number or two. If the lock doesn't open, draw a new line above or below until the correct location is found.

If you don't have a clue as to where the drop-in location of the lock is, here is list of the most popular locations.

97 - S&G, LaGard, Ilco, Diebold, Federal

91 - Mosler 302

80 - Yale

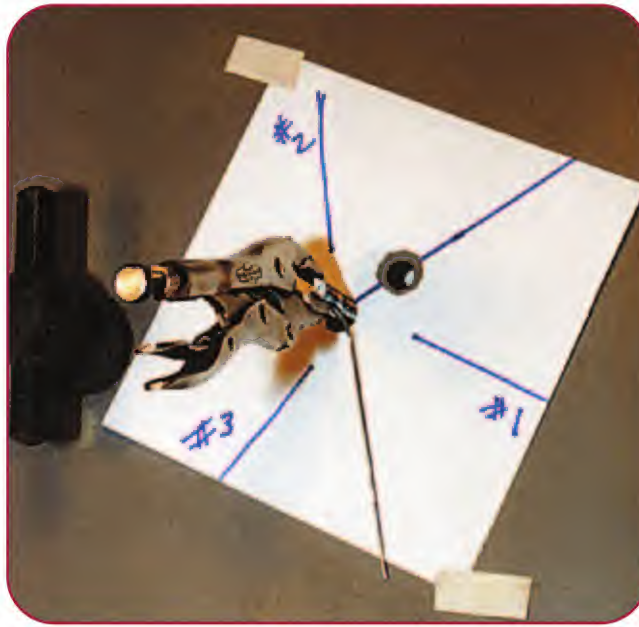
75 - Sentry, Hall, many inexpensive imported safes

60 - Old Moslers (101, 104 etc.)

50 - Old H.H.M. with OB locks

I carry a small roll of masking tape

**98 • The National Locksmith**



**1. If you don't own a transferring tool, one can easily be made.**

**2. Just as you did with a transferring ring, move the hole reference line to the drop-in location of the lock.**



in my toolbox and place a strip on the door for my combination notes, not only for the numbers found, but the direction and number of turns. It becomes a reminder of what I have found and how I found it. A second piece will be used at the drop-in location for my trial index lines. To insure the transfer ring doesn't move while turning the pointer, a small piece of tape is used to hold it in place.

**W**hat! You have a safe to open tomorrow and you don't have a transfer ring? Can you manage to find a piece of paper a little larger than a dial? How about a paper clip and a small pair of vise-grips? Ah good, let's assemble a makeshift transferring tool.

Punch a hole in the center of the paper and place the paper over the spindle. Punch, tear or cut a corresponding hole in the paper to match the hole in the safe door. Rotate the paper so that the hole in

the paper is over the hole in the door. Use a little of your masking tape to hold the paper in place. Draw a reference line from the center of the spindle through the center of the paper hole. Straighten the paper clip to form a 'L' shape. Place the paper clip with the short leg against the spindle and secure with vice-grip pliers. You can attach it anywhere on the spindle. (See photograph 1.)

Just as we did with the transferring ring, turn the spindle and align the first wheel gate to the viewing hole. Carefully trace a line to copy the location of the paper clip pointer. Mark this location with a #1 - the location of the first wheel and the number of the combination.

Find the other two gates and mark the paper with lines to represent the #2 and #3 wheels.

Always test your found 'lines' to ensure the gates align perfectly.

Now what? Just as you did with a transferring ring, move the hole reference line to the drop-in location of the lock. (See *photograph 2.*) Dial your 1, 2, 3 combination and open the safe. Is life good or what?

With the knowledge of transferring, it doesn't matter where the hole is drilled around the wheel pack. Just as long as you can see and align the wheel gates.

We know that drilling a safe lock is easier done when the safe dial is removed and all drilling is straight into the door. What about those safe locks that have dials you can't (or shouldn't) pull? You know, those old antique safes with brass, bronze or steel dials. First, any dial other than those made of Zamac shouldn't be pulled. These old dials will have brass or steel spindles that are either pinned or threaded into the dial. Pulling on these old dials usually will break the spindle, or cause damage the inter working of the lock.

Many customers say, "I don't want my antique dial damaged!" Unless you have a record of precise measurements of these old safes, a top, side or back drilling can cause untold damage and may not be the answer to opening the safe. So, what to do? Drill through the dial ring!

I see so many safe opening suggestions that begin with, "Drill outside the dial ring at..." I'm sorry, I don't have the expertise to fill a drilled hole and then refinish the door with the exact matching paint to hide the evidence of my drilling. There are a few exceptions of course, but priority drilling into a safe door should be under the dial area. The cosmetic repair of the hole is hidden under the dial and the ring can be easily repaired.

Most older dial rings are wide enough to accept a 5/16-inch drill hole. Center punch a mark on the ring for drilling. (See *illustration C.*) I like the area of 14. For most standard size or larger lock cases, a hole in this location will pass under the top right corner mounting screw. The viewing hole for the 101, 104 Mosler locks, should be entered a couple of numbers above or below the fourteen area.

Placing a hole through the dial ring to view the edges of the wheel pack requires angle drilling. Yes, I know

how much you dislike angle drilling! However, even if you miss your target, it is only a matter of reentering the dial ring hole and 'fanning' the inner hole to a usable view. It still only requires one hole to repair!

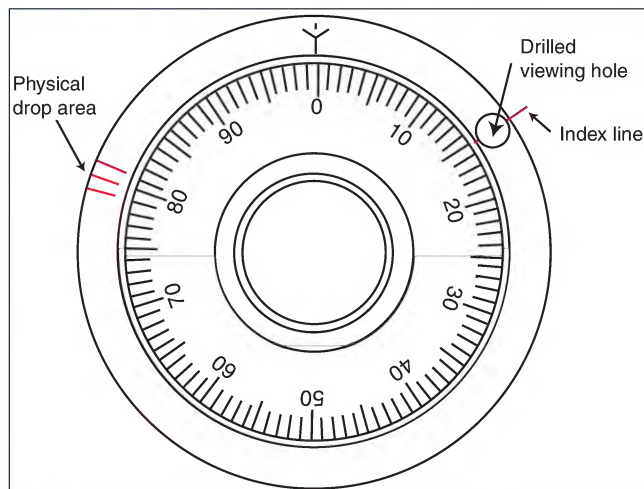
Angle your drilling slightly toward the center of the dial. When you feel your drill passing through a material, look into the hole. If the drilling area in the bottom of the hole is a bright gray color, this indicates the drilling of the inner safe wall or mounting plate. A dark gray color is probably from a cast iron lock case. A brass color is a sign of being at a bronze lock case or the wheel pack

As you are looking, turn the dial to see if anything is moving. If nothing moves, you know the drilling needs to continue a little deeper. Your completed drilled hole should give you a view of the wheel edges. Once you can see all of the wheels moving, it's time to record the location of the wheel gates.

**D**raw an index line though the center of the hole in the dial ring. It's the same method as using a transferring ring, you need a reference line. You may need a penlight or an Oscope to view into the hole and see the wheels.

Turn the dial left - or the normal turning sequence of the lock - until the gate of the first wheel is aligned in the viewing hole. Read the combination of the wheel at the drawn index line. Make a note of that combination number such as "four left to 60." Reverse the dial and bring the second gate to view aligned with the first wheel. Note its number. Find the third gate and number. As in the previous lock where we used a transferring ring, we'll use the same combination numbers of, four turns left to 60, three turns right to 80 and two turns left to 30. Test the found numbers to insure the wheel gates all align with each other at the viewing hole.

It's time to transfer. No! Don't get out your calculators! Just because we



**C. Most older dial rings are wide enough to accept a 5/16-inch drill hole. Center punch a mark on the ring for drilling.**

drilled a hole at 14, it doesn't mean we have to add or subtracting 14 to or from the found combination and then add 3 more from zero to 97 for the drop-in location. It's so complicated, I can't even describe how some people do this!

Listen to old simple Carl. Draw an index line at the physical drop-in location of the lock. In *illustration C*, it's at 80. Run the found numbers to the drawn line and reverse the dial to pick up the lever nose in the drive cam gate and the lock will open. Remember, wherever you draw a new index line, the wheel gates will follow. Maybe this is just too easy for some of you!

If you can see the gate of the drive cam, it will tell you the physical drop-in location of the lock! Align the cam gate to the viewing hole and read the dial at the drawn index line. Guess what - that reading is the drop-in location of the lock. Think about an S&G 6730 lock. At what reading on the dial would you find the gate of the drive cam? If you had X-ray vision, the center of the drive cam would be at the drop-in location of the lock or 97.

Okay, this information is great, but I want to drill through the side or top of the safe, enter the lock case and view the wheels with my scope. To what do I reference? Answer: Wherever you enter the lock case that is your reference. For example, a hole is drilled through the safe wall from the hinge side. The object is to place a hole into the lock case and view the wheels. The lock is mounted right hand and the hole enters dead center of the lock case's

right wall - the wall opposite the lockbolt. The hole offers a perfect view of the wheels and you can align the gates to the hole. How would you reference the finding?

**F**rom the dial's perspective, the viewing hole entered the lock case at three o'clock or 25. The reference is a drawn line on the dial ring at 25. As a gate is aligned to your viewing hole, read the dial at the number 25 reference line. It doesn't matter where the lock case is penetrated. With the dial on zero, locate on the dial where the hole entered the case. This dial reading is your reference line. Once you have the combination numbers of the wheels, draw a new reference line at the physical drop-in location of the lock and transfer!

What about fixing the hole in the dial ring of the old antique safe? Solder the hole shut in these brass or steel dials. File the solder to match the configuration of the ring. use fine sandpaper and file the hole to feather the edges and spay paint with your favorite paint and color. With a little care, the hole will be undetectable.

One Zamac dial that you cannot pull is the dial of an 8500-series S&G lock. This is the lock that requires the dial to be pushed in at zero to engage the lever nose into the drive cam gate. The spindle is threaded into the back of the dial and secured with a spline key. Don't attempt to pull it.

Also remember, the new LaGard and Ilco dials have tapered spindles that are pressed into the dial from the front. You must drill down the spindle to remove the flared end of the spindle before the dial will remove. This includes the new Mosler locks by Ilco and the Diebold locks by LaGard.

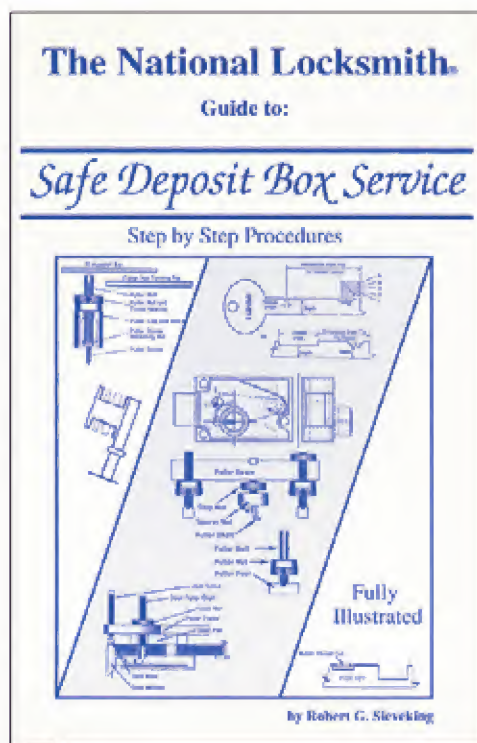
With a little practice, you will find drill transferring easy, useful, and in some cases necessary when attempting to open a lock.

To purchase a nice transferring kit to save yourself the hassle of making one yourself, contact:

Leroy Edenburn Enterprises  
Ypsilanti, MI 48197  
Phone: (313) 483-6777  
FAX: (313) 485-8769



# Safe Deposit Box Service



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#SDBS - 1

# AMSEC® AMVAULT



by Dale W. Libby, CMS

Just when we thought that everything in safes and chests is cut and dried, there comes into existence a crossbreed unit. These segments are both fire rated and burglary rated by UL. The particular box that will be discussed is the Amvault by American Security Products (AMSEC).

The technical name for these double trouble safes/chests is Fire Rated Composite units. This particular unit has a 2 hour-350 degree label and can be ordered in a TL-15 or TL-30 unit.

## Door

The overall thickness of the door is 5-3/4 inches and is constructed with a defense barrier of outer and inner steel plates. The composite barrier is a proprietary amalgamation of nuggets and steel fibers to withstand concentrated burglary attacks. In addition, the TL-30 series offers an abrasive/drill resistant hardplate protecting the entire door surface.

The dial and handle configuration can be seen in *photograph 1*. The back of the door has a full-length piano hinge that allows access to the inner mechanism if it needs servicing.

Pictured in *photograph 2*, is the back top of the door, showing the non-movable 1-1/2" bolts. Also, just above the bottom bolt is the detent lever, which allows the active bolts to be thrown when the door is fully closed.

## Body

The body of this safe is composed of inner and outer steel plates enclosing a defense barrier of high-density composite proprietary material. A drill resistant door frame protects the door and each individual bolt chamber from severe side attack. An inner barrier protects against a "peeling" attack.

## Fire Endurance

This unit has a 2-hour 350 degree factory fire rating. When tested at temperatures of 1850 degrees Fahrenheit for a period of 2 hours, the interior temperature did not exceed 350 degrees Fahrenheit. Paper burns at 451 degrees.



**1. Distinctive lock and tri-bolt handle of Amvault**

**2. Back of the Amvault door, showing piano hinge and combination key change covered hole with decal.**



3. Inside the door. Note plate for the optional key lock is welded to door.

### Locking Mechanism

The Amvault locking mechanism is equipped with 6 to 10 massive 1-1/2 inch diameter chrome plated solid steel locking bolts. Each bolt moves deeply into the body's protected bolt chambers. Bolts stay retracted when the door is open and automatically engage when the door is closed.

### Locks

All Amvault safes are equipped with a UL listed Group II key changeable combination lock. The lock is protected by a massive drill shattering hard plate and two additional spring-loaded relocking devices.

Back on *photograph 2*, there is a circle decal, just a little lower than the top bolt towards the center of the door. This decal covers the change key hole. If you have to drill from the side (highly recommended) to read the wheels through the change key hole, this decal must be removed by scrapping it away, unless someone has already changed the combination and removed the decal.

### Optional Auxiliary Key Lock

All Amvault safes (except model 1814) can also be equipped with a pick resistant UL listed high security auxiliary key lock. Unlike most key locking mechanisms on safes, the mounting plates offers an additional spring loaded relock device protecting the lock against punching attacks. The lock can function independently for day control or work together for dual custody and preservation of valuables.

### Optional Glass Relocking Mechanism

Incorporated into the Amvault-30 auxiliary key lock is a optional tempered glass relock mechanism with a remotely placed "cross-locking" relocking bolt and thermal cords to protect against punching and torch attacks. When the glass breaks and shatters, it will activate the highly sophisticated relock mechanism.

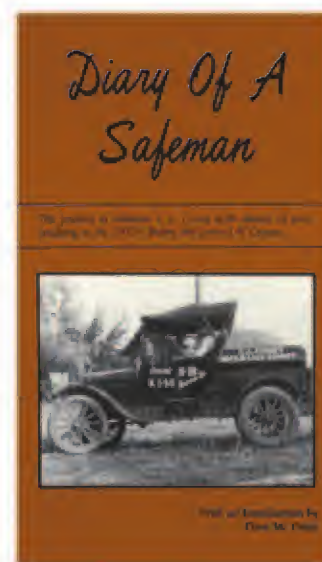
Having said all that, it makes me not want to tackle one of these monsters, especially if it has been punched and burglarized by thugs.

### A few personal thoughts

*Photograph 3*, shows the inside of the Amvault TL-15 unit. There is not a Key-OP lock on this unit, but the door is set up for one. The mounting plate is to the left of the combination lock as shown in the picture. A larger Amvault with a key lock can be seen in *photograph 4*. The key lock would also mount vertical down (VD) as the combination lock. There is a place for one relock pin to the right of the lock as shown. (This would be reversed, or to the left of the key lock from the outside.)

The combination lock is protected by a 3/8-inch piece of drill shattering hardplate. Notice the two spring loaded relockers that are held in place with the cover of the lock. If the lock was punched, you would have to drill two or possibly three holes through this hardplate to release the bolt and both relock bolts.

## Diary Of A Safeman



This book is a real gem...the private safe diary of old time safecracker C.L. Corey.

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#DIARY

4. A larger Amvault with a key lock.



5. Full view of TL-15 door, three moving bolts and detent mechanism.



I have not had the pleasure of drilling this hardplate, but if the StrongArm drills did not work, then the diamond core bore would. A better way to attack this locked up unit (non-burglarized) would be to manipulate the combination lock open. If the keylock was locked, then a side attack would be the only viable attack for me.

I took some preliminary measurements and I would attack the change key hole by drilling 5-3/8 inches back on the hinge side of the door directly in line (or 1/2 inch

above) the dial center reading. With the lock being mounted VD, this should put you in a direct line with the key change hole.

If the unit was burglarized without a glass plate, I would drill 2-1/2 inches below the dial centerline about 4-1/2 inches back from the front of the hinge side of the safe. There, one could attack the dual relocking pins of the safe lock and the single pin of the key lock as well as both locking bolts.

I hope I never have the opportunity to drill one of these units to find out

exactly what "drill-shattering" hardplate is. Even drilling the side of the safe with nuggets will cost you some hardplate drills. *Photograph 5*, shows the door of a TL-15 unit with the detent lever.

These safes are very well built, and can be a good friend when you sell them. (\$2200 to \$2800 suggested list price) When you have to open one, I hope your manipulation skills are up to it. I opened this safe for practice in about 45 minutes by manipulation.

Open, manipulate, and prosper.

For information on AMSEC safes:  
American Security Products, Co.  
11925 Pacific Ave  
Fontana, CA 92337

Phone: (909) 685-9680 or 800-421-6142

Fax: (909) 685-9685

E-mail: [sec@amersecurity.com](mailto:sec@amersecurity.com)

Web: <http://www.wbmk.com/>

Circle #317 on Rapid Reply 

# The WALTER Side

Conventional Behavior



by  
Sara  
Probasco

We should have known it was going to be a bad day when our early-morning flight attendant developed ptomaine poisoning from her own coffee. But since Don and I both have an aversion to free-fall landings and ours was a non-stop flight, we had little choice but to continue on to our convention destination.

The last time we'd been to a convention in this particular city, I'd had a harrowing, if brief, Towering Inferno experience that took at least ten years off my life — and I don't mean that it made me any younger! As I had approached the elevator, that time, I couldn't help noticing sirens going off and red lights flashing on a control panel, along with a warning that read, "FIRE: DO NOT USE ELEVATOR."

A bit nervous about the situation, I questioned a man who was quietly laying carpet in the adjacent corridor.

"Oh, yeah, I've been listening to that," he said nonchalantly. "Must be a fire in the building, somewhere."

Dashing to a window, I looked forty-three stories down at the tiny little people, knowing I was far too high up to be rescued by any fireman's ladder, and I certainly didn't want to take that long dive into a fireman's "net". But I didn't relish trooping down all those stairs, either, especially since you never knew what you'd find down there.

Anxious, I returned to my room and called the desk.

The operator put me on hold. When she finally returned, she said, "There was a little fire on the fifth floor - a wastebasket, somebody said. Anyhow, I think it's out now, so you can disregard the warning signals. Go ahead and use the elevator." All the way down, I had visions of the elevator doors opening and dumping me into a raging fire. Of course, that didn't happen, but it made for some exciting moments, just the same.

At first impression, our second visit to this convention site was a normal, uneventful, safe and sane venture.

Pushing aside any remnants of apprehension, I smiled sweetly as Don accepted accommodations on the thirty-sixth floor in order to get a non-smoking room with a view. And what a view!

Instead of the common brick wall or crowded parking lot overview, there, some seven hundred feet below us, was the entrance to the international airport. As we watched, myriad jumbo-jets landed and took off directly between our hotel building and the next — or so it seemed — on a schedule of one per minute. Our window seemed higher in altitude than some of the planes in holding patterns.

Don and I shouted to one another above the roar of arrivals and departures as we unpacked our bags and filled the drawers and closets with our paraphernalia. Then we headed to the relative peace and quiet of the hotel lobby to hobnob with other locksmiths whom we hadn't seen since the year before.

Stumbling out of bed the next morning, we both felt like we were suffering from battle fatigue. The

previous day's long flight and the late night with friends had taken their toll, but even worse had been the constant bombardment of unaccustomed sounds from the nearby airport all night long.

"Just let me get a shower, and I may survive," Don muttered, his bleary eyes only half open. He turned on the water, adjusted it to the desired temperature, stepped into the tub, and pulled the shower curtain closed. He lifted the valve to change the flow of water from the tub faucet to the showerhead. Nothing happened. He toggled it up and down a few times. Nothing changed. He grumbled something unpublishable under his breath and took a firmer hold on the little gizmo and yanked. It came off in his hand.

When I heard his next remarks, I stepped to the bathroom door.

"What's wrong?" I inquired. He told me what had happened. "Maybe you'd better just take a tub bath this morning. I'm sure we can get it fixed before tonight."

Complaining about how he hates tub baths and how his body needed the



"WOW! They had transponders in ancient Egypt?!"



soothing pummeling of a shower, Don flipped the drain closure to fill the tub. Nothing happened. He toggled it up and down. Nothing changed. He uttered something unpublishable in a loud voice and took a firmer hold.

“Forget the bath!” I intervened. “I’ve already called the desk, and they’ll be sending someone up right away. Just don’t tear up anything else.”

Anything but happy, Don took a “spit bath,” got dressed, and went on to register without me, while I waited, and waited, and waited for the maintenance man to come. When the man finally came, he wiggled something inside the wall, scratched his head, and banged around a bit with his pipe wrench. Nothing changed.

“Well, I could have done that,” I finally said in response to his futile efforts.

He used our phone to call for his supervisor.

When the supervisor finally arrived, they both banged around for a while and then sent for a sure-enough plumber. Still no results.

Finally I summoned the hotel manager. He talked to the men and then apologetically moved me and all our stuff to a room two doors down the hall. I have to give them credit — the move was quite efficient. Three maids and a porter comprised the entourage. They swapped out drawers between the dressers, carried clothes on hangers from the closet, and transported everything we had brought, placing it all in the new room exactly as it had been in the old.

We even managed to maintain a nearly identical view of the airport.

Night heralded a mammoth thunder storm — at approximately our window level — adding sound effects and lighting to what we were beginning to grow accustomed to, by that time.

The following morning, Don arose early, took a long, hot shower, and tiptoed out to his first class, while I slept in. We weren’t even noticing the planes, by this time.

Mid-morning, when I left the room, a crowd of men were huddled in the corridor just outside the open door of the room with the faulty bathtub. Several, dressed in dark business suits with ties, spoke in solemn whispers. Others, in white EMS uniforms, were wheeling someone out of the room on a Gurney. A sheet had been drawn over

the face of a corpse. A group of uniformed policemen were moving about inside the room, which was in a shambles. Three other men, wearing padded fatigues and holding what resembled welders’ bonnets in their gloved hands, were talking among themselves in agitated fashion. As one turned, I saw printed on the back of his jacket “BOMB SQUAD.”

This sort of scenario does not incite confidence in the heart of a tourist.

“Excuse me, sir,” I said hesitantly to one of the men in business suits, “can you tell me what is going on here?”

“Nothing you need concern yourself with. One of our guests had a heart attack and died. Everything is being taken care of.” His lips were smiling, but his eyes weren’t.

“Well, the reason I ask is, we were supposed to be in that room, but the plumbing didn’t work, so they moved us, just yesterday. I guess they got it fixed, huh? The plumbing. I mean, otherwise the guy wouldn’t have been in there, right?”

Three FBI men and a couple of local policemen stopped by to interview me, later that day. (Was it just my imagination that they tossed in words like “underworld,” “terrorist,” “Godfather?”)

We never did find out what had happened, but we noted with interest that by nightfall the room with the bathtub had been restored to order, the men were all gone, and a new, unsuspecting couple had checked into the room.

“What do you suppose was going on?” I asked Don on our way home? “The room was a total wreck, and with the bomb squad there...”

“Don’t you think we would have heard something, if a bomb went off?”

“I don’t know. Those planes were pretty loud. Besides, there was all that lightning and thunder that night, remember? We may have just gotten away by the ‘skin of our teeth.’ Just think, if a bomb really was randomly planted and had gone off that night, we could have been the ones on the Gurney.”

“Saved by a faulty bathtub,” Don said.

“I can’t imagine anything much worse than being blown up in a hotel bathtub.”

Don smiled a wicked little smile and said in his best Boris Karloff voice, “Perhaps I could interest you in a suite at the Bates Motel?” **NLI**

# Wafer Lock Reading



Easy to learn.  
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#WLR - 1

# Quick Entry

## UPDATE

by  
Steve  
Young



### 1998-99 VOLKSWAGEN BEETLE & JETTA

Even though I was there when the new VW Beetle was unveiled at the Detroit auto show in January of 1998, it was quite a while before I was able to actually take a door panel off one of the new Beetles. (See photograph 1.) At the time, I was able to try the TT-1015, "Under Window Tool" on a Beetle and it did work, but it was a very tight fit. From my first inspection with the door panel in place, I couldn't see any other way to attack this new "Bug."

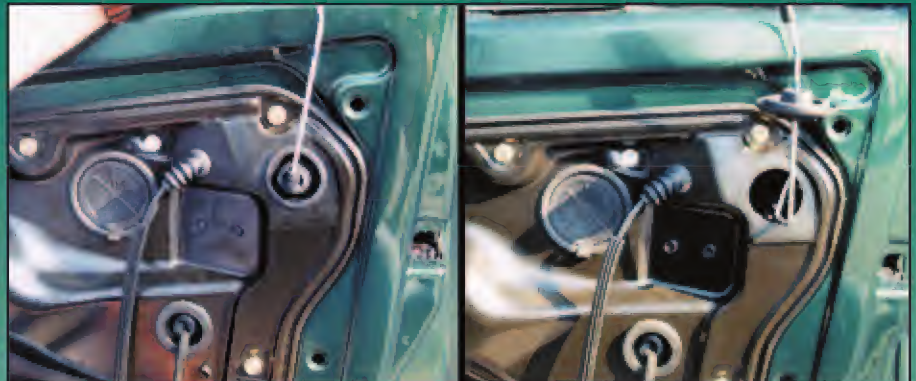
Months later, when I finally had the opportunity to disassemble one of the new Beetles, I was pleasantly surprised to discover a quick and easy way to unlock it with the TT-1000 tool. (See illustration A.) It was no wonder that I didn't find this method the first time around, the linkage that has to be attacked is impossible to see without removing the door panel.

Inside the door, the latch is very well shielded by a piece of sheet metal. The same guard protects the lower portion of the vertical linkage rod. The upper portion of the linkage makes a ninety-degree turn toward the front of the car as soon as it comes out of the top of the guard. This portion of the linkage rod runs horizontally forward for about one inch before it makes another ninety-degree turn to the inside of the door and downward. It then disappears through a rubber grommet and behind the inner skin of the door. The linkage rod then bends upward once again to finally end at the base of the inside lock button. (See photograph 2.)

The short length of horizontal linkage is the only portion of the linkage that is not protected by either a metal guard or the inner door skin. Even though this unprotected portion of the linkage is located too high in the door to be seen, it



1. 1999 Volkswagen Beetle.



2. Left: Vertical linkage with the rubber grommet in place. Right: The rubber grommet has been removed to show the bends in the linkage rod.



3. Insert the long end of the tool just to the rear of the inside lock button.

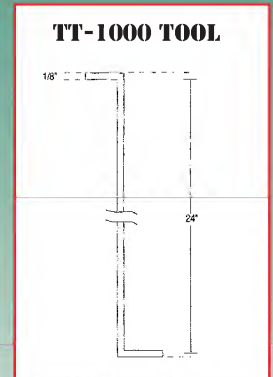
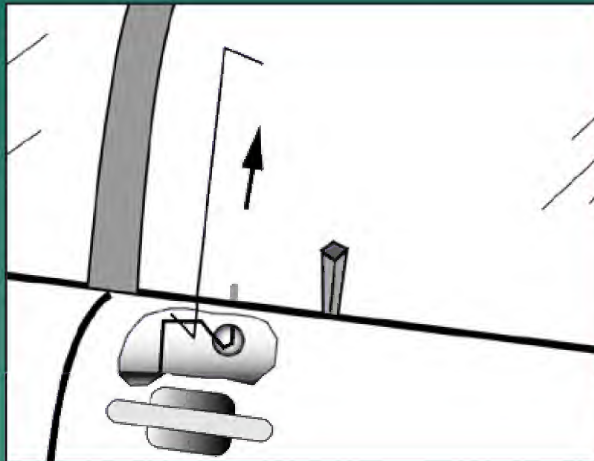


Illustration A.



4. Once you have located the linkage, pull up with the tool to unlock the car.



B. Drawing shows the tool in place to lift the linkage.



5. The tip of the tool in place to lift the linkage.

**Quick Reference Guide**

**Vehicle:**  
 Volkswagen New Beetle 1998-99,  
 Volkswagen Jetta 1999

**Direction Of Turn:**  
 Counter Clockwise (Drivers side)  
 Passenger side is not equipped with a lock cylinder.

**Tool:** TT-1000 (long end)

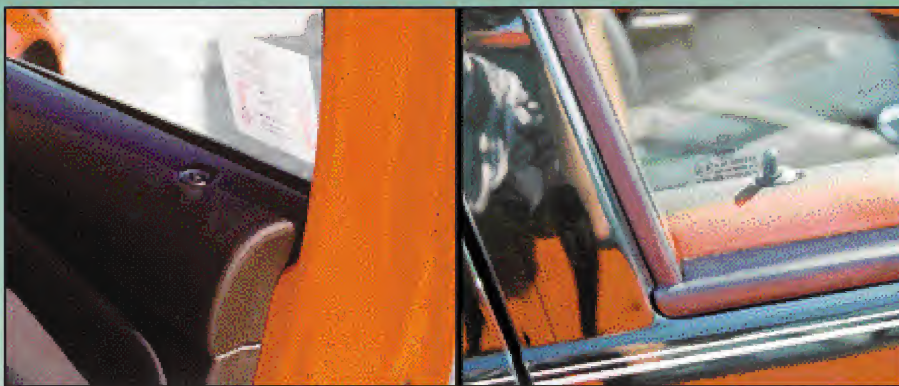
**Lock System:**  
 High-security (sidewinder)

**Code Series:** 00001-05000

**Key Blank:**  
 Ilco HU66-P, Silca HU66,  
 Jet HU66VW-PH

**Bitting:**  
 Ignition 1-8, Doors 1-8, Glove Box 6-8

6. (Below) Both of these vehicles are in the locked position. Left: VW Jetta with a lock button that is flush with the panel when locked. Right: VW Jetta with a lock button that is raised above the panel when locked.



7. 1999 Volkswagen Jetta.

can be located fairly easily by feel.

Begin by carefully inserting a single wedge into the door just forward of the inside lock button. (See photograph 3.) The window fits very tightly, but you only need to open up enough of a gap to insert the TT-1000 tool, which is only 1/8" in diameter.

Next, insert the long end of the tool into the door with the shaft just to the rear of the inside lock button. (See photograph 4.) As you lower the tool into the door, twist the tip of the tool so that it is pressed against the glass as it slides down into the door. As soon as you feel the tool slip below the bottom of the glass, turn the tip of the tool toward the inside of the car.

Continue lowering the tool into the door while making sure that the shaft of the tool is even with, or slightly to the rear of the inside lock button. You should be able to feel when the shaft of the tool contacts the horizontal portion of the linkage, and you should also see the inside lock button move down slightly. Once you have located the horizontal portion of the linkage, it should be a simple matter to slip the tool below the linkage rod by feel. (See photograph 5.)

Once you have the tool below the linkage, pulling up on the linkage with the tool will unlock the door. (See illustration B.)

One of the identifying characteristics between the early 1998 and later 1998 VW Beetles is that the lock button on the early 1998 models will extend about 1/2" to 3/4" above the top of the door panel when the car is locked. On the later 1998 models the lock button is flush with the top of the door panel when the car is locked. (See photograph 6.) All of the vehicles are made in Mexico and other than this slight difference, there doesn't seem to be any other differences between the two types of vehicles.

If you look at one of the new VW Jetta models next to a new Beetle you will notice a lot of similarities between the two vehicles. (See photograph 7.) As far as I'm concerned, the Jetta is essentially a four-door Beetle. The two cars are practically identical inside of the door, and can both be unlocked with the technique described above. The only difference is that on the Jetta, it is possible to see the horizontal portion of the linkage rod, but it requires a lot more wedging than I am comfortable with.



# The 1997 Pontiac Sunfire



by  
**Bob Sieveking**

**T**he assignment was to make a key for a 1997 Pontiac Sunfire. The car was locked and the dealer was unable to open the car or find the keys.

In case the keys were inside, I opted to open the car and make a quick search.

Photograph 1, shows the door wedged and the correct working position of the down hook opening tool. The horizontal linkage is accessible at the rear of the door, about eight inches below the weather strip. Hook and bind the tool to the internal lock button linkage. Move the linkage forward to unlock the vehicle.

You can use the short side of a Slide Lock "Z" tool or Tech-Train's TT-1003 down hook tool to accomplish the same opening.

There are two horizontal rods in the door. The door lock linkage rod is above the latch linkage rod. There is no covering on these rods. Watch the slide lock button through the side glass as you find and move the linkage forward, unlocking the door.

After opening the vehicle a quick check above the visors, in the glove box, in and under the seats failed to turn up the errant keys. Hey! flip

down rear seats. A quick check of the trunk compartment revealed no keys there either.

At this point we have four options that will net us a working key for the vehicle.

1. We can read and progress the various locks to gain enough information to make a complete working key.
2. We can disassemble a lock and progress the ignition to find a key.
3. We can pick the ignition and cut the key by code.
4. We can remove the ignition by a secret method, and use the code to produce a key.

Before we can intelligently begin any job, we will need some specific information on the vehicle locks and locking system we are working on.


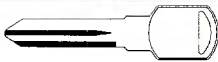
Illustration A, shows spacing and depth information as well as other pertinent information for the GM 10-cut locks.

### **Method Number One**

If you are a "wafer reader," you will want to know which locks contain which tumblers. See illustration A, to find the tumbler locations. We know that the doors, trunk and glove box are wafer locks, and can be read. The doors will contain tumblers in positions 3-4-5-6-7-8-9. The trunk contains tumblers in positions 4-5-6-7-8-9-10. The glove box contains tumblers in the last four positions, 7-8-9-10. The tumblers in the glove box



**1. The door wedged and the correct working position of the down hook opening tool.**

<b>GM</b>		<b>Buick, Skylark</b>		<b>1996+ -98</b>	<b>GM11a</b>
<b>Locks:</b> ASP,AL,B&S	codes AA00-7N45				
<b>ign</b>	valet -				
<b>dr</b>	Baxter BK 36				
<b>trk</b>	NL:HPC GCB 3&4 #index				
<b>Face caps</b> ASP,AL,B&S	Reed 1 2-----•				
<b>ign</b>	Curt 20631	1 200	CF215	Ilco	P1107
<b>dr</b> see keying kit	GM-6	GM-6A	ctr CW-1011	EZ	B89
<b>tnk</b> see keying kit	cutr	15W-45	space--depth	Tay	
<b>Keying kit</b> ASP,AL,B&S	<b>tumbler locations</b>	1.034	1 .315	B&S	597749
<b>ign</b> SK6400, 702767	ign 123456789•	.942	2 .290	Bör	
<b>dr+</b> SK6400, 702767	dr ••3456789•	.850	3 .265	Curt	B-89
<b>Gauge tip</b> domestic	tnk •••4567890	.758	4 .240	D/L	
<b>Framon: S-B-I</b> .092	gb •••••7890	.666	5	SIL	GM40
<b>Baxter: G-Keys</b> AGK619	All	.574	6	VALET	
grv 75. Reed •vol. 12 contains most codes, add codes NL 1-97, Ledger 1-97. pick/remove ign-code. read dr•tnk• progress ign, call 800# for code. Framon? tip to left, first cut@ .216. cuts@ .216, .308, .400, .492, .584, .676, .768, .860, .952, 1.044		.481	7	Ilco	-
		.389	8	EZ	-
		.297	9	SIL	-
		.205	10	Curt	-
			11	Sub.	
		<b>10w sidebar</b>			

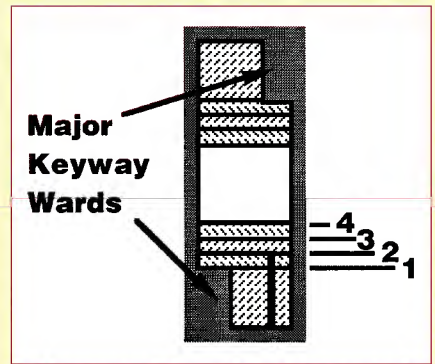
**A. Spacing and depth information for the GM 10-cut locks.**

have the depths clearly stamped on the visible face of the wafer in the keyway. The ignition, which is a sidebar lock, contains tumblers in positions 1 through 9.

The best and most convenient lock to read is usually the passenger door lock. The passenger door lock will have the least wear. It will contain cuts

3 through 9. Use a spring door tool to hold the dust shutter open, giving you a clear view of the keyway. Use a lighted otoscope and reader tool to look into the keyway.

*Illustration B*, shows a representation of the keyway and the positions of the various tumblers, with respect to the major keyway wards.



**B. A representation of the keyway and the positions of the various tumblers.**

GM 10-wafer door and trunk locks will read the same. You will note that the number one depth wafer is exactly even with the top of the major key ward. The number two-depth wafer peeks above the top of the key ward. The three-depth wafer is .025" higher than the two, and the four-depth wafer is .025" higher yet.

The wafers are read in the locked or extended position. It is not necessary or desirable to pick the lock when reading the heights of the wafers. If you are using a "Universal Wafer Lock Reader," you will find that the number two-depth wafer is exactly even with the top of the tool in the

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keyway. The wafer lock reader is used to depress the wafers in the lock as they are read, but it should also be used to measure the heights of the wafers to judge their correct cut. The wafers are always read from the front to the back of the lock.

**T**he passenger door cylinder of our little Sunfire contains seven wafers in positions 3 through 9. There are four wafers at the top of the keyway, and three at the bottom of the keyway. Cuts 3-5-7-9 will be at the top of the keyway, and cuts 4-6-8 appear at the bottom of the keyway. There are only four depths.

This job should be a walk in the park. Reading the bottom wafers, I see 2-3-3 as the depths. Reading the top four wafers, I see 1-4-4-4 as the depths. Cuts 3 through 9 of our unknown key is: 1-2-4-3-4-3-4.

Referring to the key plate in *illustration A*, we find that our 1200CMB code machine will need a CF215 code card and a CW1011 cutter to make this key. If you are using a Framon machine; gauge the key to the left side of the vise, find the .092 spacing on block number 3, and cuts start at .216. If you are using Baxter Guide Keys or a Curtis Clipper, that information will be found on the card also.

A key was cut and tried in the door and it worked easily. The key is checked again to see if there is a bind or catch. If the key binds, a cut or cuts, have been made too shallow. If the key has a catch, a cut has been made too deep. If the key is binding, it will mark or impression the offending cut. Code cut the marking positions one depth deeper to correct the key. If the key catches, read the lock again and cut another key.

The trunk cylinder contains cuts 4 through 10. To make a working trunk key, read or progress the tip cut in the trunk cylinder. The maximum adjacent cut specification (MACS) for the 10-cut GM series is "2." You will not find a 4 depth next to a 1 depth. Given cut nine is a 4 depth, cut ten can only be a 2, 3, or 4. The key is progressed in the trunk cylinder and cut 10 is found to be a 3 depth. Cuts 3 through 10 of our key is: 1-2-4-3-4-3-4-3.

To find the remaining cuts in positions 1 and 2, we will progress these cuts in the ignition. All the tumblers are on one side of the keyway in the ignition. We know the cut in position three is a 1 depth. The

cut in position 2 can only be a 1, 2, or 3. Work out a progression for the first two cuts of the four depth key, with a MACS of 2.

The progression would look like this:

1st key	2nd key	3rd key
1-1	2-1	2-2
1-2	3-1	
1-3	3-2	
2-3	4-2	
3-3		
4-3		

The first two cuts of the key were found to be 2-2. The cuts for the completed key was: 2-2-1-2-4-3-4-3-4-3.

By reading the door lock cylinder and progressing the key in the trunk and ignition, we found the key without disassembly, impression or codes. This is by far the easiest method of generating a key for this vehicle. Note that there are a number of different configurations for the 10-wafer locking system used on the various GM models, which use the 10-wafer key.

### **Method Number Two**

If you can not read the tumblers, you will have to disassemble a lock. If you opt for the trunk lock cylinder because it is the easiest to remove, you will be faced with a cylinder that must be turned to be disassembled. If you opt for a door cylinder, the door disassembly is very time consuming, but the plug can be disassembled from the lock case without a key. Personally I have always opted for the trunk cylinder over the door cylinder.

*Photograph 2*, shows the location of the trunk lock behind the center of the plastic light cluster. The light cluster will need to be removed before the trunk

cylinder can be disassembled from the trunk lid.

*Photograph 3*, shows the arrangement of the trunk lock and latch assembly. There are thirteen sheet metal nuts over plastic nipples, which fasten the light cluster to the outside of the trunk lid. Unplug the backup and taillight sockets from the plastic light cluster, remove the sheet metal nuts and the light cluster will come away from the trunk lid. Remove it and place it inside the car.



**2. Location of the trunk lock behind the center of the plastic light cluster.**

**3. The arrangement of the trunk lock and latch assembly.**



Carefully unsnap the plastic flex cable cup from the rear of the trunk lock cylinder. The trunk cylinder is retained by a standard sheet metal lock retainer clip. Remove the clip to disassemble the trunk cylinder from the trunk lid.

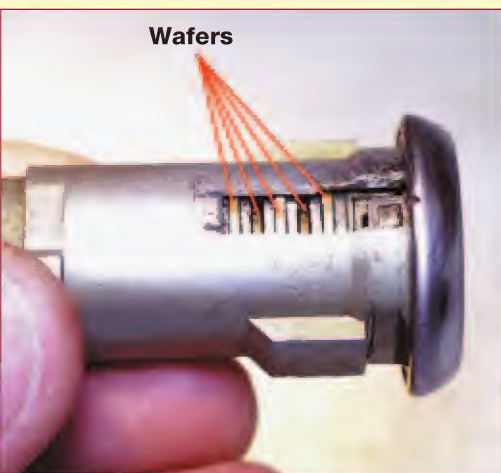
There is a small drain hole in the bottom of the lock case that will give you a good view of one of the seven wafers in the lock. The remaining wafers are impossible to see. You will need to enlarge the drain hole with a Dremel grinder to view the remaining wafers. Be careful not to damage the wafers.

*Photograph 4*, illustrates the size of the drain hole in the trunk cylinder.

In *Photograph 5*, I have used a metal slitting saw (not an abrasive cut



**4. The size of the drain hole in the trunk cylinder.**



**5. Use a metal slitting saw in a Dremel grinder to cut along the sides of the wafer compartment.**

off wheel) in a Dremel grinder to cut along the sides of the wafer compartment. Pry up and break away the metal tab to reveal the remaining wafers. The cylinder in photographs 4 and 5 were taken of a 1995 Chevrolet Cavalier trunk cylinder. The Sunfire uses a similar cylinder. The wafers shown are 3 through 7. In the Sunfire, you would see wafers 4 through 10. The method is the same.

If the trunk cylinder has failed because of corrosion in the wafers, this method of exposing the wafers will allow you to force the wafers into the plug, turn, and disassemble the cylinder for repair.

Lubricate the cylinder and use depth keys to decode or read the wafers. Write down the cuts you find and cut a key. When the key operates the cylinder, you will have determined cuts 4 through 10. Note that it was not necessary to read, pick, or disassemble this cylinder.

Progress the working trunk key in the door to determine cut number three (the door cylinder contains cuts 3-9).

Progress the working door key, as above, in the ignition to find cuts one and two.

Carefully reassemble the lock cylinder into the trunk lid, reconnect the flex link to the lock cylinder and check the lock for proper operation. Reassemble the light cluster onto the trunk lid, being careful not to over-torque the sheet metal nuts over the plastic nipples. Install and check the backup and tail lights.

By removing only the trunk cylinder, reading the wafers through the drain hole and progressing the door then ignition locks, we were able to complete a working key for the car.

### **Method Number Three**

It is possible to pick this ignition, remove it to read the code stamped on the rear of the cylinder body and cut the key by code.

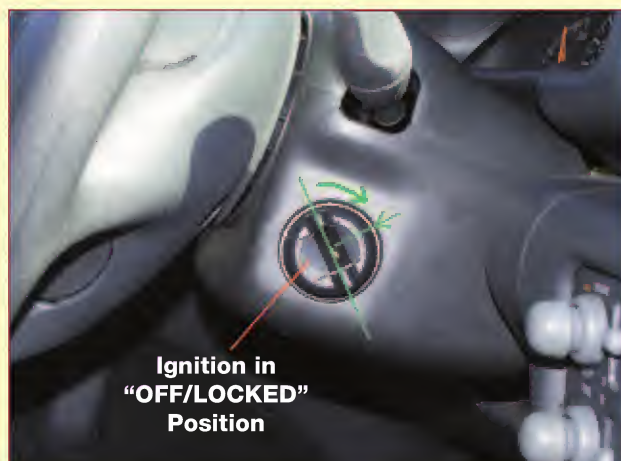
*Photograph 6*, shows the location of the ignition lock cylinder in the clad column. Remove the screws on the underside of the shroud. Loosen the top portion of the shroud from the bottom, and unsnap the halves. Push the top portion of the shroud toward the dash to free two plastic hooks, which engage the bottom portion of the shroud. The bottom portion will drop away, then you can remove the top portion of the shroud to reveal the ignition lock housing. Note that the ignition housing on this vehicle is made of plastic.

Picking the GM 10-wafer ignition is not as difficult as you might have been led to believe. You should note that the axis of the keyway, when the lock is in the locked position is shown. With the keyway in this position, the combining wafers are at the bottom of the keyway. The sidebar is to the left of the keyway.

To pick a sidebar lock, it is necessary to apply pressure to the sidebar, as the wafers are manipulated. The wafers will be captured by the pressure of the sidebar, much as the turning torque on a pin tumbler lock plug captures the top pins, as the lock is being picked. The amount of pressure on the sidebar is just as important/critical here, as it is when picking any lock.

*Photograph 7*, shows the assortment of tools, which I have found most effective for picking this lock. The diamond, hook, and ruffle picks are pretty much standard items in the locksmiths tool kit. The pictured turning tools are unique to the manipulation of the sidebar lock. The offset in the neck of the turning tool allows the tool to be inserted into the open front of the sidebar compartment, in most cases without removing the plastic head of the ignition cylinder.

There are two GM 10-wafer keys



**6. The location of the ignition lock cylinder in the clad column.**



**7. The assortment of tools, which I have found most effective for picking this lock.**

shown in *photograph 7*. The first is a set-up key. One side of this key is cut to a 1-1/2 depth over its length. The second key is a plug removal key. The key is cut over its length to a 4 depth.

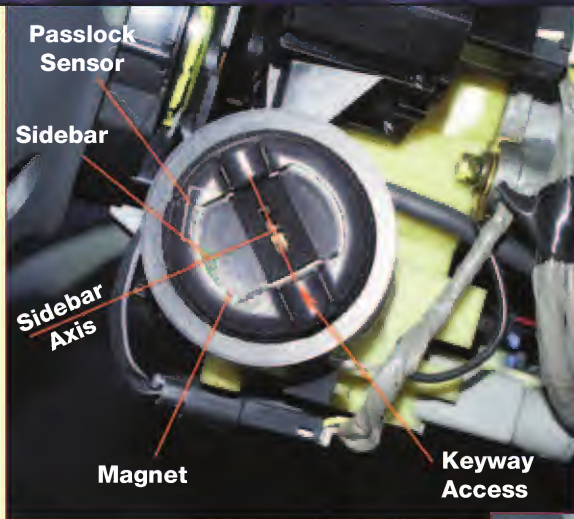
Now let's study the locations of the various components of this ignition for a short moment.

*Photograph 8*, shows the shroud removed and the location of the sidebar, Passlock magnet and Passlock sensor in relation to the axis of the key. Ninety degrees away from the axis of the keyway (centered on the keyway,) is the axis of the sidebar. The Passlock magnet is below the sidebar and the Passlock sensor is above the sidebar.

One of the special turning tools shown above can be inserted into the open front of the sidebar compartment, over the sidebar. Apply light turning tension to the tool as you insert the "set-up" key fully into the keyway. Wiggle the set-up key as you remove it. You will feel the front most wafers of the lock pick, as the key is removed. (I have had these locks pick in the first pass, with only the set-up key.)

The lock is picked from front to back because the turning tool applies pressure to only the front of the sidebar. As the front wafers pick, the sidebar will tilt "front down first." With the front of the sidebar settling into the wafer gates, the sidebar will capture the wafers, more or less in order, from front to back.

As the turning tool handle tilts, it will indicate the position of the sidebar. When the sidebar is picked, the plug will turn. Take it easy on the tension tool and pick. False gates in the wafers complicate the picking process, but do not make it impossible. Remember that



*Photograph 9*, shows the **8. The shroud is removed and the location of the sidebar, Passlock magnet and Passlock sensor is indicated.**

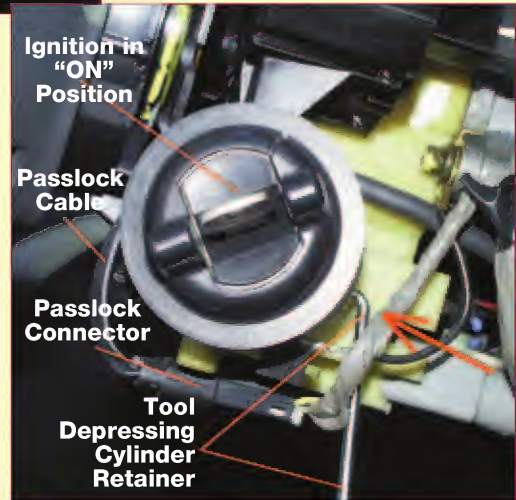
finesse, not force, will pick these locks.

When the lock is picked, turn the plug only far enough to capture the sidebar in the lock case. Insert the plug removal key into the cylinder and rotate the plug to the "On" position. Insert key "cut side down," as all wafers are at the bottom of the keyway. Though not all of the 10-wafer locks have the same type of "key sensor switch" some will shear off the plastic key alarm button if turned without a key in the keyway. If you shear off the key alarm button, the on-board computer will not perform some of its necessary programmed functions. This will require the replacement of the switch and harness. Believe me, you don't want to start down that road. Get into the habit of using the plug removal key.

Before we get too far away from picking, You should know that there is a second method of putting picking pressure on the sidebar.

Take a second look at the position of the sidebar in *photograph 8*. Knowing where the sidebar is situated with reference to the keyway, you can measure back on the front side of the plastic lock housing about 3/8" from the front of the housing, in line with sidebar and drill straight over the sidebar. Drill a 1/8" hole through the plastic housing, then the lock case to find the sidebar. The lock case is very thin over the sidebar so don't get carried away and drill the sidebar in half.

The Passlock sensor and its magnet are shown above and below the sidebar. Locate your hole carefully. You can use a regular battery powered drill to accomplish this task. Insert a straight piece of wire into the hole to put picking pressure on the sidebar. Schlage lever locks come with a wire poke tool that is ideal for this purpose.



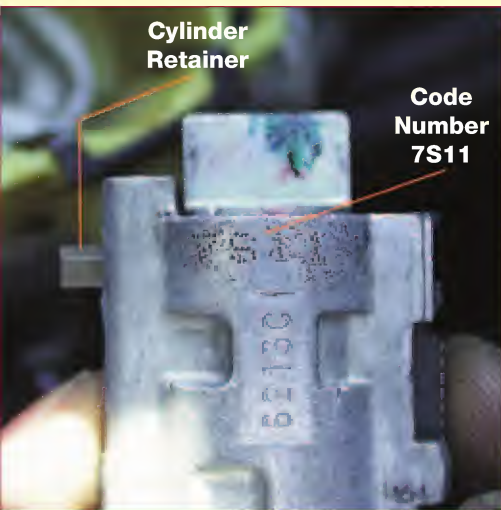
**9. The ignition is picked to the "On" position.**



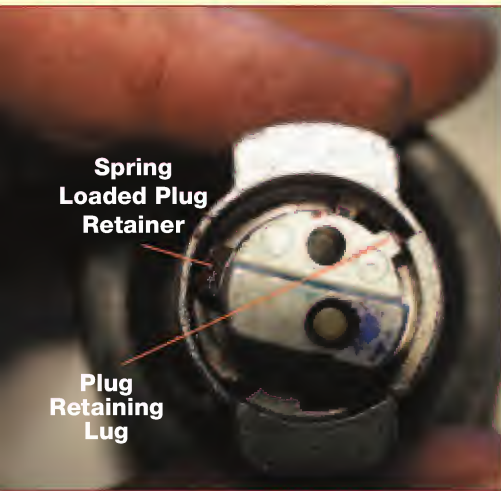
**10. The ignition removed.**

ignition picked to the "On" position. Note that the plug removal key is in the keyway. Disconnect the Passlock connector and depress the cylinder retainer to remove the ignition. The cylinder retainer can only be



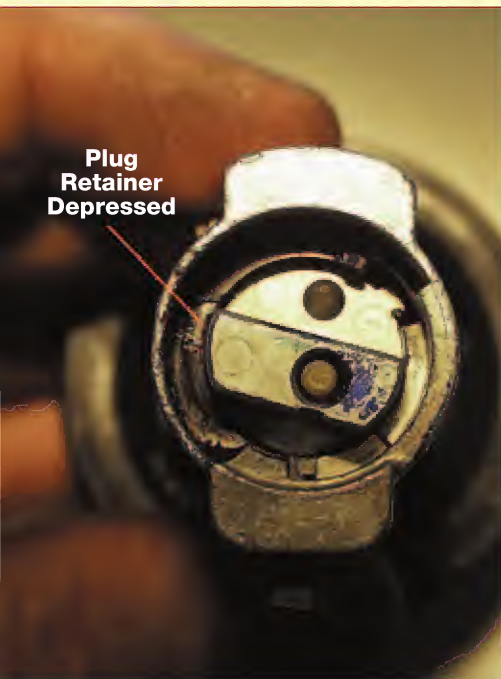


11. The code stamped on the lock is 7S11.



12. The rear of the lock plug, in the On/Run position.

13. The plug partially removed.



14. The lock plug removed.

depressed in the "on/run" position.

Photograph 10, shows the ignition removed. Note the position of the Passlock/Hall Effect sensor, which is staked into the lock case.

With the ignition removed, you can read the code stamped in the outside of the lock case.

Photograph 11, shows the code to be "7S11." Look up the code to find cuts 2-2-1-2-4-3-4-3-4-3.

If you do not have the code, you will already have the lock in the "On" position. Remove the lock plug and decode the wafers. The lock plug is retained in the lock case by a spring retaining lug.

Photograph 12, shows the rear of the lock plug, in the "On/Run" position. Depress the plug retainer lug with a small screwdriver to free the plug.

Photograph 13, shows the plug partially removed.

Photograph 14, shows the lock plug removed. Note the position of the Passlock magnet with reference to the sidebar. The tumbler spring retainer is at the bottom of the plug. Disassemble the plug to decode the wafers. It is very similar to the 6-wafer GM lock in its construction and service. Use a clamping service fixture when removing and replacing the spring retainer to avoid damage to the sidebar.

**Method Number Four**

Now that we've gone through all the finesse methods of making this key, there is an alternate method that I have used when the ignition is for some reason not functional, or not related to the other locks on the vehicle.

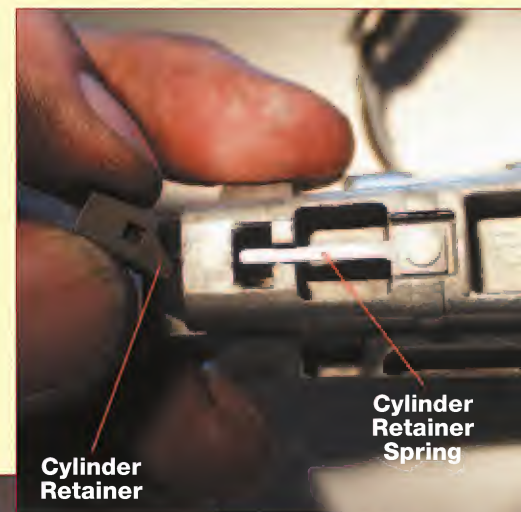
With the shroud removed, you will

be able to see the cylinder retainer in its pocket behind the ignition. Photograph 15, shows the cylinder retainer and the leaf spring that retains it in the ignition cylinder. It floats in the retainer hole and the only thing preventing it from coming out is the stainless leaf spring. To remove the ignition, pry up on the retainer with a sharp pointed scratch awl or scriber tool. With the retainer up, pry out gently on the ignition. This will trap and bind the retainer in the up-most limit of its free travel.

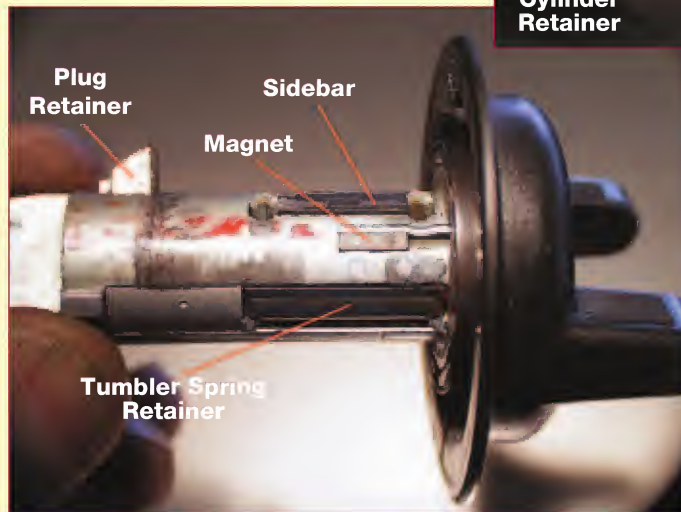
Gain another purchase with the scratch awl and slightly release the outward pull of the ignition. Lift the retainer and bind it again. Repeat this lift and bind procedure until you bend the tip of the leaf spring and it releases the cylinder retainer. Remove the retainer and the ignition will slide out of the housing. Straighten the leaf spring, and reinstall the undamaged cylinder retainer. Find the code and make a key as above.

As a force method, you should only use it if the other methods fail or are not applicable.

TNL



15. The cylinder retainer and the leaf spring that retains it.



# THRU THE KEYHOLE

*A Peek at Movers & Shakers in the Industry*

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## **ShatterGard Introduces Locksmith Partnership Program**

Usually, the weakest link in commercial and residential security is the windows. The most secure homes and commercial facilities are generally the ones with the least amount of glass. Glass is often chosen as an entry point because it breaks easily. All buildings and homes have walls, and in many cases sophisticated locking systems that are difficult to breach. However, a hammer or even a rock is all that is needed to breach most windows.

There are generally three basic ways to protect glass. Removal (boarding up), bars and/or gates, or replacement with bullet resistant material. Removing glass or boarding up windows is not an option in most cases. Windows allow light, improve aesthetics and are necessary for a variety of reasons. Bars and gates



allow light, but are aesthetically not appropriate for many applications. A remaining option to retain the appearance of glass is to replace existing glass with ballistic (bullet resistant) glass. Ballistic glass is not really glass, but any one of a combination of clear laminate materials. Beginning at \$60 per square foot, ballistic glass is very expensive and often provides a distorted image.

There is now an affordable and profitable solution...ShatterGard.

Although glass breakage cannot be eliminated, applying ShatterGard security film on a window can prevent shattering and eliminate penetration, stopping a would-be intruder. ShatterGard, an optically clear virtually impenetrable film is applied directly to the existing glass, increasing the strength of the glass by up to 300%.

In the event that the glass is struck

with sufficient force to break, the film holds all of the broken shards together. Holding glass together serves two purposes. First, it prevents an opening from being created from the broken glass, preventing a person from climbing or reaching through. Secondly, collateral damage (such as an injury from flying glass) is significantly reduced. A properly filmed window not only stops glass from flying, it also prevents other debris from flying through the window. Starting at \$10 per square foot installed, ShatterGard offers an affordable solution to most security headaches.

Filming glass is relatively inexpensive when compared to replacing glass with ballistic laminate. The film is applied to the existing glass, and can be done without the remodeling time and effort that is required to replace glass. In most cases film can be pre-cut and installed without disruption to the business or homeowner. If properly applied, the film is optically clear and does not alter the appearance of the glass. It is



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virtually impossible to tell which glass has been treated with ShatterGard in comparison to which glass has not been treated with ShatterGard.



Filming glass provides several benefits in addition to breakage control from intentional damage. Film can be either clear or tinted, with tinting beneficial to reducing heat and glare, which can provide significant energy savings. ShatterGard film also provides protection from ultraviolet rays. Protection from ultraviolet rays reduces fading of artworks, carpets and furnishings. Sometimes the UV protection becomes the primary reason to film, i.e., museums and art galleries.

Another selling point is that filming windows also increases protection from storm damage, such as tornado's hurricanes and even earthquakes.

Due to the affordability, homeowners worldwide are utilizing ShatterGard in high crime areas to prevent burglaries. Most access by residential burglars is gained by either

reaching through or climbing through broken glass.

Adding ShatterGard to your line of security products is an excellent way to increase revenue. As a part of the ShatterGard Locksmith Partnership Program, you can sell ShatterGard Security Window Film in a program that is clear profit to you. ShatterGard film is available in different thickness and tints, depending on the necessary application.

The Locksmith Partner Program is painless; no inventory purchase is required and there is no need for special tools. After making the sale and providing the window measurements, ShatterGard will contact the client to arrange a convenient installation date. All that is left to do is wait for the 15% commission check to arrive by mail.

ShatterGard film is maintenance free and reduces or eliminates the need for additional window protection. ShatterGard films come with a 15-year commercial and a lifetime residential warranty.

The ShatterGard Locksmith Partner Program is available only to licensed locksmiths. ShatterGard operates world wide, and potential

clients include both commercial and residential customers. The corporate client list includes Marriott Hotels, Zales Jewelers, Borders Books and BellSouth. Many retail clients such as Zales Jewelers, film internal showcases to prevent smash and grab thefts.

A basic dealer starter kit begins at \$59.00, and additional materials (such as a large portable demo unit) are available. A ShatterGard website exists ([www.ShatterGard.com](http://www.ShatterGard.com)) to help educate potential clients as well. In addition to the Locksmith Partner Program, full dealerships with protected territories are also available. Contact Jordan Frankel with ShatterGard at 1-800-307-1649 or write to ShatterGard at 8351 Roswell Road, Suite 196, Atlanta, GA 30350 for additional information or for full dealership pricing.

For more information contact  
ShatterGard at: (888) 306-7998;  
Fax: (770) 730-0771;  
E-mail: [Partnership@shattergard.com](mailto:Partnership@shattergard.com);  
Web: [www.ShatterGard.com](http://www.ShatterGard.com) today and see why ShatterGard is known as "The Invisible Coat of Armor." Circle #313 on Rapid Reply Card.



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#SUB - 1,2,3,4,5,6



# THE CASH STATION

by Mark Gerhardt

**NCR**  
**5670**

**ATM Manufacturer:**  
NCR

**ATM Model #:**  
5670-0101-C297

**Safe Manufactured by:**  
NCR

**Safe Model #:**  
Unknown



**Safe Measurements:**  
38-3/4" high, 18-1/2 inches wide, 26-1/4 inches deep.

**Door Measurements:**  
37-1/2 inches high, 17-1/4" wide.

**Handle Type:**  
L-Handle

**Handle Location:**  
4-inches from edge of door.

**Handle Rotation:**  
Counter-Clockwise to open.

**Dial Center to Handle Center:**  
5-inches right of dial center and 6-inches down.



# THE CASH STATION



## NCR 5670

**Dial Location:**

14-1/2 inches down from top of door.  
9-inches left of opening edge.

**Number of Door Locking Bolts:**

One flat steel plate.

**Door Locking Bolt Locations:**

In center of door 2-inches back from door surface.

**Door Locking Bolt Diameter:**

Flat steel plate 1/4" thick.

**Door Thickness to Bolt Center:**

2-inches

**Door Thickness to Lock Case:**

1-3/4 inches.

**Door Thickness to Back of Lock:**

2-7/8 inches

**Lock Type:**

LaGard 3330, UL Group 2

**Lock Description:**

3-wheel key changeable lock.

**Lock Case Thickness:**

1-1/8 inches.

**Number of Wheels:**

3

**Driver Location:**

Rear

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

**Lock Notes:**

**External Relock Device Type:**

None

**External Relock Device Drill Point:**

N/A

**Special Notes:**

There is a 3/8-inch piece of hard plate which is free floating in cavity welded on back of door which doubles as the lock mounting plate.



# Time Lock Basics

Part 2

by Charles Stephenson, CPS

**L**et me preface this by stating that while most of the procedures implemented during installation and maintenance will be performed alike for all brands and makes of time lock cases and movements, you should always consult the directions and instructions of the specific manufacturer when working on their products.

Now that you have an understanding of the basic components of a mechanical time lock, we will move on to the installation, maintenance and trouble shooting.

The first step in time lock work after a good education from a reputable source such as Lockmasters, Mark Bates or Timemasters, is the purchase of high quality tools. Here again, any of the above are excellent sources for these products. This is not a job for a "shade

tree mechanic at heart" but rather a technician who desires to produce high quality work and build a reputation as a skilled craftsperson.

#### **Tools needed are:**

- ✓ Precision screwdrivers in a variety of sizes, both straight blade and Phillips.
- ✓ High quality hex wrenches up to 5/16-inch.
- ✓ Needle nose pliers from small to medium.
- ✓ A couple sizes of stainless steel tweezers.
- ✓ A couple new and clean toothbrush with soft and medium bristles.
- ✓ Disposable lint free towels.
- ✓ Time delay device warning stickers.
- ✓ High quality G322L grease.

- ✓ Acid brushes.
- ✓ A variety of brushes.
- ✓ A box of disposable wipers from a local janitorial supply is always a good item to have on hand as is a bottle of a good cleaner such as 409.

One of the most important items is a good light and I do not mean the two-cell flashlight on your belt. A good high intensity light (120v) with a clamp to free both of your hands, will be worth its' weight in gold time and time again.

We must add a few items to the above list since we are going to also be

servicing electronic time locks and movements. The most important consideration may be for the safe handling. I think we are all well aware of the dangers of static electricity, so carry an anti-static work mat and grounded wrist strap. The wearing of the wrist strap and attachment to a suitable object is the first consideration before touching the lock.

**T**he second consideration will be for clean hands. A can of compressed gas for removing dust, a can of electronic component cleaner and a high quality ohm/test meter are necessary. An ink eraser is advisable for removing corrosion caused by old batteries. A couple of

electrostatic discharge bags for transporting electronic movements is indispensable.

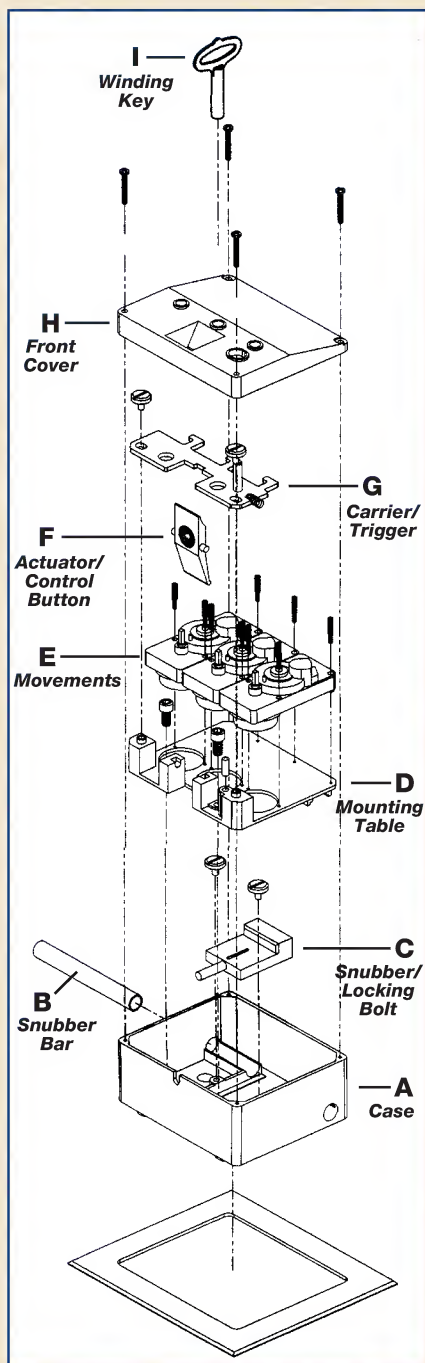
**Installation**

Let us install a new time lock. We do not care whether it is has two or three movements since we are going to approach the job just the same. Step one is to read the lock manufacturer's directions carefully. Again, we read the instructions completely and follow them precisely. This step cannot be emphasized too frequently due to the fact that we want to build our personal knowledge, build a reputation and ensure that we do not void the manufacturer's warranty. Everyone in the business has their own story to tell (good and bad) about an experience with a manufacturer concerning a warranty. Let us not go there. Let us be professional.

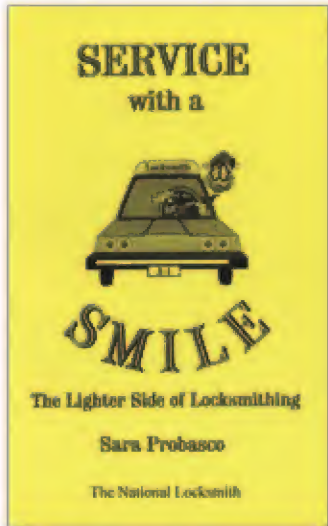
Next, we will prep the mounting surface and this may mean removing the old lock. This should present no problem, so we will proceed to removing paint scale, dried grease and corrosion from the mounting surface of the lock. This is where our brushes, disposable wipers and cleaner earns their keep and spotlights us as professionals. Do not forget to clean the snubber bar while ensuring that it is secure.

We now will need to remove the cover from the time lock, then the carrier, laying the parts out on a clean disposable wiper or shop cloth. To do this we should wind some time into the movements to relieve the pressure against the carrier. Be careful that parts do not get away from you when removing the carrier and go slowly so you can remember how to properly replace the parts when ready to reassemble. We should now be able to remove the mounting table with the movements still attached. Again we want to inspect the locking mechanism and how they attach one to another.

Take the base portion of the case and insert the mounting bolts (screws) one at a time, placing the rubber washer (bushing) onto the bolt behind the case. This washer will dampen any vibration caused when closing the door, etc. Now, hold the case up to the mounting surface, carefully guiding it onto the snubber bar, and start each bolt a few threads at a time until all three or four have been properly tightened. Care must be taken not to over tighten and possibly bind or warp the case. A drop of



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medium strength thread locking compound on each bolt will ensure the bolts do not back out after repeated door slamming.

At this point, you will reattach the mounting table, will all of the movements in place, the carrier and finally the cover. Remember that you may have to wind some time onto the movements when installing the carrier. Test the lock to assure that all moving parts are working freely (no binding) and that the movements are still synchronized. I will discuss movement synchronization later.

### Servicing

The servicing of time locks is generally done in conjunction with a contract between the servicing company and the client (i.e., bank, jewelry store, etc.). A normal servicing will occur once a year and requires removing each movement and either replacing with a "loaner" or a direct replacement. The movement that is removed then undergoes disassembly, intense inspection, sonic and selective hand cleaning, lubrication and reassembly. The movement is then adjusted for the correct beat. Some service companies will remove, inspect, clean and replace the

movements at the door. The cleaning lubrication and inspection of the time lock case is also part of the annual servicing.

Safe technicians must decide whether to invest in the equipment with which to perform in-house cleaning or opt to contract a local watchmaker to perform the work for them. If you are just getting started in the lock service business your best move may be to find a good watchmaker.

While the movements are removed, you must clean, lubricate and inspect the case. This is where you will want to refer to the specific manufacturer recommendations. Some cases require lubrication be limited to a very light coating of G322L grease at all points of metal to metal contact. The cleaning is accommodated better with the use of one of the brushes I recommended earlier. An acid brush is perfect for applying a new coat of grease. Plumbers and others use acid brushed for cleaning with acid before soldering and therefore the brushes are both durable and inexpensive.

I am omitting any information about the servicing of movements because I firmly believe that the

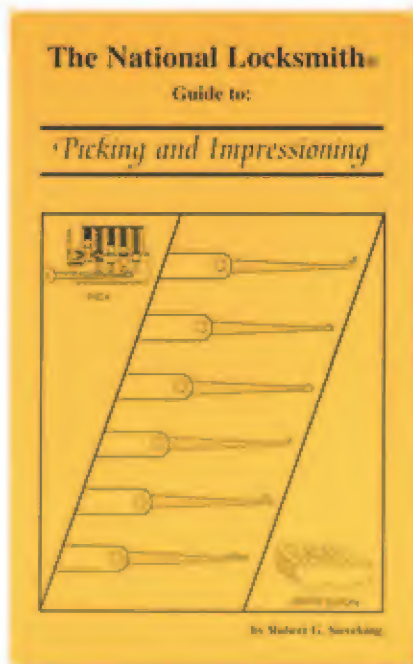
proper venue for learning these procedures are in a classroom or under the supervision of an experienced time lock mechanic, not in the pages of a magazine.

After servicing the time lock case you will replace the movements that have been reattached to the mounting table. Next, replace the carrier and synchronize the movements to the time lock.

**S**ynchronization means that each movement should engage the carrier at the same time. This ensures that each of the movements is able to unlock the time lock at the "0" hour. Opening time should not exceed 15 minutes early and should never be late. Adjust the dial indicator on the escapement so that whenever the unlocking pin on the dial contacts the arm of the carrier the dial indicator points to "0".

The installation and servicing of time locks can become a very profitable part of your business if you are inclined to invest money and time to learn. I hope that you may have gained a little insight into how basic these skills can be, and are, encouraged to investigate further.

TNL



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#PI



# PRESO-MATIC

## Keyless Locks

by Tom Lynch

**Y**ears back, I was fortunate enough to have been given many old copies of locksmith trade magazines, some dating back to the 1970's. While looking through each copy making sure I absorbed each and every article, I would come across advertisements for a product called Preso-Matic keyless locks. (See *photograph 1.*) The ads always interested me, however, all of my experience with keyless locks was limited to the current products so heavily advertised and presented in present day magazine ads and trade shows. Assuming that this must have been a product of the past, I never took a closer look.

I decided to ask around and see what other locksmiths thought about the product since I have never seen one in all my travels. The response varied from, "Oh yeah, the little padlock, I sell em all the time," to "What's that?" I also made phone calls to friends in the industry who did know the name, but have had either very limited exposure or have never seen one. Most commented on the fact that they have been around for a long time, but that they have only seen one or two. With comments like these, I just had to check it out myself. Before we continue, lets make it clear that I said Preso-Matic keyless locks not Presto locks! This is not a padlock.

In contacting the manufacturer, I was greeted very nicely as I explained my curiosity about their existence. To begin, I was told that Preso-Matic keyless locks have been on the market for 33 years, with many units

sold and installed in commercial and municipal applications. I was told the reason why locksmiths are not as familiar with the product as the manufacturer would like, is that locksmiths are uncomfortable with the installation. They don't like having to cut out a rectangle as compared to drilling a round hole.

The manufacturer admitted that their installation is different, however it is something that can be accomplished by any professional locksmith. It is this aspect of the product that will cause someone to have a negative experience if not properly performed. Having always been an advocate for exploring all possibilities and knowing the attitudes of my fellow locksmiths, I decided to give one a try.

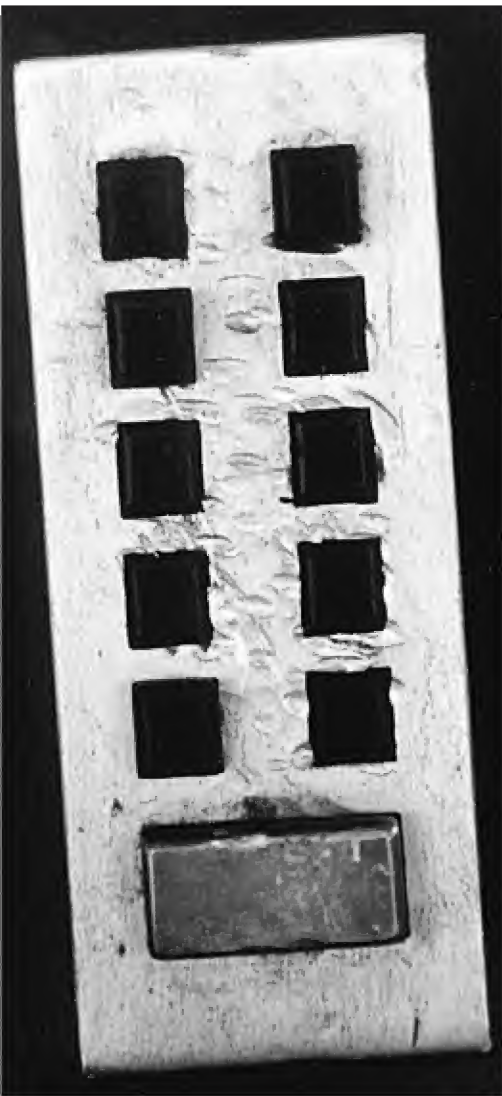
Upon arrival of my first unit and mount, I was impressed with the weight and the solid feel of the body. Then I inspected the instructions. In all honesty I was scared to death by the written portion, however, after reviewing the photographic instructions it all made sense. I would agree with fellow locksmiths that this first impression may scare you away, but don't let it.

Luckily, the lockset was sent to me with the bolt installed so that I could test it immediately. After inspecting the unit I proceeded to abuse the bolt by prying, pulling and finally striking it with a hammer. The bolt held its ground from every attempt except direct blows to the face of the bolt. I was able to punch it back, however, it had taken several blows and its diagnostic value will be seen later on in this article.

The next target of the hammer was the lock body and buttons. Hit after hit proved nothing. The body of this lock withstood abusive blows and did not fall apart. (See *photograph 2.*) The buttons did get jammed in the housing, however, this was caused by the burrs and dents on the faceplate of the body restricting the return of the

### 1. The Preso-Matic keyless lock.





**2. The body of this lock withstood abusive blows and did not fall apart.**



**3. I began an exhaustive pounding on the interior cover and buttons with the wood handle of the hammer.**

button. After disassembly, I found no damage at all to any springs, buttons or components. With slight filing I was able to put this lock back in service!

**A**nother positive feature is that this unit is not surfaced mounted. It maintains its integrity while providing a more sleek appearance by being mortised into the door.

I began an exhaustive pounding on the interior cover and buttons with the wood handle of the hammer. I wanted to see if the locking button would hold up since it sits loosely in the cover and appears to be flimsy. (See photograph 3.) The product was designed this way so as to allow heavy or swift blows to throw the bolt without breaking the button or components in comparison to a rigid device. This also held up well and worked according to the manufacturer claims.

Installation of the Preso-Matic is really quite simple. First you must determine the backset. Using the paper ruler template supplied with the lock, you would identify either 2-3/8, 2-3/4 or a 3" backset. Each backset is identified with a letter code of A, B, and C respectively. (See photograph 4.)

At the edge of the ruler template are hash marks with these letters. This is to identify where the edge of the interior cover will end. For example: A 3" backset is equal to the letter C, and that corresponds to the



**4. Each backset is identified with a letter code of A, B, and C respectively.**

very last hash mark on the template.

This information is important. You cannot have any window, or raised panels in these areas or your cover will hang over the edge.

Now verify the door thickness. If your door is anything other than 1-3/4", you will need either spacers or a thick door adapter.

Now mark the door using the template provided. You can choose three methods from which to mark and cut the prep, but the end result must be a rectangular cut out of 5-3/8" high and 1-7/8" wide. (See photograph 5.)

Using a 1" hole saw you would have to make 12 cuts. Using a 2-1/8" hole saw you need only cut 3 holes, with some slight edge clean-up.

A jigsaw or SawzAll can also be used by just drilling the four corners of the template marks and work around the edges, this works great and leaves little edge cleanup. I have also used the Kwikset deadbolt jig to drill the first 2-1/8" hole and edge bore, then repositioned over the remaining areas to produce a nice prep.

There are two types of deadbolt

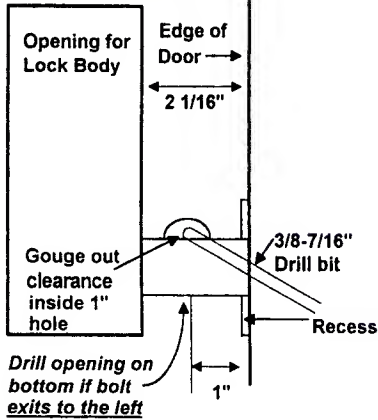


**5. The end result must be a rectangular cut out of 5-3/8" high and 1-7/8" wide.**



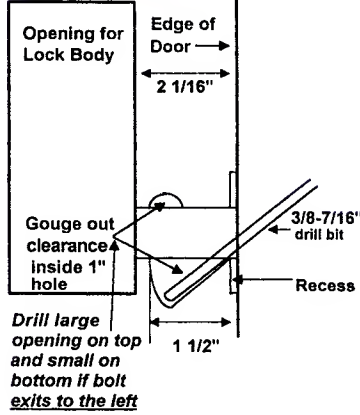
**6. A recess must be made to accommodate a "multiplying lever" which allows the bolt to achieve a full 1" throw.**

**Model 8101 example**  
Front view of door



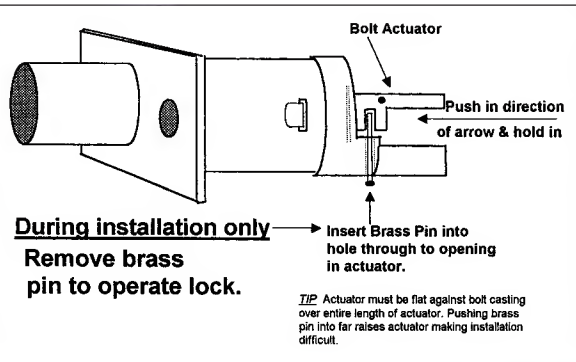
**A. You only need to drill or chisel a small indentation for the bolt lug to travel then install the unit.**

**Model LT8102 Example**  
Front view of door



**B. This recess needs to be tapered towards the edge of the door in order to allow the movement of this lever to be unimpeded.**

**C. Place the bolt actuator inside the rear of the bolt housing and insert a brass pin through the small opening in the bolt tail.**



latches (which Preso-Matic refers to as the lug) available, depending on which backset is used. (See photograph 6.)

When choosing a backset of 2-3/8 or 2-3/4" you only need to drill or chisel a small indentation for the bolt lug to travel then install the unit. (See illustration A.)

If you are using a 3" back set you need to do one more thing. It is this last "thing" that will make or break an installation. Inside the edge bore a recess must be made to accommodate a "multiplying lever" which allows the bolt to achieve a full 1" throw. This recess needs to be 1-1/4" in length, 5/8" at the deepest end and tapered towards the edge of the door to allow the movement of this lever to be unimpeded. (See illustration B.)

The problem that exists at this point is that when you insert the bolt to test for proper operation, you stand a chance of this lever getting jammed if the channel you cut is not at a consistent angle. As I mentioned earlier, these bolts are tough and trying to pry it out may damage the door. If this occurs simply try to apply pressure through the backside of the bolt using a small punch. This will



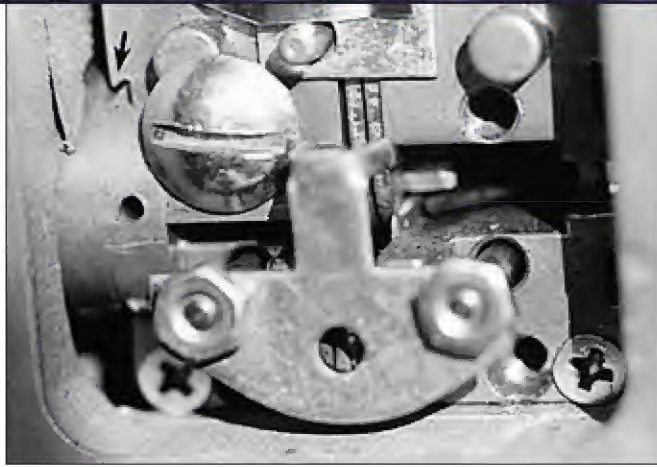
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**7. Insert the lock body into the door and match the dovetailed cutouts on the bolt to join the two pieces.**



**8. At the bottom of the lock body there are two holes. These holes are for the reset button spring.**



**9. Insert the large flathead screw and snug it up, do not over-tighten!**

drive the lever back to its appropriate position for removal.

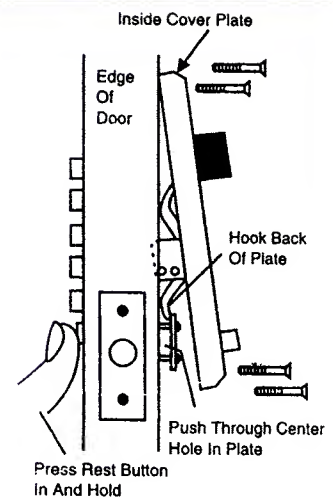
At first I was a little apprehensive about "gouging" the recess as suggested by the manufacturer. I was concerned about weakening the door edge by removing too much meat. With a little finesse I was able to cut away a channel which left ample strength to the door and sufficient space for the lever. On steel doors this would not be of concern.

This recess or channel is cut according to the hand of the door. If you have a left-hand door the lever recess must be on the bottom. If you have a right door the lever recess must be on top. After some practice this is not that difficult to achieve.

With the bolt prep complete, you

must now place the bolt actuator inside the rear of the bolt housing and insert a brass pin through the small opening in the bolt tail. (See illustration C.) This will hold the bolt in the thrown position and keep the multiplying lever clear to allow easy installation. Do not secure with screws yet.

Once the bolt is installed insert the lock body into the door and match the dovetailed cutouts on the bolt to join the two pieces. (See photograph 7.) At the bottom of the lock body there are two holes. These holes are for the reset button spring. (See photograph 8.) This spring will be positioned on the same side as the bolt. Only one spring is needed when installing a deadbolt model. Next, insert the large flathead screw and snug it up, do not over tighten! (See photograph 9.)



**TIP** Tape brass pin to inside of cover & save for future use

**D. At this point secure the bolt with the supplied screws.**

You must now remove the brass pin from the bolt actuator. Place the pin on the inside of the interior cover with a piece of tape to save for future use if needed. Position the interior cover and using the four 1-1/2" screws gently tighten while aligning the body and bolt for a flush finish. At this point secure the bolt with the supplied screws. (See illustration D.)

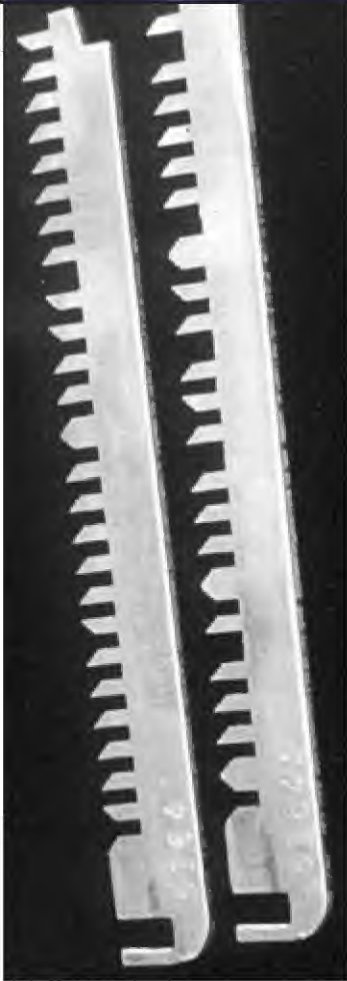
Test the unit for smooth operation and lubricate the bolt only. Installation of the strike is basic.

The most noticeable feature of this lockset is the automatic bolt. After pressing the last number of the combination the bolt will automatically retract.

Remember that if you are using any backset other than the 3", the installation consists of basic crossbores and a minor recess for the lug. The reason for this is that the bolts for these backset do not have a multiplying lever and therefore do not have a 1" throw. Achieving only 5/8" is below industry standard and it appears that no design change is available to improve this feature.

Preso-Matic keyless locks are also available with a spring latch. The lock bodies come in a variety of finishes, and a number label is available to enhance identification of the buttons.

The combination of the lock is determined by combination slides, which allow the lock to also be master keyed if it is desired. (See photograph 10.) Additional combination slides are available for a cost of \$10 and custom numbers are \$15. Master slides are also available for "masterkeying". These slides are easily changed and you can



**10. These slides are easily changed and you can utilize 4 number combos or 7 number.**

utilize 4 number combos (10,000 possible combinations) or 7 number (10,000,000 possible combinations.)

The Preso-Matic keyless lock has proven to be a mixed bag of opinions and it has its pros and cons depending on the application and the model chosen. It has proven to be extremely easy to operate with one finger opening and closing, making it attractive for use in ADA compliance. Recombination is fast and easy and ensures recurring revenue.

The large buttons aid the visually impaired and allow for rapid entry and exit. The ability for the lock to be mastered is unlike any other mechanical keyless unit available on

the market. Each unit has a privacy function as well. Its rugged design withstands impacts far beyond the endurance of standard locksets.

After working with this product I was given a direct lead from the manufacturer for a repair request by a commercial customer who had just experienced a bolt failure after 15 years of service!

In *photograph 11*, you will see how the bolt actuator tail has rolled over, which allowed the bolt to be pushed back into the bolt casing without passing through the slides.

In *photograph 12*, you can see the damage caused to the lock body that



**11. The bolt actuator tail has rolled over, which allowed the bolt to be pushed back into the bolt casing.**

## The Ultimate Technitips Collection

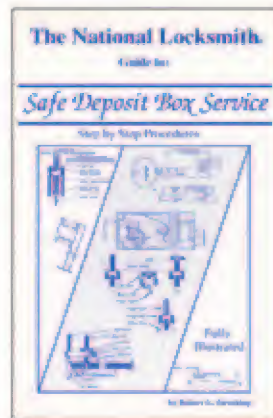


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#TIPS - 2

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#SDBS - 1



12. See the damage caused to the lock body that absorbed the pressure from the bolt actuator.



13. Drill a hole directly in the center of the large exterior button until you break through the material.

absorbed the pressure from the bolt actuator. This in turn caused the combo slides to rub and bind against one another restricting proper operation. As a result of my findings during my evaluation of this locking device; it was determined that while the blot was extended, something struck the end with great force. This was the case of the above mentioned customer. Their bolt had been struck by a forklift while the door was open and the bolt extended, and was not due to lack of product quality.

So how do we pick this tough guy? You don't, but as "professionals" we may be called upon to bypass this access control device, so here is how. Drill a hole directly in the center of the large exterior button until you break through the material. (See photograph 13.)

Place a probe, small screwdriver or a piece of flat spring steel into the hole and with an upward motion, work the combination slides up. This will create an open position in the

slides and allow the bolt actuator to pass and retract the bolt! A quick replacement of this button and your unit is back in service.

I hope you now know who Preso-Matic is and what they have to offer. Give them a call and check this product out.

For more information on Preso-Matic locks call: (407-324-9933), or circle 306 on Rapid Reply. **TRL**

## IC Cores: Small Format

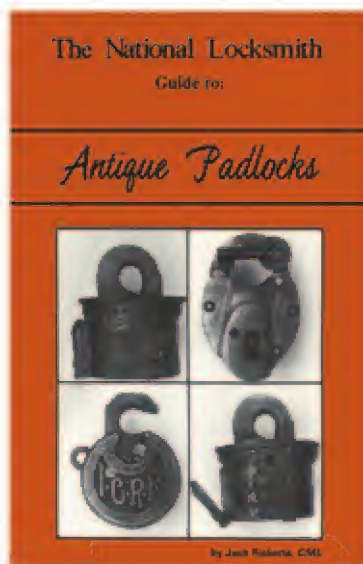


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#ICSF - 1

## Antique Padlocks



Finally there is a book to give you all the information you need about old interesting locks.

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#PAD - 1

# BUSINESS BRIEFS

## **Security Lock Strengthens Ingersoll-Rand Ties**

Security Lock Distributors, has announced the expansion of its relationship with Fortune 500 company Ingersoll-Rand by adding the complete line of Schlage mechanical and electrical hardware to its distribution centers. This addition complements Security's existing commitment to sister companies. Von Duprin and LCN, allowing Security to offer a complete Ingersoll-Rand mechanical/electoral hardware package.

For more information call: 800-847-5625; Fax: 800-878-6400; E-mail: seclock@in.netcom.com; Web: www.seclock.com.

## **Akron Hardware Launches New Website**

Akron Hardware has recently launched a new website. The new site details the company's product offerings of door hardware from Corbin Russwin, Yale, Norton, Rixson, Sargent, Arrow, Adams Rite, Stanley, Ives, Locknetics, and Dorma.

Visit the web site at: www.akronhardware.com.

## **American Security Distribution Launches Visual Express**

American Security Distribution is offering what they call Visual Express, the ultimate order processing system. This new system combines the power of real time order entry, price check,

inventory status and CD-ROM catalog. Visual Express may be accessed on the Internet through a service provider or toll free number. Simple "point and click" procedures allow even a new employee to take full advantage of the speed and efficiency of the system.

For more info call: (714) 996-0791 ext. 797

## **Boyle & Chase Offers Simplex 4000**

Boyle & Chase is stocking the new battery-operated Simplex push-button lock. The Simplex 4000 series is a totally stand-alone unit. It does not require a computer to program it or any special wiring to power it. It runs on four standard AA batteries and is easily installed or retrofitted on any door from 1-3/8" to 2-1/2" thick.

For more information call: 800-325-2530 or 800-248-2295. Circle #314 on Rapid Reply.

## **McDonald Dash Offering PowerLever**

McDonald Dash is now stocking the Mas-Hamilton PowerLever door lock series, a keyless electronic access control door lock. PowerLever does not use batteries or external power, wiring and maintenance are not required.

Three models have been designed to control access for up to 96 users and retain up to 945 audit events. Circle #315 on Rapid Reply.

## **Monarch Web Site**

Monarch Tool and Manufacturing's web site for the Key Kop(tm) Locking Key Rings is up and available for examination. Visit the site at www.keykop.com. This is another effort to seek better ways to further serve security professionals.

## **Jet on the Web, Issues New Keys**

The entire Jet Hardware line can now be seen on the web in full color. Jet's address is www.jetkeys.com.

Also new from Jet are two

key blank assortments along with a limited time free offer of a keyboard.

Assortment BBA-10 consists of five each of the nickel silver standard blanks for keyways A through R, BA, DD, TB, TD and TE and composite

DE and JK. Assortment BB1-195 consists of all blanks in BBA-110 plus five each of Best's 5/16-inch longer blanks for some of the specialty products.

New transponder keys include: GM97-N-PHT, GM99-N-PHT and DA31-N-PHT. Other new offerings include HU66-VW-PH, PZ1, B89, H67, HY12-NP, HY12-PH, HY13-NP, HY13-PH, HY14-NP, HY14-PH, MIT4-NP and Y153.

## **LaGard Names Director of Domestic Sales**

LaGard, Inc. has named George

Chenarides as Director of Domestic Sales, responsible for the management of all domestic

customers. Mr. Chenarides has a long history with LaGard products, having supplied them to his customers during his more than thirty years in the industry.

## **Jo-Van**

Jo-Van Distributors Inc.'s 1999 National Trade Show & Educational Seminar will be held October 1, 2 & 3rd, 1999. For more information contact Ron Wilson, Jo-Van Distributors at (416) 752-7210 or on the Internet www.jovanlock.com

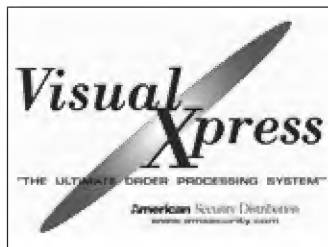
## **Streamlight Stinger®, Inc.**

The Streamlight Stinger® has received the underwriters laboratories (UL) listing mark signifying that the flashlight complies with nationally-recognized safety standards and requirements reviewed by UL, a leading, third party safety testing organization. The stinger is the first and only machined aluminum flashlight for the law enforcement professional to receive the UL safety rating. Circle #316 on Rapid Reply.

## **Darex Industrial Logs 300 Safe Weeks**

Darex Industrial, makers of drill and end mill sharpeners have experienced No Lost Time Injuries for a 300-week period. The time period began in 1993. No Lost Time Injuries defined by the Occupational Safety Hazards Act means that not one work related accident was severe enough in nature to cause a person to be unable to return to their job after attending to the injury.

For more information call: 800-547-0222 or visit the web at: www.Darex.com



# KEY CODES

## New GM Code Series S000A-S711K, Part 1

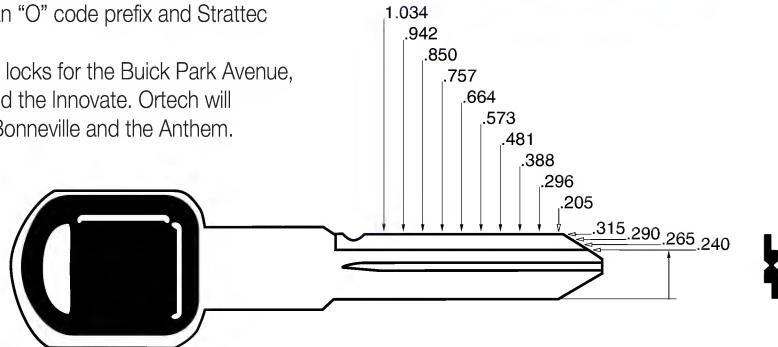
**The HPC 1200CMB and  
 1200PCH code cards for  
 this code series are  
 between pages 50-53.**

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 Innovate. 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

S000A 1131343342	S020A 3231131343	S040A 3231344232	S060A 3231131213	S080A 3231311342	S100A 3233113442
S001A 3221131124	S021A 3231132423	S041A 3231122423	S061A 3232332423	S081A 3232234234	S101A 3233234224
S002A 3221134222	S022A 3232134423	S042A 3231312423	S062A 3231243422	S082A 3231244243	S102A 3233223423
S003A 3221231332	S023A 3232322442	S043A 3232243133	S063A 3231344312	S083A 3231242313	S103A 3312242213
S004A 3221331132	S024A 3231343422	S044A 3232134244	S064A 3231122342	S084A 3231342244	S104A 3312112423
S005A 3231234242	S025A 3232331223	S045A 3231242133	S065A 3232244213	S085A 3232132442	S105A 3311233442
S006A 3231212422	S026A 3232321313	S046A 3231134213	S066A 3232313123	S086A 3231232442	S106A 3311242123
S007A 3231334243	S027A 3231131133	S047A 3231324342	S067A 323212313	S087A 3231134312	S107A 3312231312
S008A 3231243342	S028A 3232331212	S048A 3231234212	S068A 3232121242	S088A 3231213113	S108A 3312134234
S009A 3232123134	S029A 3231311312	S049A 3231244234	S069A 3231343112	S089A 3231342423	S109A 3313223423
S010A 3232131242	S030A 3232323423	S050A 3232311242	S070A 3231232312	S090A 3231342432	S110A 3313121242
S011A 3232113113	S031A 3231242442	S051A 3231124312	S071A 3232323113	S091A 3232331123	S111A 3312232313
S012A 3231211313	S032A 3232233113	S052A 3231123112	S072A 3231323123	S092A 3231133442	S112A 3313213124
S013A 3231324423	S033A 3231234422	S053A 3231242213	S073A 3231121312	S093A 3232213313	S113A 3311324212
S014A 3232313213	S034A 3232244313	S054A 3232334223	S074A 3231131122	S094A 3231124224	S114A 3313123213
S015A 3231342112	S035A 3231344223	S055A 3232132313	S075A 3232112422	S095A 3231313112	S115A 3312212423
S016A 3232342232	S036A 3231312242	S056A 3231234342	S076A 3232344212	S096A 3231231244	S116A 3311343112
S017A 3231231232	S037A 3231224212	S057A 3232312312	S077A 3232242113	S097A 3232123313	S117A 3311312242
S018A 3232112442	S038A 3231242122	S058A 3231324213	S078A 3231243113	S098A 3232213342	S118A 3311234422
S019A 3231233123	S039A 3232243313	S059A 3232324234	S079A 3232124212	S099A 3232213122	S119A 3313212242



# New GM Code Series

## S000A-S711K, Part 1

S120A 3312344224	S149A 3321334243	S178A 3322132442	S207A 3312124313	S236A 3311231322	S265A 3311242134
S121A 3313244234	S150A 3322342322	S179A 3321234424	S208A 3311242312	S237A 3311243242	S266A 3311242342
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S148A 3322344212	S177A 3322331213	S206A 3313134422	S235A 3312323112	S264A 3311231224	S293A 3313134223

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## S000A-S711K, Part 1

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Your total code and code machine  
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#IC - 2001



## New GM Code Series S000A-S711K, Part 1

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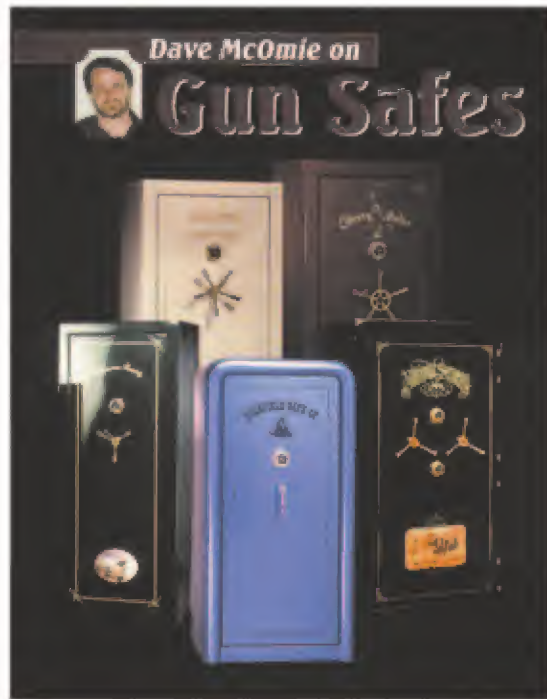


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## New GM Code Series S000A-S711K, Part 1

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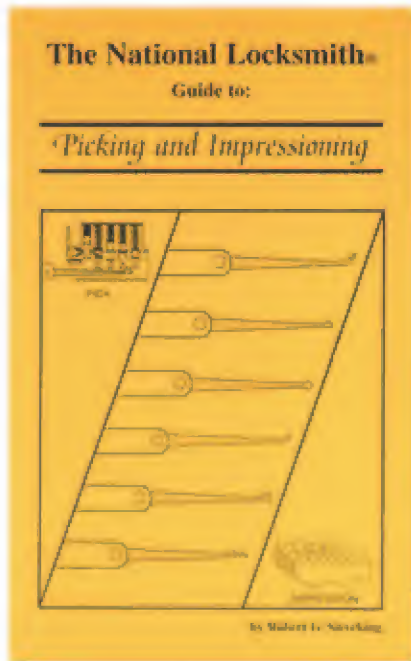


#GS - 1

# New GM Code Series

## S000A-S711K, Part 1

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S949A 1131212234	S979A 1123422312	S009B 1131323132	S039B 1123213122	S069B 1122331343	S099B 1121133442
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S951A 1131342134	S981A 1131342312	S011B 1131243434	S041B 1123212312	S071B 1121334312	S101B 1123113224
S952A 1131334342	S982A 1124243234	S012B 1132212313	S042B 1122432342	S072B 1123134244	S102B 1123132312
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S954A 1124232434	S984A 1124434422	S014B 1124224422	S044B 1121323312	S074B 1121334242	S104B 1123312234
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S962A 1123433442	S992A 1131321342	S022B 1123243442	S052B 1123221313	S082B 1123242243	S112B 1121244212
S963A 1131134424	S993A 1123431342	S023B 1123132132	S053B 1122134423	S083B 1122423434	S113B 1123313124
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S967A 1132121242	S997A 1131343422	S027B 1122343313	S057B 1121334222	S087B 1122311224	S117B 1122433422
S968A 1124434212	S998A 1131324213	S028B 1122433122	S058B 1123122124	S088B 1123113342	S118B 1121344234
S969A 1131242313	S999A 1123443132	S029B 1121234232	S059B 1122434232	S089B 1122442242	S119B 1123122434
S970A 1123434312	S000B 1223131124	S030B 1122323113	S060B 1122313432	S090B 1122124212	S120B 1121322342
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S972A 1124344242	S002B 1124332422	S032B 1122331124	S062B 1121323242	S092B 1121224342	S122B 1122343422
S973A 1124313312	S003B 1131323134	S033B 1123124324	S063B 1123224313	S093B 1123231213	S123B 1123123123
S974A 1124342234	S004B 1131312434	S034B 1122131232	S064B 1123313324	S094B 1123244232	S124B 1122323132
S975A 1131234222	S005B 1124242124	S035B 1121212423	S065B 1123242312	S095B 1122123122	S125B 1123223442



## Picking & Impressioning

Here is the most complete book ever published on picking and impressioning locks! You will have everything you need to know about how to open almost every kind of lock that can be picked.

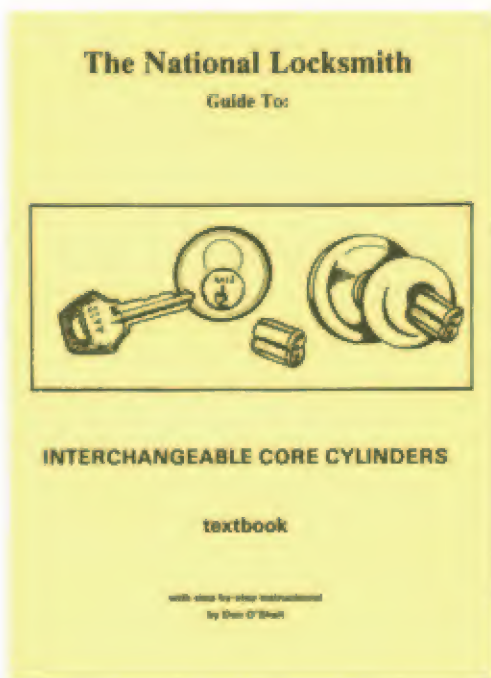
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#PI

# New GM Code Series S000A-S711K, Part 1

S126B 1123342122	S155B 1121244243	S184B 1123242134	S213B 1123133212	S242B 1123133224	S271B 1123112324
S127B 1123134434	S156B 1123323422	S185B 1122342134	S214B 1122133124	S243B 1123311334	S272B 1122112242
S128B 1121212242	S157B 1122131224	S186B 1121331224	S215B 1121312234	S244B 1122313242	S273B 1122421334
S129B 1123211242	S158B 1121332312	S187B 1122132312	S216B 1123223112	S245B 1123132213	S274B 1123121224
S130B 1123234313	S159B 1123124232	S188B 1123324313	S217B 1123112424	S246B 1121243424	S275B 1123324223
S131B 1122424334	S160B 1122424422	S189B 1123131232	S218B 1123234224	S247B 1123132324	S276B 1122312434
S132B 1123213123	S161B 1121313434	S190B 1122442334	S219B 1121312324	S248B 1122133423	S277B 1123231242
S133B 1121223312	S162B 1123234422	S191B 1122342112	S220B 1123123312	S249B 1123234212	S278B 1122342322
S134B 1123231343	S163B 1123342212	S192B 1122442124	S221B 1121233422	S250B 1121232312	S279B 1123113434
S135B 1121334224	S164B 1122134243	S193B 1121342324	S222B 1123322342	S251B 1123132234	S280B 1121334232
S136B 1121242122	S165B 1123242423	S194B 1122323112	S223B 1122442422	S252B 1123122442	S281B 1123324422
S137B 1123243422	S166B 1121134342	S195B 1123342313	S224B 1121324423	S253B 1122342342	S282B 1122342312
S138B 1123312422	S167B 1122334223	S196B 1123123242	S225B 1122313213	S254B 1123123432	S283B 1121244312
S139B 1123212313	S168B 1123221312	S197B 1123324212	S226B 1123134323	S255B 1121332422	S284B 1122112423
S140B 1121344313	S169B 1121343312	S198B 1122421124	S227B 1123134312	S256B 1121344224	S285B 1121132422
S141B 1123312312	S170B 1121313224	S199B 1123134222	S228B 1121124223	S257B 1123213242	S286B 1122313422
S142B 1122331242	S171B 1123122313	S200B 1121343424	S229B 1123123213	S258B 1122133422	S287B 1121223132
S143B 1121332242	S172B 1122311242	S201B 1123342242	S230B 1121124232	S259B 1123131244	S288B 1123242334
S144B 1123313213	S173B 1123343122	S202B 1123242112	S231B 1121242422	S260B 1121123242	S289B 1123133132
S145B 1122134233	S174B 1121242313	S203B 1122344232	S232B 1123132422	S261B 1123344222	S290B 1123313424
S146B 1122312313	S175B 1121331342	S204B 1122334242	S233B 1122431324	S262B 1122312312	S291B 1122112442
S147B 1121231322	S176B 1123342124	S205B 1122423342	S234B 1123313442	S263B 1123233113	S292B 1121342332
S148B 1123323312	S177B 1123134422	S206B 1122342434	S235B 1122332423	S264B 1123234242	S293B 1123244212
S149B 1122334422	S178B 1123112234	S207B 1121232442	S236B 1121344242	S265B 1121324232	S294B 1123121322
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S151B 1121324213	S180B 1123121242	S209B 1121323123	S238B 1122331332	S267B 1122323423	S296B 1121242213
S152B 1123342422	S181B 1123232422	S210B 1123343422	S239B 1122433242	S268B 1123344212	S297B 1122331312
S153B 1122343112	S182B 1123124422	S211B 1121322312	S240B 1123231124	S269B 1123131334	S298B 1121124422
S154B 1121342423	S183B 1121122423	S212B 1121212442	S241B 1123132242	S270B 1123134224	S299B 1122432312



## Interchangeable Core Cylinders

Covers all this...

- Best/Falcon/Arrow/Eagle/(A2)
- Best A3
- Best A4
- Corbin X Removable Core
- Corbin Z Removable Core
- Russwin Removable Core
- Emhart System 70 Removable Core
- Sargent Removable Core
- Schlage, Yale, Lockwood
- Medeco Removable Core

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#ICB - 1

# New GM Code Series

## S000A-S711K, Part 1

S300B 1123323113	S348B 1134232124	S396B 1213122434	S444B 1212323132	S492B 1124433132	S540B 1133242242
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S302B 1122343132	S350B 1134212234	S398B 1212134233	S446B 1212243313	S494B 1124321242	S542B 1133224313
S303B 1121334422	S351B 1132342242	S399B 1213112422	S447B 1134321312	S495B 1131324223	S543B 1133213424
S304B 1123312442	S352B 1132431342	S400B 1212332423	S448B 1134424242	S496B 1131343242	S544B 1132332342
S305B 1121132242	S353B 1133432442	S401B 1212423342	S449B 1211344312	S497B 1124313434	S545B 1133113242
S306B 1131212324	S354B 1134223422	S402B 1212124212	S450B 1134432312	S498B 1131122424	S546B 1133224212
S307B 1123434222	S355B 1132243422	S403B 1212332442	S451B 1211244232	S499B 1131233132	S547B 1134312312
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S309B 1131233424	S357B 1134234342	S405B 1211242342	S453B 1211312234	S501B 1131223442	S549B 1132242322
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S311B 1124232134	S359B 1134242442	S407B 1213112234	S455B 1123442442	S503B 1124224242	S551B 1133231213
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S336B 1123443342	S384B 1133442312	S432B 1212342434	S480B 1124223132	S528B 1133442134	S576B 1132422342
S337B 1132343132	S385B 1133233113	S433B 1211242334	S481B 1124313342	S529B 1133421342	S577B 1134213132
S338B 1133134422	S386B 1134231312	S434B 1213132234	S482B 1131334242	S530B 1132423122	S578B 1134233112
S339B 1133232342	S387B 1133244312	S435B 1212433242	S483B 1124213324	S531B 1132321313	S579B 1132334342
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S341B 1134213312	S389B 1133233242	S437B 1212324423	S485B 1131234434	S533B 1134242324	S581B 1134243434
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S346B 1133421224	S394B 1213134224	S442B 1213123242	S490B 1131342434	S538B 1132311334	S586B 1133242112
S347B 1132344213	S395B 1212112442	S443B 1212233132	S491B 1131132234	S539B 1133234232	S587B 1132231312

## 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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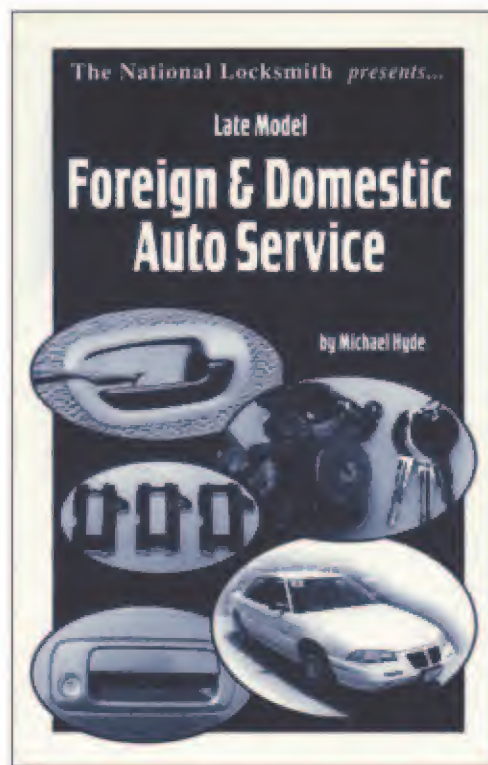


#LURE

## GM Code Series S000A-S711K, Part 1

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S591B	1132424232	S655B	1132324212	S719B	1223231332
S592B	1132313234	S656B	1132434222	S720B	1213324312
S593B	1133423112	S657B	1134233442	S721B	1213342422
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S595B	1134231342	S659B	1132433112	S723B	1223113242
S596B	1132342334	S660B	1133212313	S724B	1213423122
S597B	1133223113	S661B	1132443132	S725B	1213233113
S598B	1133212422	S662B	1133434422	S726B	1213342432
S599B	1134242234	S663B	1133221312	S727B	1221321342
S600B	1132243124	S664B	1133132134	S728B	1221343422
S601B	1133122423	S665B	1132423242	S729B	1223244312
S602B	1132334232	S666B	1132433442	S730B	1213223442
S603B	1134211334	S667B	1132313213	S731B	1223313434
S604B	1132422434	S668B	1134232242	S732B	1213422134
S605B	1133423234	S669B	1132213422	S733B	1221312124
S606B	1132322442	S670B	1133123442	S734B	1213224313
S607B	1132243342	S671B	1134312134	S735B	1223213422
S608B	1132213242	S672B	1133123424	S736B	1213242242
S609B	1132323342	S673B	1132431312	S737B	1213134434
S610B	1132234422	S674B	1132242342	S738B	1221132312
S611B	1134212324	S675B	1134224324	S739B	1213323342
S612B	1133233123	S676B	1133442434	S740B	1221213122
S613B	1132233242	S677B	1132242113	S741B	1213342242
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S617B	1132434312	S681B	1134231224	S745B	1213242334
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S619B	1134232422	S683B	1133213442	S747B	1213343422
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S621B	1132344312	S685B	1132423422	S749B	1223131212
S622B	1132233113	S686B	1132244212	S750B	1213423422
S623B	1134212442	S687B	1133124312	S751B	1213344342
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S625B	1133134432	S689B	1213221342	S753B	1213324232
S626B	1134213434	S690B	1223123112	S754B	1213234242
S627B	1134313122	S691B	1221334212	S755B	1223113422
S628B	1133224242	S692B	1213443132	S756B	1221334422
S629B	1132323312	S693B	1213311334	S757B	1223224312
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S638B	1133424342	S702B	1221212313	S766B	1221134232
S639B	1132313324	S703B	1213443312	S767B	1213422312
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S642B	1133112434	S706B	1223312442	S770B	1221324313
S643B	1133231343	S707B	1221233113	S771B	1221343313
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S648B	1133443122	S712B	1213234422	S776B	1213324422
S649B	1133422124	S713B	1223243134	S777B	1213224342
S650B	1134234434	S714B	1213431134	S778B	1221243312
S651B	1132342243	S715B	1213223423	S779B	1221132442

# Foreign & Domestic Auto Service



This book represents the best work of Automotive Locksmithing guru Michael Hyde, author of the famous AutoSmart.

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#FDAS - 1



# New GM Code Series

## S000A-S711K, Part 1

S780B 1213213242	S844B 1211312324	S908B 1212343124	S972B 1212324244	S036C 1221244342	S100C 1233224213
S781B 1213442324	S845B 1213122312	S909B 1134423312	S973B 1212423312	S037C 1213434312	S101C 1233223242
S782B 1213344212	S846B 1211323242	S910B 1213122124	S974B 1212342442	S038C 1221212312	S102C 1232344242
S783B 1223123113	S847B 1212331312	S911B 1212234242	S975B 1211313434	S039C 1213243313	S103C 1232342324
S784B 1223123424	S848B 1212442242	S912B 1134323442	S976B 1213132242	S040C 1223113342	S104C 1232332442
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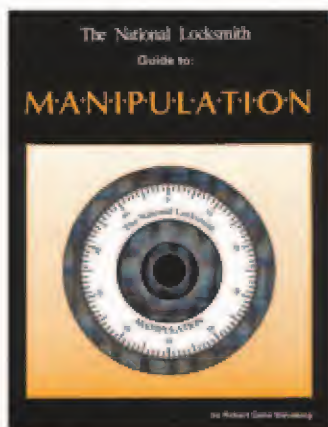
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			S672C 1243213122	S736C 1242122442	S800C 1313132313
			S673C 1242121242	S737C 1242332324	S801C 1313121334
			S674C 1234313324	S738C 1242423342	S802C 1313434212
			S675C 1242244334	S739C 1242324312	S803C 1312242113
			S676C 1234312334	S740C 1242434324	S804C 1313212242
			S677C 1243213242	S741C 1234434342	S805C 1312122342
			S678C 1242332442	S742C 1243112324	S806C 1313322342
			S679C 1234313112	S743C 1243123242	S807C 1312421324
			S680C 1242112422	S744C 1242332234	S808C 1312434342
			S681C 1242424422	S745C 1242442124	S809C 1312423122
			S682C 1242213132	S746C 1243213422	S810C 1312324212
			S683C 1242123132	S747C 1242133122	S811C 1313132312
			S684C 1234342334	S748C 1242324434	S812C 1312242134
			S685C 1242442242	S749C 1234344222	S813C 1313342212
			S686C 1234243242	S750C 1234342124	S814C 1312422134
			S687C 1243122312	S751C 1242321242	S815C 1312234242
			S688C 1243132124	S752C 1243132422	S816C 1312131244
			S689C 1243122434	S753C 1242121334	S817C 1313134422
			S690C 1242213312	S754C 1242124212	S818C 1313424312
			S691C 1234311312	S755C 1242432342	S819C 1313421312
			S692C 1243112442	S756C 1242442422	S820C 1312334212
			S693C 1234422134	S757C 1234343442	S821C 1312313424
			S694C 1242133422	S758C 1242432434	S822C 1312231343
			S695C 1242232334	S759C 1234242312	S823C 1313244342
			S696C 1234434222	S760C 1242442334	S824C 1313342442
			S697C 1234311224	S761C 1234431224	S825C 1312243124
			S698C 1242231134	S762C 1242132434	S826C 1312234422
			S699C 1242244242	S763C 1242123434	S827C 1312242434
			S700C 1234423242	S764C 1234434312	S828C 1313134244
			S701C 1242434232	S765C 1234321342	S829C 1313343423

# Manipulation Home Study Course

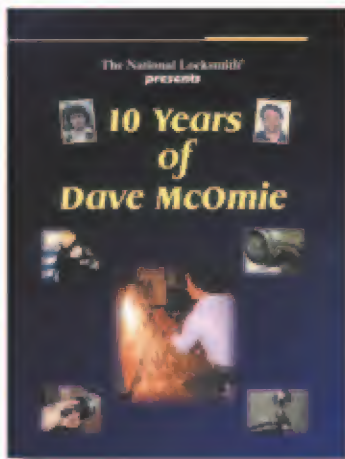


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#MAN - 1

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#DM - 10

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S830C 1313223342	S894C 1312332342	S958C 1311334234	S022D 1244223434
S831C 1313244312	S895C 1313223113	S959C 1311323442	S023D 1244213442
S832C 1312234212	S896C 1312123124	S960C 1244211224	S024D 1243442234
S833C 1312442234	S897C 1312324422	S961C 1243443132	S025D 1244221334
S834C 1312311334	S898C 1312122312	S962C 1243232442	S026D 1243224312
S835C 1312242312	S899C 1313132124	S963C 1244331224	S027D 1243242312
S836C 1313224212	S900C 1312332423	S964C 1244343132	S028D 1244234324
S837C 1313321312	S901C 1312132242	S965C 1243231242	S029D 1244331312
S838C 1312324313	S902C 1313244313	S966C 1244234232	S030D 1243324422
S839C 1313224224	S903C 1313423442	S967C 1244224242	S031D 1311223442
S840C 1313224232	S904C 1313424342	S968C 1243243242	S032D 1244231324
S841C 1312331312	S905C 1312434222	S969C 1311312242	S033D 1244342324
S842C 1313231212	S906C 1313231134	S970C 1243323132	S034D 1243313324
S843C 1312312242	S907C 1312323112	S971C 1311334242	S035D 1311322442
S844C 1313124213	S908C 1313442434	S972C 1243313112	S036D 1244212334
S845C 1312342334	S909C 1312324234	S973C 1243231124	S037D 1311242324
S846C 1312123422	S910C 1312442442	S974C 1311343122	S038D 1243224342
S847C 1313442342	S911C 1313134223	S975C 1244223312	S039D 1243322442
S848C 1313224422	S912C 1311232242	S976C 1311313242	S040D 1311223313
S849C 1313132134	S913C 1244323122	S977C 1311323312	S041D 1311344213
S850C 1313313122	S914C 1243423242	S978C 1243243422	S042D 1311331324
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S852C 1313323112	S916C 1244343342	S980C 1311231334	S044D 1311242312
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S854C 1312342422	S918C 1244233242	S982C 1311342342	S046D 1243434222
S855C 1312321342	S919C 1244212124	S983C 1244343312	S047D 1311223242
S856C 1312213242	S920C 1311344313	S984C 1311324312	S048D 1311313422
S857C 1313344212	S921C 1243342124	S985C 1311342312	S049D 1243221312
S858C 1312443132	S922C 1243344312	S986C 1311332313	S050D 1311342134
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S863C 1313122313	S927C 1244224334	S991C 1243242434	S055D 1311334244
S864C 1313421224	S928C 1243432242	S992C 1244322312	S056D 1311244242
S865C 1312344213	S929C 1311223422	S993C 1243431224	S057D 1243244232
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S867C 1312244212	S931C 1243342242	S995C 1244242242	S059D 1244232134
S868C 1313311324	S932C 1311324342	S996C 1244221242	S060D 1311343242
S869C 1312234234	S933C 1311243422	S997C 1311234342	S061D 1243422342
S870C 1312124212	S934C 1244332242	S998C 1311231243	S062D 1244342234
S871C 1313244212	S935C 1243223112	S999C 1243242342	S063D 1243424324
S872C 1312312313	S936C 1311224212	S000D 1344331124	S064D 1244324232
S873C 1313123442	S937C 1244334312	S001D 1243234422	S065D 1313312312
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S875C 1313123213	S939C 1311212424	S003D 1244313224	S067D 1312431312
S876C 1312133442	S940C 1244232312	S004D 1244312442	S068D 1313231224
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S892C 1312242342	S956C 1243431312	S020D 1311234312	S084D 1313212312
S893C 1313422334	S957C 1243223442	S021D 1243431134	S085D 1312434312

# New GM Code Series

## S000A-S711K, Part 1

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S089D 1313212422	S153D 1331123224	S217D 1323232313	S281D 1312343313	S345D 1321133132	S409D 1322423442
S090D 1313421134	S154D 1323223422	S218D 1323424422	S282D 1313211342	S346D 1321312242	S410D 1322313342
S091D 1313342313	S155D 1331242124	S219D 1324243422	S283D 1312233113	S347D 1322332242	S411D 1323123224
S092D 1313442134	S156D 1323343422	S220D 1331242443	S284D 1312322342	S348D 1323132112	S412D 1321234212
S093D 1313242422	S157D 1323424334	S221D 1324221124	S285D 1313443242	S349D 1321342312	S413D 1321231324
S094D 1313423234	S158D 1331242334	S222D 1323244212	S286D 1312433442	S350D 1322121313	S414D 1323122442
S095D 1312131322	S159D 1323342342	S223D 1324422312	S287D 1312243442	S351D 1321242434	S415D 1323134432
S096D 1312342443	S160D 1323423132	S224D 1323311224	S288D 1313213132	S352D 1322334222	S416D 1321243313
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S098D 1313242112	S162D 1323311313	S226D 1323342434	S290D 1312422434	S354D 1322121312	S418D 1322421342
S099D 1313312134	S163D 1324323342	S227D 1324233132	S291D 1321234242	S355D 1313443422	S419D 1322323242
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S106D 1313424434	S170D 1331123423	S234D 1324422342	S298D 1322342442	S362D 1321342124	S426D 1322424342
S107D 1313224313	S171D 1323234312	S235D 1331233242	S299D 1321123342	S363D 1321343442	S427D 1321342443
S108D 1313232342	S172D 1331213132	S236D 1323242213	S300D 1321334232	S364D 1322443122	S428D 1322331224
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S129D 1312342242	S193D 1331242313	S257D 1324233434	S321D 1321133422	S385D 1321344212	S449D 1322124423
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S131D 1313242244	S195D 1331134312	S259D 1331243112	S323D 1322313313	S387D 1323123342	S451D 1321223132
S132D 1313344223	S196D 1331224224	S260D 1324321242	S324D 1321233113	S388D 1321134222	S452D 1322422334
S133D 1312424324	S197D 1324434222	S261D 1323311342	S325D 1321124232	S389D 1323213342	S453D 1322421134
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S138D 1312322424	S202D 1331231224	S266D 1323234342	S330D 1322424434	S394D 1322311312	S458D 1322343132
S139D 1313224242	S203D 1324433442	S267D 1313134242	S331D 1323133242	S395D 1321231312	S459D 1321313312
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S141D 1323343122	S205D 1331242422	S269D 1313442312	S333D 1322312134	S397D 1321221313	S461D 1322344242
S142D 1331234423	S206D 1323422442	S270D 1312422312	S334D 1323213112	S398D 1323124242	S462D 1322131242
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S148D 1324434312	S212D 1331131343	S276D 1312134312	S340D 1323113442	S404D 1322443422	S468D 1323123112
S149D 1323243342	S213D 1323432312	S277D 1312134222	S341D 1321322442	S405D 1321242113	S469D 1322442134

# New GM Code Series

## S000A-S711K, Part 1

S470D 1322131332	S517D 1332113342	S564D 1331324324	S611D 1343212422	S658D 1323342243	S705D 1323244242
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S473D 1321331312	S520D 1332233124	S567D 1332334242	S614D 1342432124	S661D 1323313422	S708D 1324343112
S474D 1323134313	S521D 1334323422	S568D 1331342442	S615D 1343233122	S662D 1323244224	S709D 1324344222
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S497D 1322123424	S544D 1331334222	S591D 1332132342	S638D 1324224312	S685D 1323324212	S732D 1334224242
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S516D 1324234242	S563D 1331323242	S610D 1343112134	S657D 1331123312	S704D 1331133122	S751D 1332321342

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## S000A-S711K, Part 1

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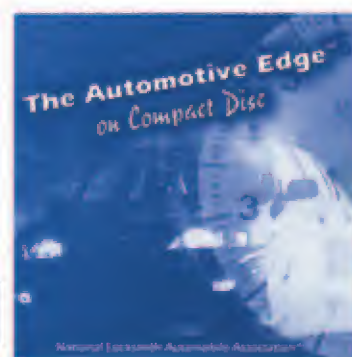
# New GM Code Series

## S000A-S711K, Part 1

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S174E 2112243313	S213E 2113133213	S252E 2112213342	S291E 2131234212	S330E 2123423442	S369E 2123213422

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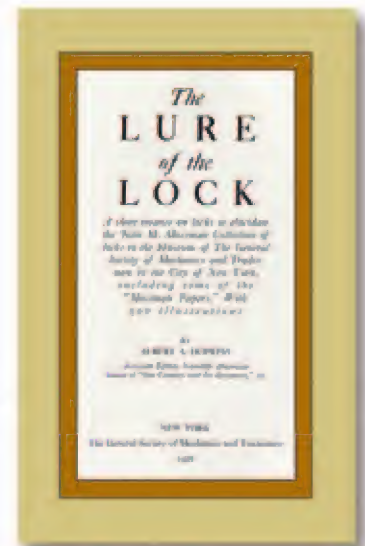
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S403E 2113343442	S467E 2113224313	S531E 2121334422	S595E 2121313424	S659E 2122113124	S723E 2131342422
S404E 2113324212	S468E 2123113422	S532E 2122134244	S596E 2121312434	S660E 2122344312	S724E 2133133213
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S406E 2123121312	S470E 2121231343	S534E 2122342344	S598E 2113342213	S662E 2121134232	S726E 2132442134
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S411E 2122312442	S475E 2121212312	S539E 2113312234	S603E 2121343133	S667E 2132321134	S731E 2132431334
S412E 2113243442	S476E 2113422134	S540E 2113231312	S604E 2113313442	S668E 2131313132	S732E 2133233123
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S417E 2122331322	S481E 2113311334	S545E 2122311312	S609E 2121233423	S673E 2132332242	S737E 2132244312
S418E 2113242422	S482E 2113243242	S546E 2113343122	S610E 2123112132	S674E 2132232342	S738E 2131313442
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S421E 2122433112	S485E 2123121124	S549E 2122344233	S613E 2113232442	S677E 2132113422	S741E 2131243123
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S424E 2122311334	S488E 2121213342	S552E 2121134422	S616E 2113234212	S680E 2133124213	S744E 2132434242
S425E 2113422312	S489E 2121312124	S553E 2121124212	S617E 2113342234	S681E 2133134324	S745E 2132323313
S426E 2113242242	S490E 2121213122	S554E 2121342134	S618E 2113432242	S682E 2131242312	S746E 2132131124
S427E 2121334224	S491E 2122331332	S555E 2113242243	S619E 2121342342	S683E 2133122132	S747E 2132443122
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S429E 2113223113	S493E 2123124313	S557E 2121231212	S621E 2122133123	S685E 2131331224	S749E 2132323422
S430E 2122131312	S494E 2123112124	S558E 2113223312	S622E 2113423122	S686E 2132312442	S750E 2133133112
S431E 2121133124	S495E 2121334232	S559E 2122434312	S623E 2122342443	S687E 2132324212	S751E 2132113122
S432E 2122112313	S496E 2113234312	S560E 2121242113	S624E 2121132313	S688E 2133124334	S752E 2133242113
S433E 2113243422	S497E 2122313112	S561E 2113313224	S625E 2113244212	S689E 2131323224	S753E 2131323434

# New GM Code Series S000A-S711K, Part 1

S754E 2132324423	S818E 2123344242	S882E 2123313112	S946E 2133242442
S755E 2133223313	S819E 2123431334	S883E 2123224342	S947E 2132312324
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S757E 2131323342	S821E 2124232334	S885E 2124422442	S949E 2131321324
S758E 2131322424	S822E 2123234423	S886E 2123213113	S950E 2131344312
S759E 2132313313	S823E 2124432312	S887E 2123311342	S951E 2132123132
S760E 2133113312	S824E 2124231342	S888E 2123342212	S952E 2132342442
S761E 2132112313	S825E 2124213312	S889E 2123213112	S953E 2133212423
S762E 2132331322	S826E 2131122124	S890E 2124212442	S954E 2132421312
S763E 2132134212	S827E 2124243434	S891E 2123344312	S955E 2132233124
S764E 2131324223	S828E 2124313122	S892E 2131231123	S956E 2133134232
S765E 2132121342	S829E 2123311312	S893E 2123424312	S957E 2132421342
S766E 2133242212	S830E 2123223313	S894E 2124324342	S958E 2133124242
S767E 2132332422	S831E 2124324312	S895E 2123433132	S959E 2132113242
S768E 2211342133	S832E 2131224434	S896E 2124233112	S960E 2133233422
S769E 2211324312	S833E 2131134224	S897E 2131234223	S961E 2131344213
S770E 2134422434	S834E 2131231134	S898E 2124334422	S962E 2132233422
S771E 2211342232	S835E 2131131223	S899E 2124211334	S963E 2131311334
S772E 2212342344	S836E 2124424212	S900E 2124331334	S964E 2132313342
S773E 2212331134	S837E 2123323313	S901E 2131134243	S965E 2131342313
S774E 2211321342	S838E 2131134233	S902E 2123242442	S966E 2131242322
S775E 2211243123	S839E 2131224234	S903E 2123323124	S967E 2133124313
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S811E 2131233423	S875E 2123124434	S939E 2133124212	
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S815E 2131134222	S879E 2123233422	S943E 2131242244	
S816E 2131134422	S880E 2123323242	S944E 2132211312	
S817E 2123423112	S881E 2124424422	S945E 2131342213	

## 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



# THE POWER OF PROMOTIONAL PRODUCTS

by Laura Walker

**K**eeping your name in front of customers and prospects is critical to growing your business, especially if you rely heavily on word-of-mouth and referrals. You have to find ways to make it easy for people to remember you and find you.

Newspaper and magazine advertising is one option, but is often too expensive for small business to do on an ongoing basis. Another way, which is memorable and cost-effective, is through the creative use of promotional product items given away free to your customers, prospects, and referral sources.

Who has not received a pen, key chain, or mug imprinted with a company's name and phone number on it? Maybe your company has even handed out a few of these items.

Do you know the true power of promotional products and how to use them most effectively?

## THE POWER OF PROMOTIONAL PRODUCTS

The "staying power" of promotional products is what makes the difference. Unlike ads that can be overlooked, a good quality promotional product is functional and used for a very long time.

Imprinted with your company name, logo, and phone number, promotional products continue to remind people of your business long after they have been received. For example: a calendar hanging on a wall and a mouse pad sitting next to the computer keeps your company name and phone number ready and available for customers when they need your products or services.

The following statistics and trend information from the Promotional Products Association International might surprise you:

Mailing a pen or other promotional product along with a sales letter can increase the number of prospects that call you back by as much as 50 percent.

Customers who receive promotional products as gifts are more likely to refer friends, colleagues, and others to your company than those who do not.

Promotional products can help increase repeat orders from your customers by as much as 16 percent.

Sending a useful promotional product such as a baseball cap or T-shirt instead of a general thank you note can enhance your customer's positive feelings about you by as much as 25 percent.

At trade shows, promotional products can increase awareness of and preference for an exhibitor's products by as much as 70 percent.

## MAKE SURE IT IS USEFUL

Besides the ever-popular pens, key chains, and letter openers, you can find a wide variety of items that can be personalized and used as promotional giveaways. Nowadays, everything from luggage tags and golf tees to water bottles and measuring tapes can be imprinted with slogans, company names, and more.

What is important, however, is to select something that is useful and that your customers will want to use again and again.

Consider choosing an item related to your business. For example: automotive companies may give out key chains or travel mugs, lawn care companies may pick sun visors, and contractors may select mini screwdrivers and flashlights. Whatever you decide, make sure the products are of good quality and have meaning to your audience.

CUSTOMERS WHO  
RECEIVE PROMOTIONAL  
PRODUCTS AS GIFTS  
ARE MORE LIKELY TO  
REFER FRIENDS,  
COLLEAGUES, AND  
OTHERS TO YOUR  
COMPANY THAN THOSE  
WHO DO NOT.

## TNL Subscriptions



This is THE source for automotive technology, safe opening techniques, electronic security and much, much more.

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#SUB - 1,2,3,4,5,6

Also, do not be afraid to give different people different items. For example, you may choose to give a more expensive item, like a sweatshirt or jacket, to your best or largest customer and a magnet or notepad to other customers and referral sources. Everyone will remember your company favorably and you will maximize the use of your company's promotional dollars.

### THINK OF CREATIVE OPPORTUNITIES

While holidays present a prime time for using promotional products, those given at "unexpected" or "unusual" times can often be the most effective and memorable. The fact that you gave away an interesting and useful item will stand out in people's minds, instead of being forgotten amidst all the holiday excess and clutter. Try to pick a time that ties in with something directly related to your business, like an anniversary, open house, or the launch of a new product or service.

Some other creative ways to use promotional products include:

To reinforce early orders and early payments, send a pen to customers who consistently pay their bill on time.

To thank customers for their business. A bicycle dealer for example, may want to give free water bottles with the purchase of every bicycle and auto repair shops may include floor mats with every service job.

To support community events, sports teams, and educational programs for instance, instead of giving money to your town's summer festival, try donating Frisbees imprinted with your logo. Donate balloons to the high school graduation ceremonies as a way of showing your company's pride in students' accomplishments.

To recognize employees for their hard work and length of service to your company, sweatshirts, jackets and T-shirts are popular gifts for employees on 5- or 10-year anniversaries. Remember, employees who feel good about your company may do a better job with customers.

Used creatively, promotional products can help differentiate your company from the competition, build relationships with current customers, and attract new business. They can also create feelings of goodwill and encourage the word-of-mouth your company relies on for new business. **TNL**

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# BWD Introduces

by Sal Dulcamaro, CML

**BWD** Automotive Corporation has recently introduced a number of new products to their auto lock product line. Not totally familiar with their new name, many locksmiths will know the product line better from its former company name of "All-Lock." With a fairly extensive product line of after market replacement locks and some OEM products, BWD is now manufacturing a number of different auto locks previously unavailable from them.

Adding to other Ford automobile locks already in their product line, BWD now makes Ford door locks for use with the 8-cut style keys. They will be available in five different versions, as either coded or uncoded locks.

*Photograph 1*, shows two different sets of 8-cut style Ford door locks. On the left are the DL5885 door locks, which are used on 1998-99 Ford Expeditions, 1997-99 full size F-Series Pick-Up trucks and 1998-99 Lincoln Navigators. On the right are the DL5887 door locks which are used on some of the following vehicles: 1996-99 Ford Explorer, 1996-98 Ford Bronco, 1996-99 Ford F-Series Medium Duty Trucks, 1996-99 Ford Ranger and 1997-99 Mercury Mountaineer. This version uses black face caps. The equivalent style lock with chrome face caps is part #DL5886.

Another style door of lock that uses the 8-cut keys is not shown. With slightly concave shaped face caps, they are available in chrome as part #DL5883. In black, they are part #DL5884. Those door locks are used for 1996-99 Ford Taurus and 1996-99 Mercury Sable. All these locks are available uncoded, and otherwise have the same part number with the letter "U" at the end of the part number to indicate "uncoded". The service kit designed for these auto door locks has part #SK5011. These locks will work with transponder and non-transponder keys, depending on the type of ignition lock used on any particular car.

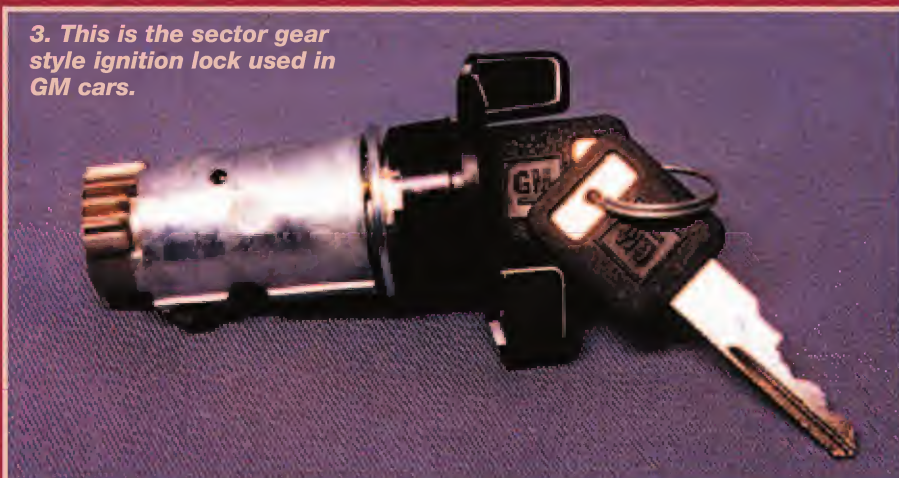
**1. Two different sets of 8-cut style Ford door locks.**



**2. BWD Premium Pack Lock Kit.**



**3. This is the sector gear style ignition lock used in GM cars.**



# New Auto Locks

4. A service kit for coding the new 9-cut sidebar locks.



5. The pin kit which includes the four tumbler sizes and tumbler springs.



## BWD Premium Packs

Another new and interesting product is the BWD Premium Pack Lock Kit. The lock comes uncoded and is otherwise like a BWD uncoded lock, except that tumblers are included in the package. One example of that item is shown in *photograph 2*. It is one of nearly ten different variations of 10-cut Ford ignition locks available from BWD. You get five each of the five different sizes of tumblers, plus tumbler springs. The package includes enough parts to assemble a lock to fit any standard 10-cut key biting configuration.

The main value and benefit of the Premium Packs is that you don't need a service kit to service the locks. You get just enough of a service kit within the package to do the job. Premium packs are also available for some Honda, Mazda and Toyota auto ignitions. They cost a bit more than the standard coded or uncoded versions of the locks, but save you the expense of a service kit. To order the premium packs, just add "LK" to the back of the current BWD part number for locks available in this format.

## Other Items

*Photograph 3*, shows another lock now made by BWD. It is the sector gear style ignition lock used in GM cars equipped with square steering columns, such as the 1991-96 Chevy Corsicas and Berettas. It has a universal keyway and will allow the insertion of any of the GM (primary) ignition keys with the long neck single sided key blanks.

Shown in *photograph 4*, another new item from BWD is a service kit for coding the new 9-cut sidebar locks found on 1997+ Saturn. *Photograph 5*, shows the pin kit which includes the four tumbler sizes and tumbler springs.

The name may have changed, but BWD offers a wide range of quality aftermarket automotive locks.

For more information, contact an authorized BWD distributor or BWD Automotive Corporation at 800/647-4926. Circle #312 on Rapid Reply. **TNL**

# VIEWPOINT:

## Putting a Stop to GOA's

**We have been receiving a number of calls and e-mail requests lately on how to stop the dreaded "Gone On Arrival" (GOA) occurrence in which you are called to open a locked vehicle only to find upon arrival that the customer is gone. These situations usually happen because the customer either found their lost keys or they also called someone else to unlock the vehicle who arrived before you did and the customer didn't bother to call you back to cancel the call. Whatever the reason, when you are called to a lockout and arrive only to find no one there, it causes enormous frustration.**

**Since there has been a lot of e-mail talk lately about GOA's, we thought we would print some of the measures and suggestions given to one locksmith that requested possible solutions to GOA's.**

I would be interested in hearing from my fellow locksmiths regarding how they handle, or try to prevent the occurrence of the "Gone On Arrival (GOA)" lockout situations. I am having quite a few lately, and I want to try to eliminate this nuisance. There must be something I am missing.

*Dave Daly*

Answers:

1. For me, getting there promptly before someone else does or before they call a tow truck (especially in a parking lot mall) is important.

2. Ask if they have called anyone else. If they have, either have the customer call that other service provider or you give a polite courtesy call to them. I would turn down the call only if the other locksmith is on his way to the call. If he is still in his shop then the lockout is fair game.

3. I know it sounds tedious, but I keep a lockout call checklist next to every phone I own. I ask for a name, phone number, home address, phone number they are calling from (try to verify with caller ID if you have it), vehicle and house description, driver's license number and license plate tag number. It also does not hurt to call the customer back when possible to assure them you are on the way.

4. When ending the conversation, refer to the customer by name, and tell them your name as well. I also

give the customer an approximate arrival time frame and ask if that is O.K. with them.

5. Do not forget to ask for an extension number if they are calling from work or an office building and always thank them for the call.

Hope this info helps.

*Anthony Scalia*  
E-mail



I have a GOA problem at least once a week. If the call is close to the shop I just go and hopefully I get there in time. If some traveling is required, I explain that there is a service charge just to come out, and I usually tell them it will take a little longer than I expect it to take me. This way when I show up early I have a better shot at collecting a service call. Some guys get a credit card over the phone, but I

never had luck with that because people just do not want to give the information over the phone.

*Lockman 102*  
E-mail

I make sure I ask how they are going to pay, which gives them an opportunity to ask how much my service will cost. I make sure I get their name and call-back phone number. Caller ID helps (yes, I also have it on my cellular phone) to determine whether they are telling the truth. If not, I plainly tell them that the number they just gave me is NOT the number they are calling from. I then repeat to them the number they gave me. I get a complete description of the vehicle as well.

The above procedure is not only useful to ensure I know where I am going, what I am looking for, and whom I am going to meet. It also lets them know that I know a lot about them (presuming they answer honestly). Listening to the customer is almost a lost art, which can provide you with clues as to description accuracy. If any is noted during initial contact, I call them back and listen to who answers the phone, especially if the phone is answered with a business name. I then ask for the person by name, including some sort of statement that they are the person who is locked out.

*Wes*  
E-mail

I know of several locksmiths who request a credit card number over the phone when they take the call. It seems to work for them just in case they get stiffed.

*Greg Hale  
E-mail*

1. I only work for the owner.
2. Get name, address, and phone for where they live.
3. Get payment method.
4. Find out if someone is trying to open the car now. If yes, tell them to call back if they are unsuccessful in their attempts to open the car.
5. Tell them that the call can't be canceled once you leave for the call, and give them a service fee.
6. I get a phone number so I can call them back. Give them a time frame of when I can get out there. I do not go if they do not answer, if busy I call back a second time about a minute later. If it is still busy I cancel.

If for some reason these steps can not be followed I won't go.

*Frank  
E-mail*

For any lockout situation, we take all necessary information and then ask for a credit card number. We explain that the credit card number is a "guarantee of service" and that once we are dispatched the customer is responsible for the service call. In the event they are not there, and someone else gets the vehicle open or another locksmith beats us to it, their credit card will be charged for the service call. If they are there upon arrival,



they may pay however they like. This helps weed out the people who call every-body in town figuring the first out gets the job.

In the event they do not have a credit card, we require a home address and telephone number. If they are gone at least you can reach them and try to collect your money.

It works for us.

*Bill and Jeanne  
E-mail*

# Technitips



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#TIPS - 2





# Wafer Lock Reading



Easy to learn.  
 No Codes needed.

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#WLR - 1

If the customer is paying for it, get a charge card number before you respond, and inform the customer that there will be a charge if they are gone when you arrive. Also get a phone number and call while you are on the way so you know they are still waiting. Otherwise there is not much else you can do.

*Jerry Kruss  
 E-mail*

Unfortunately you cannot stop it completely, but here are a couple of things we do:

1. If the lockout is more than 15 minutes away, we require a credit card before we go. No card, no go.
2. If the lockout is close by, do not waste any time getting there. That extra couple of minutes drinking your coffee may cost you the job.
3. Try to work with your competition. Make an agreement before you meet on a call that if two of you show up on the same call they pay both, or no opening by either. It's hard to get the cut-throats to agree to this sometimes.
4. Last of all, learn to live with the fact that this is going to happen and it always seems to happen back to back. Be nice about it and you may get the next job if you leave a good impression on your almost customer.

*Steve Brown  
 E-mail*

I asked a group of locksmiths this question a couple of weeks ago.

I was called to open a truck at a Motel 6. I arrived within 20 minutes and the caller's truck was not there and there was no answer from the room number the caller gave me.

On the way back home I thought about writing an invoice for it anyway detailing the customer's name, address he called from and the make and model of the vehicle and bill for one service (trip) charge. I would mark this invoice as "un-collectable" and file it in my bad debt file and turn it in to the CPA to do with it in the same manor as other non-collectable - deduct at years end. Seems as if a wasted trip is still a business expense



not to mention lost income and potential missed calls due to my wasted time.

Another locksmith I know from Corsicana, TX has a great operating procedure for dispatching lockouts, they try to obtain a credit card number or at least a billing address before they send a truck out. Also some locksmiths I asked are starting to write invoices on all

freebies they do as well. For example: child locked in a car, downed senior citizen in a home, etc. This way financial credit may be obtained for this service as well.

*Jon Milsap  
 E-mail*

GOA's are the frustration of every locksmith. We use caller ID to help us determine if a call is bogus or not. We also ask if anyone has attempted to open the car. If they say yes then we ask them to call us back when the first attempt at opening the car has been unsuccessful. Nothing really works.

I overheard a nurse at a hospital one time talking about how many times she has been locked out of her car. When I asked if she had ever left before a locksmith arrived, she said yes. "Why pay for something she did not need?" she said.

When I asked if she expected to be paid when the hospital called her in because of an emergency and then sent her home because the emergency was handled before she got there, she said "Of course, but that is different."

Now I understand.

*Jerry Jones  
 E-mail*

As you can see there are some common GOA resolution similarities between all these locksmiths. Other than refusing to do the call unless the customer will give you a credit card number, there is no foolproof way to totally eliminate GOA's. However, if some of the precautionary procedures given are implemented, you will certainly see a reduction of GOA's. **TL**

# MEILINK'S **NEW** LABEL SYSTEM

**C**omparative shopping is as American as the Fourth of July. We love to get the best product for the best price. The problem is that sometimes the best product is not readily ascertained. Looks alone may not distinguish a difference. And the assumption that “the higher priced item is better” isn’t always true.

Buying a safe fits into the category of “How do I know which one is better?” Two brands may look alike, but are they really? In fact, two models of the same brand may seem to be the same thing, so how do you tell the difference?

One manufacturer is trying to take some of the confusion out of buying a safe. Meilink Safes has come up with a comparative rating system based on Underwriters’ Laboratories and industry standards. To complement the rating system, Meilink has also developed a simple and easy-to-understand labeling system to make comparative shopping easy.

“For some people, reading the spec sheet on a safe is akin to deciphering the schematic of a nuclear bomb,” says Van Carlisle, president and CEO of Meilink Safes. “There are codes and ratings which may not make sense. That’s why we felt compelled to simplify things.”

The cosmetics and size of a safe reveal nothing about its performance. Put two similar-looking safes



**1. Just looking at the Meilink ThermoVault FV2015 and the Gibraltar KC2218-F, you’d be hard pressed to tell which one is more secure and which is more fire resistant. With Meilink’s new label system, you would quickly learn that the ThermoVault will protect contents in a fire for 2 hours even when dropped from 30 feet.**

side by side and you'd be hard pressed to pick the difference. Take the Meilink line, for example. The model names - ThermoSafe, ThermoVault, Dauntless, Centennial and Gibraltar - don't give clues on expense or performance. (See *photograph 1 & 2.*) And the model numbers generally deal with size, not features.

So how do you tell the difference? How do you rate the performance of an inanimate object like a safe?

First, you create benchmarks. Security performance in a safe is related to three standards:

- Theft resistance
- Fire and impact resistance
- Access control

These three benchmarks are the heart of Meilink's new consumer rating and labeling system. Simple, easy to recognize icons are used.

The theft-resistant icon looks like a padlock with a number on it. The higher the number, the more theft resistant it is. For example, a "1" indicates minimum security while a "6" indicates the safe has been tested by UL and will resist a break in even when the perpetrator knows the workings of the safe and is using a torch and tools, such as diamond-tip drill bits.

**2. The Gibraltar, while less fire resistant, offers five times the burglary resistance than a ThermoVault offers, even when using a torch and other sophisticated tools.**

The fire-resistant icon looks like a flame. The number inside it is based on how long the contents will be protected when exposed to a fire. A label with "FR" indicates the safe is fire resistant but does not have a UL rating. A label showing "1 hr" has been tested by UL to protect the contents for one hour. All labels showing a time period are based on UL results.

Surviving a fire is one thing. But a fire-resistant safe, depending on where it's stored, may need to be impact resistant. This means that after the safe has been exposed to fire, it will withstand being dropped from 30 feet. If a safe is kept on an upper floor, it may fall one or more stories during a serious fire.

On Meilink safes, the impact rating is indicated on the fire icon simply by showing a plus sign behind the time rating: "2 hr+."

**T**he final performance standard involves access control. After the purchase of NKL/Gary Safe, Meilink added an entire line of safes designed for the retail environment - safes that allow employees to put in and sometimes withdraw cash.

The rating system for cash vaults features a key icon. Inside the key is a number. The higher the number, the more control it creates over access.

For example, a rating of "1" allows cash to be put in, but not taken out. A rating of "4" allows the employee to put cash in and distribute change if needed. It gives a read out of who used the safe, how much money was put in, and how much was taken out.

"Retailers have different needs," says Carlisle. "Some deal in high volume with unskilled workers and need tight control over cash or else it will disappear. This is the type of business person who needs a fairly sophisticated cash vault. And now he can walk into a safe dealer's store and determine in a matter of seconds, which models to consider.

"Our new label system lets the buyer quickly figure out which safe performs to the level they need. They can quickly zero in on one or two models and then research the detailed specs and compare pricing. This simplifies the purchase decision which really helps the buyer make a smarter and quicker decision."

Meilink has also come up with in-store material - a poster and brochure - that helps explain the new rating and labeling system. (See *photograph 3.*) "We need to practice what we preach," says Steve Aronson, marketing director for Meilink. "If we're going to come up with a new labeling system, we should provide the dealer easy to read, easy to understand material that helps them explain the product on the show floor."

At Larry's Lock Safe and Security in Cincinnati, more than 100 safes are on display and it's difficult for customer's to tell the differences between them, according to store's owner, Larry Smith, CML. He puts small signs on products to communicate performance differences. Therefore, it's not surprising he jumped at the opportunity to work directly with Meilink in developing the company's new labeling system.

"In our industry, people who make good products, don't always communicate it effectively," says Smith. "But it seems like that's beginning to change. And Meilink is the forerunner because no one else is doing this. I think it's excellent."



# How to buy a safe.

	Purpose	Name	Capacity range	Rating
<b>UL Rated Fire Safes</b>	Fire protection for the home and small office.	<b>ThermoSafe™</b>	.5 - 2.5 cubic feet	
	Fire protection with basic burglary protection	<b>ThermoVault™</b>	1.6 - 2.3 cubic feet	
<b>Fire &amp; Burglary Resistant Safes</b>	Fire resistance with increased burglary protection and greater capacity for the home and office	<b>Dauntless™</b>	1.4 - 18.0 cubic feet	
	Increased burglary resistance for high risk fire areas.	<b>Centennial™</b>	3.2 - 17.2 cubic feet	
<b>Burglary Resistant Safes</b>	High value contents in need of burglary protection with minimal fire resistance.	<b>Hercules™ C-Rated</b>	1.4 - 18.0 cubic feet	
	E-Rated safes offer increased capacity and are constructed with 11 gauge steel and 30% thicker walls.	<b>Hercules™ E-Rated</b>	3.8 - 36.7 cubic feet	
<b>UL Rated High Security Safes</b>	Very high value contents. Ideal for jewelers and financial institutions.	<b>Gibraltar™ TL-15</b>	1.8' - 36.7 cubic feet	
	TL-30 offers twice the burglary protection of the TL-15.	<b>Gibraltar™ TL-30</b>	1.8' - 36.7 cubic feet	
	TL-30X6 is rated on all 6 sides.	<b>Gibraltar™ TL-30X6</b>	10.5 - 36.7 cubic feet	

## Protection Rating System\*

### Burglary Ratings

Designates the safe's ability to protect against unauthorized entry and theft. The number represents the increasing level of burglary protection within the safe line.

- Theft resistant (minimum security)
- Underwriters' Laboratories Residential Security Container label
- Non-rated anti-theft (incorporates features of high security safes without a UL rating)
- Underwriters' Laboratories TL-15 label
- Underwriters' Laboratories TL-30 label
- Underwriters' Laboratories TL-30X6 or THL-30 label

### Fire Ratings

Designates the safe's ability to protect contents against fire damage. The number represents the hour limits of the UL test the safe has passed. Icons with a (+) indicate that the safe has earned UL's impact rating.

- Fire resistant un-rated insulated safe
- UL class 350 1/2-hour fire label
- UL class 350 1-hour fire label
- UL class 350 1-hour fire & impact label
- UL class 350 2-hour fire label
- UL class 350 2-hour fire & impact label

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3. To help consumers decipher the new Meilink labeling system, an easy-to-understand poster has been developed. Also included in the merchandising program are product hang tags and brochures.

Customers often come into Smith's store looking to buy an inexpensive safe to protect \$50,000 or more worth of valuables. "With this new labeling system," he says, "we can discuss needs and performance before we start discussing price. Can a kid break into the safe with a crowbar? Will the contents be damaged in a fire? The answer to questions like these help us determine the type of safe needed before discussing price. It

makes it easier for the dealer to satisfy the customer and perhaps convince him that he may need more safe than he anticipated."

Smith, who's been selling safes for 31 years, believes the Meilink labeling system will help dealers turn products faster and reduce inventory by not having to carry what he calls "tweeners" - models that fall in between two categories of performance. "The better we

communicate with our customers, the more efficient we'll operate, which translates into making more money. And that's what it's all about."

For more information on Meilink safes contact: Meilink Safe Co., 111 Security Parkway, New Albany, IN 47150, Phone: 800-634-5465 or (812) 941-0024, Fax: 800-896-6606 Circle #307 on the Rapid Reply Card.



Taking  
Industry Products  
for a

TEST  
DRIVE!

In recent years, General Motors has re-introduced the dash mounted ignition lock on some models. In today's design, there is not a retainer poke hole in the face of the lock to remove the plug. The retainer is on the side of the lock, and removal requires dropping the dash, or pulling the radio or both to access the lock.

To eliminate the need to drop the dash to access the lock retainer, A-1 Security Manufacturing Corp. offers the PS3 Service Kit for GM 10-cut In-Dash Ignition removal.

#### PRODUCT:

The PS3 includes a Depth Neutralizer, Drill Jig, Removal Tool, Side Bar Tension Tool, Rocker Picks (2), Cylinder Release Tool, Drill Bit Extension, and Decoder.

#### HOW IT WORKS:

**Removal Tool** — First insert the slotted end of the Removal Tool (PS3-022) into the bezel of the ignition. Tighten the brass thumbnut and gently rock the tool up and down while pulling toward you to remove the bezel.

Place the hooked end of the Removal Tool against the ignition cap at the 9 o'clock position. The hook must be under the lip of the ignition cap. Pry the cap with its inner black plastic support from the ignition.

**Drill Jig & Drill Bit Extension** — Position and hold the Drill Jig (PS3-020) against the face of the ignition plug with the alignment pin of the jig at the 3 o'clock position and seated in the notch on the outer edge of the plug. Using a hand drill and the Drill Bit Extension (PS3-A28), drill a 3/32-diameter hole thru the face of the

## GM 10-cut In-Dash Ignition Service Kit, by A-1



ignition plug and into the opening of the sidebar slot.

**Depth Neutralizer** — Position the Depth Neutralizer (PS3-029) into the lower right side of the keyway. The tool must be aligned so that the bend will be away from the key opening. Continue to apply pressure toward the right side and push the tool fully into the ignition. The pressure of the wafers will hold the tool firmly in place. This tool is designed to move wafers that are 3 and 4 depths to a picked position.

**Sidebar Tension Tool** — Insert the Sidebar Tension Tool (PS3-026) thru the hole just drilled and onto the sidebar. When inserting this tool, the loop end should be at 6 o'clock and the inserted end at 12 o'clock.

**Rocker Pick** — Insert the #5 Rocker Pick fully into the keyway. Apply very light pressure to the sidebar by rotating the looped end of the Sidebar Tension Tool clockwise. Rock the pick up and down and as the sidebar drops in, the Sidebar Tension Tool loop will move to the 8-9 o'clock position. If after 30 to 40 seconds the sidebar will not drop, release sidebar pressure and try again using pick #6.

Once the sidebar is depressed, turn the plug until the Sidebar Tension Tool binding stops rotation. At this point, preventing counter-clockwise rotation of the plug, pull out the Sidebar Tension Tool and then continue rotating the plug to the "On" position.

**Lock Cylinder Release Tool** —

Push the lock cylinder into the dash to relieve pressure on the lock cylinder-housing retainer. Insert the Lock Cylinder Release Tool (PS3-025), with curve toward the lock cylinder plug, between the lock cylinder housing and the dash housing at the 4 o'clock position. As you slide the tool between the housings, apply pressure on the lock cylinder retainer "leaf spring" disengaging the retainer from the in-dash housing. Remove the plug and plug housing from its dash housing.

**Decoder** — If the lock does not have a code stamped on it, repick the plug while holding light pressure on the sidebar. Once the lock is picked and the sidebar drops in, continue applying pressure on the sidebar holding it in place.

Insert the supplied Decoder (PS2-A05) into tumbler cavities #1 thru #9 recoding the depth for each position.

**PRICES:** The suggested retail price for the PS3 is \$96.50. At first it may seem a bit expensive until you have to pull a dash just to remove an ignition, then you realize it's quite reasonable.

**CONCLUSION:** The PS3 does take a bit of practice to use, however, it does work and is the easiest way I know to remove GM in-dash locks.

For more information contact:  
A-1 Security Manufacturing Corp.  
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Richmond, Virginia 23230  
Phone: (804) 359-9003  
Fax: 804-359-9415  
Circle #311 on Rapid Reply.



#### IN SUMMARY:

**DESCRIPTION:** The PS3 Service Kit for GM 10-cut In-Dash Ignition removal.

**PRICE:** \$96.50

**COMMENTS:** The tool does take a bit of practice to use, but it works.

**TEST DRIVE RESULTS:** Using the PS3 is the easiest way I know to remove GM in-dash locks.