he Official Publication of ALOA—An International Association of Security Professionals





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Plus:

History of Auto Keys, Going in the Side Door, Helping out on a Re-Hanging, This Ain't Your Daddy's Locksmith Business, Safe Servicing and Combo Changing (Part 1 of 3), and more



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presidentia viewpoint



Dear members,

I trust that everyone had an enjoyable holiday season and is looking forward to a productive and prosperous new year. Over the holidays, I was invited to several associations' holiday events. I enjoy getting out and talking to locksmiths, and one group in particular deserves some special recognition.

I was guest speaker at the Christmas banquet of the Delaware Valley Chapter of the Institutional Locksmiths Association, which was held in Philadelphia, PA. The ILA is a national organization and has three local chapters that meet regularly: Delaware Valley, Great Lakes, and Northern Arizona. They have an annual convention and educational opportuni-

ties scheduled throughout the country uniting their membership.

The ILA struggled in its infancy, but is now doing quite well under strong leadership. I have known the national president, Tom Negron (employed by the New Jersey State Police) for some time, as well as many of the members of the national board. They are a great group of individuals who put their members' interest at the forefront.

ILA is a very valuable ally to ALOA. ILA locksmiths control more doors and openings and have more buying power than all of the locksmiths in the private sector combined. They have tremendous influence with manufacturers, which leads to great educational opportunities. They have developed a certification program similar to the PRP that is tailored to the type of locksmithing that the "in house" guys do.

ALOA wants to continue to foster a good working relationship with ILA. I have invited Tom to the spring board meeting to share ideas, and I am also seeking to have an ILA director who would be willing to serve on the ALOA Board. We want to help ILA with any additional educational needs that they may have, and assist in their certification program if the need arises. We would also encourage the ILA members to join our ranks and feel that the creation of a corporate (or company) membership will prompt the institutional employers to have all of their locksmiths become ALOA members.

I commend the efforts of ILA and other organizations that cater to the needs of specialty groups in our field. Another group that comes to mind is the International Association of Investigative Locksmiths. ALOA will continue to work to meet the needs of locksmiths who specialize in specific areas such as access control or automotive work. And of course, SAVTA meets the needs of our safe tech partners.

Sincerely,

William L. Young

William L. Young, CML

Volume 50, Issue 1



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Additional contact information for the ALOA Board and most Keynotes authors is available through "Locksmith Search'" on the ALOA Web site- www.aloa.org or by contacting the ALOA office at 3003 Live Oak Street; Dallas, TX 75204; (800)532-2562; FAX (214)827-1810; e-mail aloa@aloa.org.

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12 Institutional Locksmithing at the NASA Ames Research Center, California

What are the ingredients of the perfect locksmithing job? Consider a combination of regular hours, nice customers and zero bounced checks or overdue accounts. Add to that a mixture of an inexhaustible supply of steady work and an exciting and rewarding work environment, and you'll start to get an idea of what it is like being an institutional locksmith at NASA Ames Research Center in sunny California.

By Chris Geary, CRL

A Brief (and Interesting) History of Automotive Keys

Knowing about the earliest automobile locks and keys learning a little about the automobiles themselves. For example, more than 15.5 million Model T Fords were manufactured in the United States from 1908 to 1927 - more than all other makes of automobiles. In 1914, a completed chassis was assembled every 93 minutes; in 1927, every 24 seconds. What kinds of keys did these old beauties use?

By Merritt Perkins, RL

Helping Out on a Re-Hanging

We used the same type of hinge and fasteners as the rehanging job we did last year, but the method of installation on this job was different. We recommended what was appropriate for the customer, not because it would make us more money, but because it was needed for a reasonable amount of security. This job could be done alone, but it would take longer, and during some parts of the job, it would pose some safety issues.

By Greg Perry, CML, CPS

24 Going in the Side Door

Let's look at a pair of Overly vault doors. On the pair we were servicing locally, I tried the handle; sure enough, it would not turn, and the lock bolt was retracted, but the door still would not open. I could tell the lock bolt was retracting because of the amount of travel after the stepper motor fired inside the lock. There is no relock inside the door, so what could be keeping the door locked? What could be the problem?

By Greg Perry, CML, CPS

²⁸ This Ain't Your Daddy's Locksmith Business!

Well, as I set out to write this article, it dawned on me the dramatic changes that have occurred throughout the evolution of automotive security. On my father's car, security was the lock and key; just enough to keep the honest people honest. Security during my time includes the introduction of high security locking systems and electronic disabling systems like VATS. Although keys were still widely used, my son and daughters' made their driving debut around the time of GM's Passlock system, and the birth of transponder technology, during what is probably the fledgling era of electronic automotive security. More changes, and at a faster pace than ever.

By Tom Seroogy

³⁴ Safe Servicing and Combination Changing

Servicing and changing combinations on home/office safes and vault doors is a very lucrative part of the locksmithing industry. Though the wave of the future of our industry is electronics, mechanical combination locks are still in abundance in the marketplace and probably always will be. Let us first examine the definition of safes and how the mechanical imperfections work to our advantage as security professionals.

By Jim Hancock, CRL

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By Chris Geary, CRL



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hat are the ingredients of the perfect locksmithing job? Consider a combination of regular hours, nice customers and zero bounced checks or overdue accounts. Add to that a mixture of an inexhaustible supply of steady work and an exciting and rewarding work environment, and you'll start to get an idea of what it is like being an institutional locksmith at NASA Ames Research Center in sunny California.

Ames Research Center and the adjacent Moffett Federal Airfield are located in the San Francisco Bay Area, right in the heart of Silicon Valley. Not only was it a major naval base from the 1930s up until 1994, but also, for years, has been one of the world's premier aeronautical research facilities. Here the largest wind tunnel in the world, named the "80-by-120", is also one of the largest electricity users in California when it is operating. Ames is also home to cutting edge research in the fields of Life Sciences, Information Technology, Nanotechnology, and has entered into research agreements with a variety of universities and high-tech businesses. Hanger 1 is one of three dirigible hangers built in the 1930s for the Navy – it's a prominent Silicon Valley landmark.

The locksmith function at Ames is split between two different departments. The Plant Engineering locksmith installs and repairs all door hardware. He also makes all keys for desks and cabinets, issues lockout/tag-out locks, and installs computer lockdown hardware. The two locksmiths in the Protective Services Technical Security Department are responsible for rekeying locks, key control, and safe work for approximately 200 buildings. Badge and card readers are not a part of our function, but are installed and maintained by contract alarm technicians. A frequent misconception of in-house locksmiths is that we aren't sharp enough or hard-working enough to make it in the commercial world. Ask my new partner -- a commercial locksmith for 20 years before he joined the team last November about that misconception, and he will tell you how overwhelming it has been for him. I can safely say that being a commercial locksmith does not prepare you for a great deal of what we do as a service to the Federal Government.

One of our functions is to interact with the Engineering group to help develop door hardware requirements. We have made it our aim to standardize hardware as much as possible, to both cut costs and facilitate repairs. Best 9K lever sets are the standard office lock, so you can probably figure out that the base is all SFIC. While the Unican 1000 was the standard stand-alone pushbutton access lock, we recently decided to switch over to the Trilogy T2 and T3 to allow for more possible combinations and flexibility.

Rekeying is a never-ending process. A combination of office moves and remodeling provides us with a steady flow of work. While we do much of the rekeying of cylinders in-house, we farm out requests for over 100 cylinders to Best Access Systems, and then install them ourselves. We computer-generate our own mas-



ter key systems, but print out the entire progression and work off the hard copies, which are stored in a GSA-rated safe. Having a complete printout allows us to write notes next to each code, as well as giving us the ability to see the whole system at one time with the inter-relationships of the various levels of master keys. We have the following key machines at our disposal: an ITL 9000 hooked up to a computer, a Rytan Semi-automatic, two HPC 1200CMs, three Best Key Combinators, and a Scotsman ACE cutter. Unlike most commercial shops, every key made for a door type lock is cut on a code machine. We want to ensure that every key is as accurate as possible and will work flawlessly. That requires us to maintain an extensive record system.

One of the many benefits of working at a computing research facility is the resources available to us. We were provided with a relational database custom-made to our specifications. The government has given a name to our record system, RKLS, the Registered Key and Lock System, and it is at the heart of what we do. John Bousquet, a former locksmith here, did an outstanding job of providing the programmers with the overall design. The program automatically updates employee data from the Base's personnel server, allows us to search for people by typing in any portion of their name, automatically inserts key requester

> information for us with a click of the mouse, and keeps a running history of each key and each key holder. It displays for us who the authorizing signatories are, and warns us if an individual already has a copy of a key we are in the process of issuing. It also allows us to change the signatory list for large groups of keys all at once. It is built for ease of input and speed. We can generate custom reports by any one of about 30 search criteria and sort them any way we choose. Investigators, facility management, and contractor managers often ask us

for reports on outstanding keys for specific areas, and we can supply those for them in minutes. We are also heavy users of MS Excel and Word, PageMaker for keying diagrams, and a large number of other applications. I can safely say that we make good use of computers to provide the government and our customers with the best service possible.

Our shop is responsible for tracking and servicing the safes and vaults on base. Safes are checked nightly by patrols, and if one is missing, we are the ones asked to track it down. Safe lockouts are a fact of life, so we have the equipment and training to both open and service them. We have a Magnum 457 and a StrongArm Mini Rig, a Vac Attack drill press, carbide actually do more safe openings for the military tenants than we do for NASA, mostly because we set and service the NASA containers ourselves. We were once called out to the airfield in an emergency to meet a

Going out of our way to help our customers is easy to do because they are great to work with and appreciative of what we do.

and diamond bits, an autodialer, and both Hawkeye and Stortz swing-prism borescopes. All drilling and repair is done according to FS 809. Both of us are Certified GSA Safe and Vault Inspectors. One of our most valuable tools is the ALOA-partnered ClearStar Security Network, where we can get up-to-date information on X-08 and X-09 servicing techniques, as well as get answers to any questions we have.

Since they're in use at a Federal facility, the vast majority of safes and vaults are GSA-rated, making manipulation unlikely. Even so, there are some nonrated containers that give us opportunity to practice our skills. The U.S. Navy had just vacated Moffett Field in 1994 and I found a locked vault in one of their buildings. The base commander was still on site, but was unable to track down the combination form. It was a Diebold door, circa 1930, with an unusual S&G dial having a large gap between the numbers in the drop-in zone. I detected a four-wheel lock and called the SAVTA hotline. Mike Oehlert faxed me several diagrams for comparison. It opened after an hour and a half of manipulating, turning out to be an S&G roller-bolt with a gravity fence -- one really cool lock that is now in our collection. Also in our collection is an S&G two-movement time lock, removed from another old vault. The jeweled case is a beautiful example of the craftsmanship of days long gone.

Even though the military tenants on base procure and often service their own containers, we will help them change combinations, retrofit to the X-09 lock, or do other repairs (including drilling), when asked. We military plane. They were on a mission and couldn't open their safe, and we were asked to open the container as quickly as possible so they could get back in the air. Thirty minutes and one hole later, they were rolling down the runway.

There is an administrative side to what we do. Government regulations specifically address the locksmith function. There are regulations referring to safes and proper storage of materials in them, as well as how the master key system is maintained and secured. We not only follow the rules, but also help modify them. We write standard operating procedures, monthly reports, perform audits and surveys, and just about anything else our management asks. We attend a variety of meetings with facilities managers, security management, and other groups to improve processes or plan for upgrades and changes. Everyone terminating from Ames is required to outprocess through our shop, so we can recover all government keys and locks.

There are many benefits to being an institutional locksmith at Ames. Whether it's a ride in a blimp, trying out the aircraft simulators, or attending seminars on cutting-edge technology, my colleague and I can honestly say that our work here at Ames is the most rewarding job either one of us has ever had. Going out of our way to help our customers is easy to do because they are great to work with and appreciative of what we do. We are constantly learning and loving every minute of it. Institutional locksmithing is nothing less than fantastic!

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A Brief (and Interesting) History of Automotive Keys

By Merritt Perkins, RL

Before we discuss automobile keys, we need to know a little about the automobiles and their history. More than 15 and a half million Model T

Fords were manufactured in the United States from 1908 to 1927 -- more than all other makes of automobiles. In 1914, a completed chassis was assembled every 93 minutes; in 1927, every 24 seconds.

Ford owned iron mines in Minnesota and Michigan and ore carrier ships to bring the ore to River Rouge. He owned coal mines in Kentucky and railroads to bring it to River Rouge where the assembly lines were. I recall watching glowing hot coke pushed from a furnace fall into a railroad boxcar at the River Rouge plant where it was used to make steel.

The Model T Ford was very different from other automobiles. Cars of that time were touring cars with a front and back seat and open top. A fabric top was attached to a frame that folded it up and stored it behind the back seat. When unfolded, it attached to the top of the windshield. There were side curtains that could be attached to enclose the sides.

There was also a single seat model called a "runabout."

There was no door on the driver's side. A brake lever to the left of the driver set the brakes on the two rear wheels when pulled back and also depressed the clutch pedal halfway to the neutral position. There were three pedals, a brake on the left, reverse in the center, and the clutch on the right. When the clutch was pushed down it was in low gear, and when all the way up, in high gear. The pedals tightened fabric-lined bands to grip the three drums of the planetary transmission, and the tension on the bands could be adjusted to compensate for wear. There were two levers behind the steering wheel. The left lever adjusted the timing of the spark. Up it was retarded, as when starting, and down it was advanced. The right lever (the gas lever) adducted the throttle to control engine speed.

The engine was started with a hand crank in front of the radiator. Often a wire was attached to the choke on the carburetor and extended through the radiator so that you could choke the engine while cranking it. Around 1920, a six-volt starter and generator were installed using a six-volt storage battery. The starter had a Bendix drive that engaged a ring gear on the flywheel. At this time, the ignition switch was moved to the dash and had a key lock with 24 changes, F51 to F74. The switch had three positions: Magneto, Off and Battery. Beside the switch was an ammeter to show the battery charge or discharge.

The magneto consisted of a group of V-shaped permanent magnets attached to the front of the flywheel that moved past stationary coils. The ignition system consisted of four induction coils in a coil box under the dash. The high tension terminal of each one attached to a spark plug. One primary terminal connected to the switch and the other to the timer, which had four insulated terminals that a wiper on the end of the cam shaft made contact with, in sequence. The spark lever rotated the timer to adjust the timing. The vibrating armature on the induction coils would give a sequence of sparks, and you could hear them buzzing.

Sometimes, young fellow would connect up a spark coil, so that when anyone touched the car while it was turned on he would get an electrical shock. The gasoline tank was under the front seat. To see how much gasoline was in the tank, you used a stick similar to a ruler to dip into the tank. There was a tool box on the running board which might contain a monkey wrench, slip joint pliers (furnished by Ford), tire pump, repair kit for inner tubes and tires, and other tools.

The 1915 Dodge touring car had a 12-volt electrical system with a starter-generator connected to the

motor with a silent chain drive. The four-cylinder engine had a priming cup on each cylinder. The ignition system had a single ignition coil with cam-actuated breaker points in the primary circuit, and a distributor to connect the high tension terminal to each sparkplug in sequence. The ignition switch was mounted on the dash and had a stamped steel key with 24 combinations, DB76 to DB99. introduced the Model A, which was discontinued in 1931, followed briefly by the Model B. In 1932, Ford introduced the V8, with an ignition lock that also locked the steering column. This had a little pin tumbler key with no grooves on the sides, the top being narrower than the bottom.

The spacing of the cuts was .170 inches from shoulder to center of the first cut, .125 inches between cuts.

Sometimes, young fellow would connect up a spark coil, so that when anyone touched the car while it was turned on he would get an electrical shock.

The gasoline tank was mounted in the back, and a vacuum tank mounted on the bulkhead in the engine compartment was connected to the intake manifold and supplied gasoline to the carburetor. The gear shift was floor-mounted and the transmission worked like those in many later cars.

Dodge Brothers was incorporated in 1914 and was purchased by Chrysler in 1928. In 1922, Walter P. Chrysler took over both Willys-Overland and the Maxwell Motor Car Co., which was founded in 1904 and had taken over the Chalmers Motor Car Co. when it failed in 1908. In 1925, it became Chrysler.

Three years later, after the purchase of Dodge Brothers, Chrysler introduced the Plymouth to compete with Chevrolet and Ford. In 1933 and 1934, the Chrysler cars, Chrysler, Dodge, DeSoto and Plymouth used a bent or offset key (with locks made by Yale). The keys for the different makes differed in the length of the shoulders of the blade. These keys were difficult to cut, and the demand for them soon disappeared.

In 1935 and 1936, straight keys were used with different grooves for each Chrysler model. In 1927, Ford shut down his plants to retool, and in December 1927, The depths were .195, .175, 155, .135 and .115 inches. Around 1950, the locks had no shoulder in front, and a shim could easily be introduced from the front to pick and shim it open. Bargman also used similar locks for mobile or motor homes.

Breakaway pins were made for these locks. The lower and driver pins were made in one piece nearly cut in two, so that the pins could be assembled in the lock and the key inserted and turned to break the two pieces apart. This left a tiny tip where it broke apart that dug into the die cast plug and cylinder.

Later, Ford used a single-sided key with a groove down the side and spacing of .199 inch from shoulder to center of first cut and .125 inch between centers of cuts. The depths were .240, .220, .200, .180 and .160 inches. Next, they used a reversible double-sided key with the primary and secondary key with opposite milling, so that they would not enter each other's keyways. The pin tumblers were only on one side of the lock.

In the late 1920s, Studebaker and Erskine (made by Studebaker) had a lock on their steering column that locked the steering and ignition. In 1954, Studebaker merged with Packard. In 1963, they announced new keys and locks, but ceased U.S. production in 1963 before any were used. They ceased production in Canada in 1966.

In 1932, Chevrolet used a small key, and in 1933, Buick and Oldsmobile used different grooves. In 1934, General Motors used a double-bitted key with three cuts on each side. There were three different grooves for the center part for different models: 1934 Nash and 1934 Chevrolet; 1934 Cadillac, 1934 LaSalle and 1934 Oldsmobile; 1934 Buick and 1934 Pontiac.

In 1935, General Motors went to the sidebar lock with six tumblers that had the same keyway grooves for both the primary key (which had an octagon head for ignition and door) and for the secondary glove-andtrunk key (with a pear shaped head). Both keys had a

small hole in the knockout insert on which the code numbers could be stamped. Some tried to drill the hole out larger instead of knocking out the insert. The spacing of the bitting cuts was .107 inches from the shoulder to the center of the first cut and .093 inches between cuts. The depths were .250, .225, .200 and .175 inches.

A set of 64 tryout keys was available with cuts half way between the correct bitting

depths to unlock these locks. The keys were inserted in these locks with the notches or bitting cuts down instead of up as in most pin and disk tumbler locks. To open a lock when the key was missing, the cap was torn or cut off with side cutting pliers, a small hole drilled at the left side so that a tool such as a wire with a beveled end could be inserted to put pressure on the side bar, and raise the tumblers so that the side bar would enter the notch in the H shaped tumbler. The tumbler springs were quite strong, and the side bar springs very light, so that the tumbler would lift the side bar out of the notch in the tumbler. When the side bar extended from the plug into a slot in the lock case, it prevented the plug from turning. When it was flush with the surface, the plug could be turned.

After many years, until about 1970, the same basic design was still used, but new keyway grooves designated by the letters A, B, C, D, E, H, J, and K stamped on the key and keys with a rectangular head for the primary or ignition key and an oval head for the secondary key that operated the doors, glove and trunk. There were still inserts for the code number to be knocked out. The keyways and codes were changed



each year.

The spacing was changed to .109 inches from shoulder to center of first cut and .093 between cuts. The depths were changed to .248, .223, .198, .173 and .148 inches.

Chrysler used small Yale spacing of .146 inches from shoulder to center of first cut and .140 inches between centers of cuts. In 1971, they kept the same key blanks as the previous year, but changed from five biting depths of .255, .230, .205. .180 and .155

inches with increments of .025 inches to six depths with increments of .20 inches, .247, .227, .207, .187, .167, and .147. New codes were published for the increased number of combinations.

Since then, automotive keys have seen many more changes. But as in any area of professional specialization, an awareness of the general history of these locks is helpful. Not to mention interesting.



Helping Out on a Re-Hanging By Greg Perry, CML, CPS



1

Old Adams Rite exit device. The black rail is not attached to the door.

Last year, we looked at re-hanging a pair of aluminum glass doors. This year, it's time to rehang a hollow metal door. Although we used the same type of hinge and fasteners, the method of installation is different. This job came about because of proper salesmanship by another locksmith. His request for service was to repair the broken door alarm. When he looked at the door and frame, he recommended repairing the whole opening. I use the term "proper salesmanship," because he recommended what was appropriate not because it would make him more money, but because it was needed for a reasonable amount of security. Since he is a one-man shop, he requested that I give him a hand with the repairs. This job could be done alone, but it would take longer, and during some parts of the job, it would pose some safety issues.



The latch edge at the top of the door is badly worn.



The hinge mount in the door is bent and no longer properly supports the door.



We are using a band saw to cut off the hinge knuckles.



The hinge plates are now reinstalled as filler plates.

We started with an opening in need of a lot of help. The existing exit device was beat up from years of use on the back door of a fast food restaurant. The hinges were badly worn. The hinge mounting plates in both the frame and door were bent, and the welds would not support realignment. The upper three feet of the door latch edge was rubbing, and the door alarm didn't operate. Three things were still usable.

The frame was secured to the wall, the door was still intact internally, and the closer was only a few years old. It was definitely time for a re-hanging.

The first thing we did was to disconnect the closer arm and remove the hinge pins. Next, we removed the door from the opening and set it aside. The hinge leaves were marked on the backside to match the edge of the frame and the face of



The hinge leaf frame side is installed in the first.

the door. Next, we set up the band saw to start cutting the old hinges while we worked on mounting the new hinge. Once the hinge knuckles are cut off, they become filler plates. Last year, I chose Select SL21 full surface swing clear hinges. Those doors were three-footers, and the additional opening width gained with a swing clear hinge was nice. This time I choose a Select model SL57 full surface hinge. The door is four feet wide, so the additional opening width is not needed. In addition, the swing clear

model requires 1 1/2-inch of clear frame face. The SL57 full surface requires only 7/8-inch clear surface on the frame. The stucco on the wall partially covers the frame. The SL57 full surface is the best choice for this application.

The frame leaf is attached first. Next, the old (now cut) hinge leaves are replaced. Wood shims typically used behind the frame (or wood shingles) are used to position the door. They are placed on the threshold, and the door is placed on the shims. Next, we shim the door in the opening side to side to leave about a 1/8-inch gap on the latch side. Once the door looks good in the opening, move the hinge over the door

and install the self-drilling screws in the smaller holes. Remove the shims and carefully open the door. Now is the time to test the door for fit and function. Is anything binding, and is the gap around the door correct? If everything looks good, then drill a couple of the 3/8-inch holes through the hinge and door. Next, install the through-bolts and screws in those holes. Check the door fit one more time before drilling the balance of the holes and installing the through-bolts and screws. We add several pop-rivets between the screws; this adds a degree of tamper resistance and additional strength. Once all the fasteners are installed and the fit checked, the covers are installed.

The door closer arm was reinstalled and an Alarm Lock 70R exit alarm panic device was installed. Finally on this job, we checked the weather-stripping to make **9** sure it still provided a good seal. Time to write an invoice.

We don't have to be great salespeople, but we should be proper salespeople. Several high-traffic businesses are now specifying these hinges for original installations. They've learned the value of spending a few extra dollars up front to save it in reduced maintenance costs later. This type of job can be very profitable and provide your customer with a high quality installation – a win-win situation.



The door is in place with hinge attached.



Because we cut the hinge, the bottom cover screw needed to be moved. I used a drill press ot drill the hole; then I tapped it to 8/32 thread.



The covers are installed.



The inside view with new alarm lock 70R, installed.



Going in the Side Door

By Greg Perry, CML, CPS

This month, we'll look at a pair of Overly vault doors. On the pair we were servicing locally, the main entrance would not open. The customer had the combo to the Mas Hamilton X-07 lock, but the handle would not turn far enough to retract the bolts. I tried the handle; sure enough, it would not turn, and the lock bolt was retracted, but the door still would not open. I could tell the lock bolt was retracting because of the amount of travel after the stepper motor fired inside the lock. There is no relock inside the door, so what could be keeping the door locked? What could be the problem? The customer mentioned a side door, but they had no idea who had the combination, or even when the door was last opened. This door had a Sargent & Greenleaf 8560 series lock. The only problem here is a lost or forgotten combination. Opening either door gives us access to the inside of the other. Which door would you want to open? I chose the second door (as seen in photo 1).

I started by removing the dial. Using a pair of vise grips on the knob, I wiggled the dial up and down until it broke off, about even with the dial bushing. Next, I removed the dial ring and attached a StrongArm MiniRig template to drill a scope hole. The building was erected about 1990, so the door was built prior to the GSA requirement for carbide included hardplate, yet the hardplate destroyed a couple of carbide bits before I switched to a diamond-core drill. Once inside the lock case, I scoped the wheel pack, setting the wheel gates under the fence, and opened the lock. Once inside the building, it was time to open the other door.



Photo 1



Photo 2



Photo 3

Opening the door from the inside is much easier than from the outside. First, you need the key for the lock cover. In most cases, it's attached to an evebolt in the upper hinge side corner on the inside face of the door. Opening the lock cover reveals a red pin attached to a spring-loaded bolt. This can be seen in photo 2. Push down on this pin; pull out on the lock bolt extension seen in the photos 3 and 4, then turn the inside handle to retract the door bolts. The door will now swing open. Under normal operation, the lock retracts the bolt extension. This moves the extension away from the springloaded bolt. Photo 5 shows the ramp area of the door bolt track. The bolt extension is pushed toward the back of the door as the handle is turned to retract the door bolts. Opening the cover on the door that wouldn't open revealed the red pin sitting at the bottom of the lock box. The problem was the spring-loaded bolt was pushed up into the lock bolt extension, even with the lock bolt retracted. It was a simple matter of using a probe to pry the springloaded bolt down and open the door.

I've thought about the prospect of opening this door if we didn't have the other door go through. The only viable method I've found would be to drill for the bolt and pry it down from the outside. This would require drilling at 6.5 inches down from the dial center about 2.75 inches deep. The problem with this location is that the GSA does not allow drilling outside of the dial ring.

The hole in the drilled door was repaired with a carbide plug welded in both sides. Next, the area under the dial ring on the door was puttied, textured and painted. A new X-08



Photo 4

was installed on the door, which required drilling and tapping the end of the lock bolt to accept the bolt extension. The other door required reinstallation of the red pin. Before installing it, I put a dab of red Locktite on the threads.

This is not the first time I've gone around a problem. Oftentimes, there are multiple ways to get in. Bank vault walls are core drilled to avoid drilling the vault door; I've knocked a hole in a wall to avoid damaging a \$5,000 sound-rated door. Always look for the easiest method, providing it is professional, and does not cause more damage or additional expense.



Photo 5





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The ALOA Membership Campaign for 2004 features more member benefits than we've ever offered before. We're stuffing members full of great gifts!!

If you renew your commitment to your industry and help support ALOA, we will offer FREE membership dues to ANY CURRENT MEMBER who recruits one new member on or before January 1, 2004.

ALOA is excited about the vast legislative challenges that lie ahead, and we're waiting for our members to let us after those groups that are aiming to legislate locksmiths out of business, one bad bill at a time. We're ready to do our part for the prosperity of this industry. Please help yourselves by doing your part this year. Prove you're a pro by sticking with ALOA in 2004. You will be rewarded for it many times over.

Note: The ALOA Board of Directors has enacted a \$25 Legislative assessment to the regular ALOA dues for all active members in the USA (and territories) in 2004. If you

live in the United States or its territories, you must pay the assessment to maintain your membership. The assessment will be payable during this year's dues billing, which mailed on Oct. 1, 2003. As directed specifically in writing by the ALOA Board, the proceeds from this assessment will be available for use ONLY in ALOA's legislative efforts.

All members who renew on or before January 1, 2004, will receive:



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This Ain't Your Daddy's Locksmith Business! By Tom Seroogy

Every now and then, I enjoy reading those little emails letting you know how old you really are. We're familiar with most – "When you were born a car cost \$1,500; a Harvard education - \$2,500; paper plates were made of paper; 8-Track tapes ruled; and two hamburgers, fries and a Coke cost a dollar..."

Well, as I set out to write this article, it dawned on me the dramatic changes that have occurred throughout the evolution of automotive security. On my father's car, security was the lock and key; just enough to keep the honest people honest. Security during my time includes the introduction of high security locking systems and electronic disabling systems like VATS. Although keys were still widely used, my son and daughters' made their driving debut around the time of GM's Passlock system, and the birth of transponder technology, during what is probably the fledgling era of electronic automotive security.

As for my grandchildren – yes, I have three – by the time they learn to drive, a museum (or grandpa's garage) may be the only place to see a car key. Vehicle security will be fully electrically based – infrared, transponders, biometrics – truly the age of Star Trek. Or, maybe, Star Wars – or, maybe... In other words, the automotive locksmith of tomorrow will be very much different from the automotive locksmith of even today, let alone yesterday.

Still, the proliferation of electronic technology in automobiles has affected more than the locksmith namely, the automotive techician. In fact, the nearly nonstop assault of technological and legislative revisions has affected the day-to-day operation of the automotive trade more than any other. Moving in stride with the fledging electronic security revolution are the growing concerns and demands of the EPA. With the single goal of creating standards for cleaner emissions, the EPA introduced OBD I/II in efforts to bring all vehicles manufactured in the United States under a uniform diagnostic umbrella. Although the OBD II standard went into affect in 1995, it wouldn't be until 1996 that OBD II and the introduction of transponder-based immobilizers would begin to effect the amalgamation of the automotive technician and the locksmith. To date, ongoing additions to EPA requirements, the advancement of high-tech/low-cost electronics, and the need for greater security, are changing the face of the automotive locksmith. The future, for those who grasp and hold on for the jour-



1. With a single Pass-Through diagnostic tool and connected to the internet, the locksmith may one day be able to program keys for any car on the road.

ney, will witness the locksmith metamorphosed from a key-cutter to a highly educated technician. (See sidebar on Lockmasters PUREAuto certification.) And, as always, those that comprehend and seize the opportunities presented by this rapidly-changing industry are those most likely to reap the first and principal share of the benefits.

History of the Tools

So, with all of the changes and uncertainty in today's market, where does a locksmith start? Well, let's begin by looking at the evolution of the tools that have been available to the automotive locksmith. In short, these tools can be divided into three types, offered at three different time frames:

- Original Equipment Manufacturer (OE or OEM) – 1996 to present
- 2. Aftermarket 2000 to present
- 3. Pass-Thru 2003 and above.

OEM - 1996 to current

For the most part, the locksmith's exposure to diagnostic tools was limited until the introduction of transponderequipped vehicles in 1996. Fortunately, for most early model transponder-equipped vehicles, key programming could be accomplished using onboard programming procedures – including GM and Ford vehicles. Unfortunately, except for GM, late model year changes required the use of an original equipment diagnostic tool to complete key programming. Initially, because these tools were not sold to the open market, they were extremely expensive, or otherwise hard to come by. Many could only be obtained by making purchases via connections within the automotive industry.

Soon, however, a couple of manufacturers began to see the merit in offering their diagnostic tools into the aftermarket. By far, the most common tool is Ford's NGS, manufactured by Hickok Inc. Ford was the only manufacturer to offer a complete OE diagnostic tool into the aftermarket, including the ability to access the key programming functions, as well as a full compliment of technical support through Hickok Inc. Chrysler also offered their DART tool, but lacked depth by not including the technical support offered by Hickok.

2003/2004 CAN Equipped Vehicles

		110051	ENOINE
YEAR	MFG	MODEL	ENGINE
2003	Ford	Excursion	6.0
2003	Ford	F-250	6.0
2003	Ford	F-350	6.0
2003	Ford	Focus	2.3
2003	Ford	Focus	2.3
2003	Ford	Thunderbird	3.9
2003	Lincoln	LS	3.0
2003	Lincoln	LS	3.9
2003	Mazda		6 2.3
2003	Mazda		6 3.0
2003	Porsche	Cayenne	S 4.5
2003	Porsche	Cayenne Turbo	4.5
2003	SAAB	9-3	2.0
2003	Saturn	ION	2.2
2004	Buick	Rendezvous	3.6
2004	Cadillac	CTS	3.6
2004	Cadillac	SRX	3.6
2004	CadillacS	RX	4.6
2004	Cadillac	XLR	4.6
2004	Dodge	Durango	37
2004	Dodgo	Durango	4.7
2004	Dodge	Durango	5.7
2004	Dodge	Durango	5.7
2004	Ford	E-250	6.0
2004	Ford	E-350	6.0
2004	Ford	Excursion	6.0
2004	Ford	Explorer	4.0
2004	Ford	Explorer	4.6
2004	Ford	F-150	4.6
2004	Ford	F-150	5.4
2004	Ford	F-250	6.0
2004	Ford	F-350	6.0
2004	Ford	Focus	2.3
2004	Ford	Focus	2.3
2004	Ford	Taurus	3.0
2004	Ford	Taurus	3.0
2004	Ford	Thunderbird	3.9
2004	Lexus	LS430	4.3
2004	Lincoln	LS	3.0
2004	Lincoln	LS.	3.9
2004	Mazda		3 2.0
2004	Mazda		3 2.3
2004	Mazda.		6 2.3
2004	Mazda		6 3.0
2004	Mazda		6 2.3
2004	Mazda		6 3.0
2004	Mazda	RX-8	1.3
2004	Mercury	Sable	3.0
2004	Mercury	Sable	3.0
2004	SAAB	9-3	2.0
2004	Saturn	ION	2.2
2004	Toyota	Prius	1.5
2004	Voluo	S40	2.4
2004	Volvo	540	2.5
2004	10100	0.10	

Other tools were available, but more expensive and harder to come by. Included in this group are the Nissan/Infiniti Consult II and Mitsubishi's MUTII. The advantages of purchasing OEM diagnostic tools were threefold: First, they offered the locksmith the ability to program keys into the latest transponderequipped vehicles. Second, because the tool is an OEM tool – providing that the correct key is used and the software is kept up to date – there were few programming problems. Finally, for problem vehicles, the OE tool allowed the locksmith to perform system diagnostics, including retrieve, correct and clear Diagnostic Trouble Codes. Needless to say, the locksmiths who first took advantage of these tools reaped the greatest benefits.

As with every advantage, however, there were several drawbacks to purchasing the OEM tool. The first hurdle has been that OEM tools are not only expensive, but they are manufacturer specific. As such, a different machine would have to be purchased for each line of cars a locksmith wanted to service. Needless to say, the full compliment of diagnostic tools would cost the locksmith upwards of \$15,000. Also, initially, factory support was nonexistent and software updates almost impossible to obtain. Again, Ford and Chrysler's forward thinking allowed access to both technical support and software updates through legitimate channels. Other machines, like the Consult II and the MUT II, were left to the devices of the locksmith for obtaining support and updates. A final problem with owning the OEM tool is that, as of 2004, machines being made for the newer CAN systems as well as the SAE J2534 requirements and specifications, are quickly replacing the older OEM machines. We'll take a look at this when we cover Pass-Thru technology later in this article. (See table insert for a list of CAN equipped vehicles.)

Aftermarket – 2000 to current

Unfortunately, the investment required for programming all of the manufacturer vehicles, plus the difficulty in obtaining software updates and PIN numbers put transponder work outside the reach of many qualified locksmiths. With locksmiths desperately searching for a way to perform the automotive key generation service they've been providing for years, the need for a single, multi-vehicle transponder programmer was apparent. The first attempt at filling this vacuum was the late 2001 introduction of ASP's TCL-1. Although coming up somewhat short on the performance end, the tool offered the locksmith a glimmer of hope for doing automotive work again. On the heels of the TCL-1, Ilco introduced the SDD (Silca's Diagnostic Device). Developed by Silca and sold into the United States by Ilco, the SDD has a proven track record in the European transponder market. Working with auto lock expert Randy Mize, Ilco developed the software necessary for using the SDD in the North American auto market. To date, the SDD has proven to be a versatile and well-made machine, backed by one of the world's largest providers of OEM and aftermarket transponder key blanks.

Still, ASP's drive to help the locksmith maintain their presence in the automotive market did not stop here. In late 2002, the TCL-I was replaced by the better performing and more robust T-Code. Manufactured by Advanced Diagnostics, and sold in Europe as the AD-100, the T-Code was fitted with software for the North American vehicle market and has proven a great successor to the TCL-1. A latecomer to the transponder tool line is STRATTEC. Although STRATTEC has been instrumental in the design and supply of OEM and aftermarket transponder keys since 1996, it is not until early 2004 that they are expected to release their North American version of Advanced Diagnostics' AD-100, calling it the "Code-Seeker." Based on the performance of other Advanced Diagnostic tools, the Code-Seeker is likely to meet all of the expectations of the automotive locksmith.

All in all, the locksmith wishing to enter and/or maintain automotive key generation work has several costeffective options from which to choose. To date, all released tools have proved out well, with few bugs, and some extra features to boot. Which one should you choose? Let's just put it this way: I've found that for every tool, there to two types of locksmiths – those that swear by it, and those that swear at it.

The benefit of owning an aftermarket transponder tool is self-evident – one-time investment for doing work on cars from various manufacturers, over and over again. The downside to an aftermarket tool, however, needs to be considered. First, unlike the OEM tools, the software for the aftermarket tool must be backward engineered. As such, the release of software updates not only lags behind the release of the new vehicles, but may also include bugs, or the inability to do specific vehicles at all. Also, unlike OEM tools, aftermarket tools are limited in their diagnostic capability. And, in an aging transponder market, this single feature can sometimes prove invaluable.

J2534 Pass-Thru - 2004 and into the future!

Going into 2004 and beyond will yield some dramatic changes to the automotive aftermarket. These changes affect anyone doing automotive work – mechanics, body shops, locksmiths, police, investigators, insurance companies, parts stores, etc. The chief reason for these changes are the rules and provisions of the EPA's SAE J2534 requirements. The documentation for the final rule is extremely involved, and is beyond the scope of this article. However, we do want to cover those few aspects that affect the locksmith. If you wish further information, the entire document, available at the Federal Register, can be downloaded as a PDF file from http://a257.g.akamaitech.net/7/257/2422/14mar20010800/e docket.access.gpo.gov/2003/pdf/03-14461.pdf.

In short, the two features of this rule that may have dramatic effects on the business of the automotive locksmith, are web access to all OBD-related information and the new upcoming Pass-Thru tool technology. Although these two features are designed to work jointly, let's cover each separately.

Regarding web access, the EPA has required that all manufacturers of motor vehicles provide all OBD-related information to the aftermarket via web sites. The information is to be exactly the same as that provided to the Acura - http://www.ServiceExpress.Honda.com Audi - http://erwin.audi.de BMW - http://www.bmwtechinfo.com Chrysler/Dodge/Eagle/Jeep/Plymouth http://www.techauthority.com Ford/Lincoln/Mercury http://www.motorcraft.com General Motors (includes Buick/Cadillac/Chevrolet/ Geo/GMC/Hummer/Oldsmobile/Pontiac/Sat urn) - http://www.gmtechinfo.com Honda - http://www.ServiceExpress.Honda.com Hyundai - http://www.hmaservice.com Infiniti - http://www.infinititechinfo.com Isuzu - http://www.isuzutechinfo.com Jaguar - http://www.jaguartechinfo.com Kia - http://www.kiatechinfo.com Land Rover - http://www.landrovertechinfo.com Lexus - http://techinfo.lexus.com Mazda - http://www.mazdatechinfo.com Mercedes Benz - http://www.startekinfo.com Mini - http://www.minitechinfo.com Mitsubishi - http://www.mitsubishitechinfo.com Nissan - http://www.nissantechinfo.com Porsche - http://techinfo.porsche.com Saab - http://www.saabtechinfo.com Subaru - http://www.subaru.com Suzuki - http://www.suzukitechinfo.com Toyota - http://techinfo.toyota.com Volkswagen - http://www.erwin.vw.com Volvo - http://www.volvotechinfo.com



It's now open game for diagnostic tool manufacturers to make a single machine that covers all manufacturers.



OEM dealers. The benefit of this media is our ability to instantly access the information at any time. As the deadline for web site delivery of the vehicle manuals is now past, locksmiths doing automotive work have the ability

to tie into these various sites, as needed. (See OEM Web Sites in list four.)

There are a couple of shortcomings to the web access, however. First, and probably the most important, the final rule on SAE J2534 does allow OEMs some latitude with the requirements on releasing securityrelated information - i.e. key codes, pin numbers, etc. In fact, the rule has made provisions that currently allow the OEM to protect this information from release. Still, a few manufacturers are offering parts of this information through web access. Mazda states that they will offer the PIN number, needed for key programming, to site subscribers. A few locksmiths have tested accessing PINs -- with little success. However, there is hope. Ford, on the other hand, has made their immobilizer information available through their web site, and more importantly, directly through their Pass-Thru module program site.

Albeit rather minor, a second disadvantage to web access is simply the expense of accessing the site.

Needless to say, if you want the info – "you're gonna havta pay for it" – every time you need it! Probably the most convenient for locksmith purposes is the single day subscription. For around \$20, a technician has access to the dealer site for a 24-hour period.

For the most part, the cost of the subscription can be built into the price of the job, and if doing more than one job, you can make the subscription pay for itself. All manufacturer sites offer various subscription levels. For a review on the subscription rates of manufacturer tech web access, go to the National Automotive Task Force web site at www.nastf.org.

Now for Pass-Thru programming. Depending on which way the market turns with respect to providing security information (namely PIN numbers), and depending on the locksmith's ability to take advantage of this new technology, Pass-Thru technology could be a boom to the automotive locksmith market. At the heart of the Pass-Thru issue is an EPA requirement for all vehicles manufactured after 2004 to be able to be programmed by a single Pass-Thru diagnostic tool! Of course, in order for a single tool to operate all manufacturer vehicles, a few things must be put into place. To accomplish this, a standard has been created that establishes a mode(s) of communication with the vehicle's OBD-related modules that all manufacturers must meet. With this standard, any aftermarket diagnostic tool manufacturer is capable of building a single tool for covering the entire car market. The biggest challenge, of course, is how does a single tool handle the software for all the years of all the models of all the manufacturers that are currently available? What about past and future models? What about mid-year and year-end engineering changes? What about software upgrade availability?

Providing a solution to these questions is the concept behind Pass-Thru programming. In short, all software for vehicle programming is provided directly from the manufacturer via a CD or directly through their designated web sites. A technician wishing to work on a vehicle first purchases the manufacturer's software CD, or subscribes to the manufacturer's web site. Once connected, one end of the Pass-Thru tool is connected to the computer using standard computer connections; the other end of the tool is connected to the vehicle using the standard OBD II compliant data link connector, or DLC. At this point, the vehicle is now ready for programming!

The benefit to the technician is instant, up-to-date, OEM software and the ability to work on just about any vehicle that comes down the road, using a single machine with costs that range from \$1,500 to \$2,500. For the manufacturer, there are continuous subscription revenues and the ability to protect the integrity of their proprietary software.

Now, this all begs the question - What does this do for the locksmith? For now, for about \$1,600, the locksmith can purchase a tool that services all Ford, Lincoln, Mercury vehicles going well into the future. This includes all diagnostics and key programming for the current models as well as the newer models using the CAN system. Some of the hurdles will be accessing the dealer sites from the road. High-speed wireless access is the coming answer, and several manufacturers, including Vetronics, already have plans for using wireless connectivity for the purposes of field programming. Nextel already provides the ability to use their phones in conjunction with computers and PDAs to make net connections. Satellite technology, although currently expensive, is also an option. Finally, the opportunities with such a technology, especially as it becomes refined over time, are great for the locksmith. With Pass-Thru technology, a locksmith may one day be able to purchase a single tool, connect it to his wireless-capable computer, and program keys for just about any car on the street.

Yes, the future holds a lot for the automotive locksmith. But then, this ain't your Daddy's locksmith shop!

Automotive Service Demands By Tom Lynch

The landscape of the automotive locksmith has change substantially and in today's environment the requirements to provide services entail a greater investment as well as education. To some this may be a signal to shy away from providing automotive locksmiths service, while others are embracing the new opportunities. Automotive service franchises are booming with the current state of the new car purchases and used vehicle retention.

Consumers who are not capable of affording the increased costs of a new vehicle are keeping their cars longer. Thus, an increase in automotive services. For those fortunate enough to afford some of higher priced vehicle, there is a desire for "options" or support products to enhance their investment. Some of these support products are ones that are actually, essential operating components like anti theft keys or keyless remotes.

So what are the factors that are causing such a demand?

The average age of vehicles in the U.S. has increased by 1.5 years from 1990-2000

The average number of miles driven yearly has increased with dual income households

New vehicle costs have risen 54 percent between 1990–1999 with an additional 6.5 percent from 1999–2000. This is due to increased technology and electronic equipment enhancements.

Improved quality and engineering has allowed vehicles to remain in service longer.

New vehicle registrations have increased 12 percent from 1990–1999, while vehicle salvage only increased 5 percent

Vehicles on the road in the U.S. have increased from 130 million to 216 million from 1980–2001

As the technology changes, so does the need for knowledge and hands-on training in the various automotive locksmith disciplines. Lockmasters' PUREAuto Automotive Certification provides locksmiths with hands-on technical training by qualified locksmiths that are experts in their field. As PUREAuto training grows, the locksmith will be qualified for the following upcoming PUREAuto Certifications:

- 1. Automotive Security TechnicianTM AST
- 2. Automotive Access Control TechnicianTM AACT
- 3. Electronic Ignition SpecialistTM EIS
- 4. Mobile Diagnostic TechnicianTM MDT
- 5. Anti Theft Computer Support TechnicianTM ATCST
- 6. Vehicle Security AnalystTM VSA

Safe Servicing and Combination Changing

By Jim Hancock, CRL

Servicing and changing combinations on home/office safes and vault doors is a very lucrative part of the locksmithing industry. Though the wave of the future of our industry is electronics, mechanical combination locks are still in abundance in the marketplace and probably always will be. Let us first examine the definition of safes and how the mechanical imperfections work to our advantage as security professionals.

Safe-type containers can be traced back as early as the Egyptians. These early devices, of course, were not as sophisticated as they have become, but they did serve the purpose as modern safe containers. A safe's purpose is not so much to protect its contents, but rather, to protect the lock. As long as the lock remains protected, there is a pretty good probability that the contents will remain secure as well. Of course, the lock won't protect the contents from fire, so the container construction does become crucial, but the lock is the main line of defense from attack. This will become more evident as we discuss safes and their construction, because you will see some of the extraordinary measures taken by the various manufacturers to protect their locks from forced entry.

As with any mechanical device, these locks are not designed for, nor will they ever be, a "no maintenance required" item. When you have moving parts of any type, especially parts made of soft brass and pliable plastics, wear will occur in everyday usage, which will eventually require some maintenance. As a rule, the more a safe lock is operated by numerous different personnel, the more wear will affect the internal parts of the lock. As these parts wear, the tolerances change from a factory, pristine setting to a setting that no longer operates the way it was intended. This can and usually does make the safe harder to open, and may even cause a lockout situation. It is our job as security professionals to intervene between "hard to open" and "locked out." However, this requires the customer calling us before it is too late. I can guarantee you that this won't happen often. More often than not, you'll receive the call, "Well it has been getting harder and harder to open for days (weeks) and now SUD-DENLY it won't open." We will discuss what to do in this situation later in the chapter, but let us first assume your customer had the intelligence to call prior to this or that you, as a great businessman, have set your customers up on a yearly service contract to check their safes annually to prevent either of these problems from happening. In this case, we would do a basic servicing, which is designed to prevent problems by allowing you to spot trouble before it occurs.

Basic Safe Servicing

I. Dial, Dial Ring and Handle

We will start from the most exposed and visible part of the safe; the handle, dial and dial ring. Let's look first at the dial. The dial should turn smoothly with no dragging or rubbing. You should be able to rotate the dial and visually see a steady line of turn with no wobble or "out of round" qualities to the rotation. Any of these could indicate one of several problems or effects to the lock. First would be a bent spindle. The spindle is the threaded shaft that is attached to the rear of the dial and connects to the drive cam inside the lock body. The other problem could be a warped dial. This would usually be indicative of a blow directly on the dial surface. Once determining from the customer that this was not a problem in the past, swing the safe door open and see were it contacts a hard stationary surface, such as a wall, or table, or file cabinet. It is possible that either the door is unbalanced and unlevel, which would cause it to swing freely into such an obstruction or that someone opening the safe has swung the door too hard, allowing it to slam into the obstruction. In either case, the problem needs rectification, whether by adjusting the door, or by training the employees. Also there should not be any side-to-side movement of the dial, but rather, it should be fairly stationary within the dial ring. Side to side movement indicates the spindle is miscut, and is too long, or that the dial ring requires a bushing that is either missing or worn. Once the lock has been disassembled, it will be a bit easier to determine which of these problems may be the culprit and then repair it by either re-cutting the spindle or completely replacing the dial assembly (if the spindle is miscut). If the bushing is missing or broken, simply replace the bushing. Last, but certainly not of least importance, since we use the dial to transfer motion to the lock (stopping at particular numbered points to allow the lock to open), we need to make sure the

numbers are clear and legible. If your customer can't be sure of the position of the dial when stopping, you can't be assured of not receiving that "safe won't open" call at 5 p.m. on Friday, when the only problem is that they can't dial the combo correctly.

The next item to examine is the dial ring. The dial ring translates everything the dial does. The first thing to check is the tightness of the ring. The ring should not have any rotational movement or any movement away from the safe body. If either of these occur, the safe will not function correctly. The majority of the times the dial ring reacts in these manners are because the mounting screws have become loose. In a small percentage of cases, the dial ring is actually broken or missing a mounting screw -- probably due to some obstruction in the corresponding mounting hole. You also need to verify that there is a distinct index mark for opening, as well as a change index where applicable. Once again, if you can't dial a number to a set index,

you can't open the safe. In the last two scenarios, the ring would need to be replaced, or the hole re-drilled and tapped.

The handles on most safes will have a degree of 'play' or looseness to them. This is a pretty natural occurrence. What you should not find is that the handle has a lot of movement in and out of the safe body -or even worse, the handle overrotates beyond the normal open/locked positions. If this occurs, in all likelihood, the cam assembly and handle spindle are not seated together correctly and you are about to have a huge problem. Once the safe is open, the cam and handle assembly must be addressed. Generally, as a rule, if the handle isn't falling off, there is very little service needed on the outside other than checking for cracks, etc. (To be continued next issue)



Keynotes • January 2004



BOARD nominations

What ALOA Board **Positions Are Open** and Where Am I Qualified to Run?

There are currently seven regional directors positions open for election in addition to the position of Secretary. ALOA members now elect the directors from their own regions. Only ALOA members from a region are eligible to run for the open position(s) in that region. And only members from the nominee's region will receive a ballot to vote for that candidate. Members from any region are eligible to run for the President position. You must have been an ALOA member for at least three years to run.

The following vacancies will exist for the election to be held before the ALOA 2004 Convention.

Northeast	three directors
South Central	one director
Northwest	one director
Asian	one director
European	one director
Secretary	

If you have any questions, please contact Charles Gibson at (800) 532-2562 or email charlie@aloa.org.

On this page you will find the required nomination petition and on the following page, the nomination form.

The following is the number of signatures required for each Board position:

Secretary	25
Northeast	22
South Central	7
Northwest	4
Asian	3
European	4

Associated Locksmiths of America, Inc. Board of Directors Nomination Petition

Please print legibly or type. This form can be reproduced if needed.

the ballot for



be placed on (position for which individual is being nominated)

for the election to be held at

the special meeting of ALOA members to be held in 2004 or any adjournment thereof. I am eligible to vote in the region.

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YOUR COMMITMENT TO ALOA BOARD SERVICE

(Please read carefully and sign where indicated.)

The responsibilities of an ALOA board member include contributing a moderate amount of personal time, and a significant degree of professional guidance and expertise to the organization.

You will be expected to come to board meetings and the annual membership meeting. You will need to be prepared to sensibly discuss matters of great importance to your profession and participate in setting policy as part of a governing body. Your course of action during your tenure on the ALOA board should be guided by fair minded, constructive goals pertaining to matters of consequence for ALOA and for the industry. Your contributions are expected to benefit ALOA as a whole, taking individual member rights and concerns into account, but free of the taint of partisan politics or personal gain.

On a practical note: ALOA board members are expected to behave and dress professionally at all times, especially when actively representing the association. ALOA board members are required to participate in two board meetings per year, of three or four days in length, one each fall and spring. Board members are also asked to attend the annual convention and are required to attend the annual membership meeting. Board members may also be asked on a voluntary basis, to represent ALOA at related local, state or regional functions, including serving in the ALOA Booth and otherwise promoting ALOA. When travel is required for a board member, expenses covered by ALOA include lodging, travel and a reasonable *per diem*. The Board has stipulated that assigned travel will be reimbursed at the lesser of the 30-day advance tourist class airfare in effect at the time of travel or the current per-mile rate for travel by personal automobile. Spouse expenses, including extra room charges, etc., are the individual's responsibility.

• • •

I have read and understand the above responsibilities of an ALOA board member, and agree to commit my time and energies as needed. I certify all of the information contained on this form and supporting documentation to be true and complete.

I can be contacted with questions at :

Address _____

Signed:

Phone #

Date

Please attach a recent photograph of yourself and retain a copy of this profile for your own files. This profile and all supporting documentation should be submitted no later than March 1, 2004:

Mail to:

Nominee Profile Secretary of the Board of Directors Associated Locksmiths of America, Inc. 3003 Live Oak Street Dallas, TX 75204-6186 1-800-532-2562



Association Health Plan Legislation Considered by Uninsured Task Force

The second session of the 108th Congress will convene on January 20, 2004, and will take up where the first session left off. While the Senate has not taken up the Association Health Plan legislation (Small Business Health Fairness Act of 2003, S. 545) this fall, significant discussions regarding the bill have been occurring in recent weeks. The Senate Republican Uninsured Taskforce, which consists of 10 Republican Senators, held several meetings in November to begin the process of developing "innovative and workable policy options to reduce the number of uninsured and provide more affordable health care coverage options." One of these meetings focused exclusively on the merits of the AHP legislation. Joe Rossmann of Associated Builders and Contractors provided a detailed briefing to the Taskforce on why the AHP legislation is desperately needed to expand affordable health benefits for workers employed in small businesses. Also participating in the meeting was Deputy Assistant Secretary of Labor Paul Zurawski, who briefed the Senators on President Bush's strong support for the AHP legislation. The taskforce also received presentations from opponents of the AHP legislation -Blue Cross Blue Shield Association and the National Association of Insurance Commissioners.

The deliberations of the Senate Republican Uninsured Taskforce, which are expected to continue in December and January, will greatly impact the outlook for the AHP legislation in the Senate in 2004. Senate Majority Leader Bill Frist (R-TN) has indicated that the Senate will make an effort to pass legislation aimed at addressing the uninsured problem sometime next year. This will provide an opportunity to gain consideration of the AHP legislation in another forum if the Senate HELP Committee fails to take up the bill as a stand-alone measure.

Also in November, President Bush continued his efforts to push the Senate to approve the AHP legislation. After speaking in favor of the AHP legislation several times in October, the President again raised the issue during a speech in Alabama. ALOA's Coalition is working with Administration officials to urge the President to continue his efforts to push the Senate to approve the AHP legislation.

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Name	Member
Kurak hat Jawaa	215
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Charles C. Robertson CML	
Jack Hobin CPL	
William Lee CRL	
Salvatore J. Dulcamaro CML	
C Allan Halverson	40
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Gene Eldridge CPL10	
Ronald P. Riggins CML10	
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Merritt Perkins, RL, has been a developing member of the locksmith and electronics industries for many years. He owns and operates Merritt L. Perkins Labs in Three Rivers, MI.



Greg Perry, CML, CPS, has been in the locksmith industry for 20 years. He's spent half of that time as a field technician for Security Engineering in Ridgecrest, CA. Greg is also a past president of the Desert Counties Chapter of the California Locksmiths Association. He has also won the 2002 and 2003 Keynotes Author of the Year Award. You can e-mail him at glmperry@iwvisp.com.

Tom Seroogy is in the new Automotive division of Lockmasters. He has been the Product Manager for BWD Automotive (formerly known as All Lock). His many years of technical expertise in the automotive field and as a contributor to automotive locksmith education have created a much sought after demand for his popular classes. Tom has developed the new Automotive Locksmithing I & II classes for ALOA to help prepare locksmiths for the PRP automotive electives.

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