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May 2022

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2022

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Automotive LOCKSMITHING 2022

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Save Time & Money: Stop & Think!

A little care and forethought can help you to avoid costly errors and work.

BY STEVE YOUNG

Have you ever said, “You dummy!” when you were the only one around? I have, on many occasions, and it typically was after I had done something that I wouldn’t have done if I only had taken a few moments to think before I started.

After almost 50 years of being an automotive locksmith, I still find myself doing stuff that I should have known better than to do. Part of that stems from the fact that I, like all of us, make mistakes. But the part that really gets under my skin is when I waste a lot of time or money by doing something that a moment of thought could have led me to avoid.

Just the other day, I was making keys for a Chevrolet Trax in the rain.

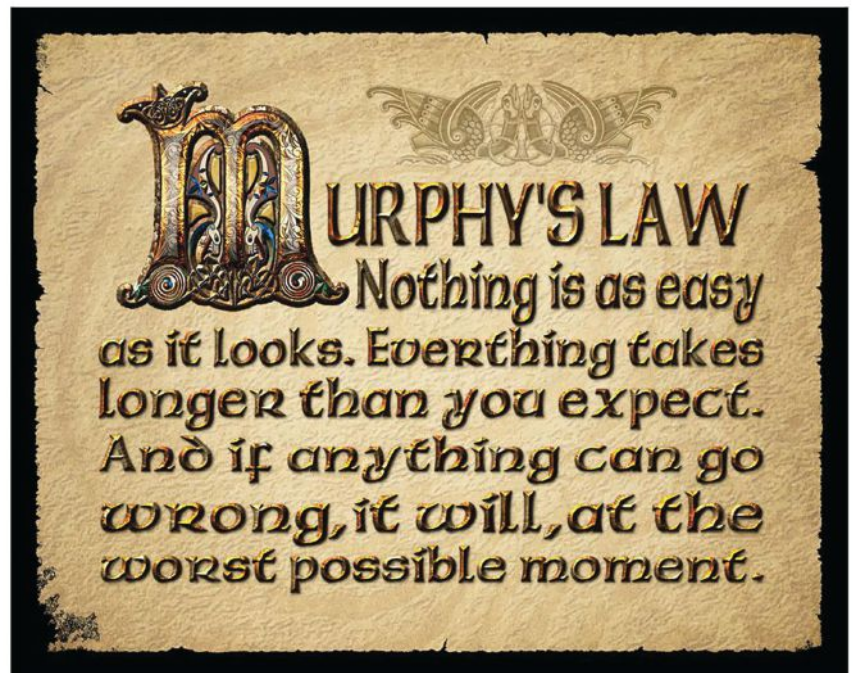


Image 1: A copy of the traditional version of Murphy’s law that hangs on the wall of my office

After removing the door lock to decode it, I closed the door to keep the rain out of the car while I decoded

the lock in my truck. After I had my test key made, I returned to the vehicle to make sure that it worked in the ignition only to find that the outside door handle was locked in place by the same mechanism that held the door lock in place!

Because I hadn’t taken a moment to unlock the other doors, I had to break out the trusty Jiffy-Jak and use it to pull the inside handle to open the door – in the rain! Stuff like that can really mess up your day.

So, the point I’m trying to make here is that taking a few moments when you arrive on the job to consider your course of action *before* you start can save you hours of work in the long run. When I worked for the U.S. Navy, motivational posters were



Image 2: A Canadian-made steering column was on certain Buick and Cadillac models. Notice that the cruise control is on the horn pad rather than the turn signal stalk.



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Automotive Locksmithing 2022



Image 3: This unusual glove box lock slides from right to left and was used on only a few high-end vehicles, such as the Cadillac Seville and Eldorado. It's a full six-cut lock, so a complete door key can be made from it. But if it's locked, it's a real pain to access.

everywhere. One of my favorites simply said: "If you don't have time to do the job right the first time, how will you ever find the time to do it over?"

In our line of work as automotive locksmiths, time literally is money, so it's natural when you hit a job that you have done hundreds of times before to jump right in without a moment of thought. And then you learn that Murphy's Law isn't a joke; it's a simple statement of fact.

Here are a few examples of situations that I've been involved in where a little thinking could have saved a LOT of work. My hope is that you'll learn from some of these examples or at least get a smile from my misfortunes.

CHECK THE GLOVE BOX

I should explain two things. In the years just before airbags, General Motors used a Canadian-made tilt-telescoping steering column on some Buick and Cadillac vehicles that required a special tool or specialized knowledge to be disassembled properly. It was similar to other tilt-telescoping columns, but if you didn't know the "trick" or have the special tool, you could get in trouble

quickly. The Canadian column was easy to identify, because the cruise control buttons were mounted on the horn pad. (Image 2)

The second thing that you should know is that for a couple years, I had to work with a guy who could mess up a free lunch. He meant well, but he had no mechanical aptitude, and when he got in over his head, which was often, he refused to call for help until he had made a gigantic mess of the entire

situation. I cleaned up a number of his messes. I'll call him "Bill."

Bill got a job to make keys to an almost new Cadillac Seville that had the Canadian steering column and the Vehicle Anti-Theft System (VATS). The employees of a local garage and car wash had dropped the keys down a drain.

About three hours after Bill arrived on the job, I got a call to go and bail him out. When I arrived, I discovered that Bill had no idea why this steering column was different from the others that he had done but plunged in anyway. He managed to get it mostly apart but broke one electrical switch, and most of the components of the steering column had vise-grip scars.

I eventually repaired the switch and got the column the rest of the way apart to get the code number off the side of the lock. I made a mechanical key, reassembled the column and sent Bill to work doing the interrogation of the VATS. (I figured that even he couldn't mess that up!) Then, I went to work making the door key.

When I opened the glove box that had the sliding six-cut sidebar lock



Image 4: I found this card in the glove box of an old Buick that was equipped with VATS. I replaced it with my business card and included the VATS resistor value for the car.

(Image 3), I heaved a huge sigh of relief that it was unlocked and that Bill hadn't tried to take that lock apart. But when I looked into the glove box, the first thing I saw was a small manilla envelope with the words "Key Codes" written on it. I looked inside and shook out the knockouts that had the key codes from the original keys.

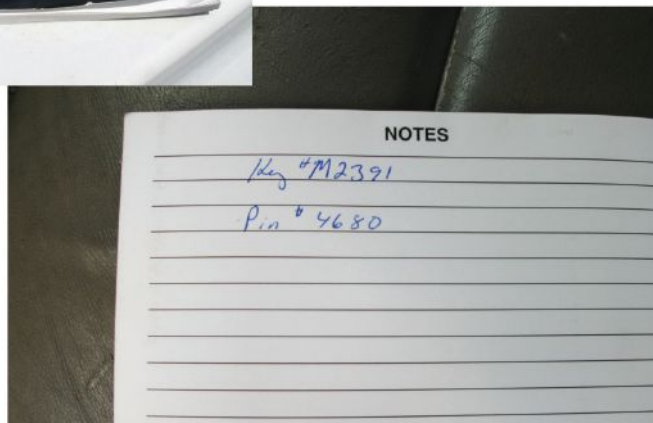
It would be an understatement to say I was mad at Bill, but I resisted the urge to use the pistol that also was in the glove box. I just made the door key from the code on the knockout and sent Bill on his merry way so I could complete the interrogation in peace.

The moral of the story is to always check the glove box. Here are further examples where that saved me a lot of time:

- Recently, I had to make keys for an old Buick that was equipped with VATS. The first thing I did was check the glove box. (Image 4) Needless to say, I saved a lot of time on that job. Basically, all I had to do was cut two keys from code and then interrogate the VATS. Murphy's law wasn't working that day, because I hit the correct value for the VATS on the second try.
- A few years ago, I had to make keys for a 1993 Chevrolet pickup at an auction. The plastic housing of the door handle assembly was broken so it was hanging out of the door. I didn't want to touch it, because it would break, and I didn't want to get stuck fixing it for free. When I looked in the glove box, a key tag was attached to a giveaway keyring that had the two knockouts from the original keys!
- Shortly after Fiat took over Chrysler and we suddenly no longer could get the Immobilizer (PIN) codes from the dealer, I had to make keys for a Dodge Neon at an auction. But when I opened the glove box, I found the



Image 5: I found this in the glove box of a Dodge Neon at an auction back when Fiat had just made Chrysler PIN codes difficult to get.



key code and the PIN written in the back of the owner's manual. (Image 5) That was a big time-saver.

DON'T ASSUME ANYTHING

We all have heard something to the effect of "To assume makes an ass out of you and me." That's one of the great truths of life as far as I'm concerned, but I still find myself doing it. If you're working on a car at an auction, impound or somewhere else where the history on the car is unknown, don't assume that a key isn't in the vehicle.

One day I had to make keys for a Ford pickup for a regular customer. He asked me to put the key in the ashtray when I was done. After making the key, I opened the ashtray and inside was the original key for the truck. I tried it, and it still worked, because I used the "add a key" procedure. At that point, the simplest thing to do was to make the key that I found disappear.

But from that day forward, I always check the ashtray before starting a job like that, and, so far, I've found three more keys in ashtrays. I also have

found keys under the seat, inside the gas filler flap and in the glove box.

I once had a job to make keys for a new rental car on the beach. The guy who called me didn't speak English well, but he did know a lot of English profanity. I got to the car before he did and tried the door to see whether it was unlocked. It was, and the car was packed with luggage and beach paraphernalia.

Just for the heck of it, I got in and pressed the brake and the start button to see whether the fob might be in the car. The engine fired right up, and I resigned myself to just charging him for a service call.

But when I called the customer, before I could tell him that the fob was in the car, he immediately started to raise Hell with me for being there in the first place, because he had texted me to cancel the call. Apparently, he decided to have the vehicle towed to the dealer.

I tried to explain that my published phone number was a landline and couldn't receive texts but got nowhere. He said he was calling the



Image 6: This is the type of proximity fob that I once found in the sunglasses holder of a Mazda RX8 I was called to work on.

But on several other occasions, I was able to locate the fob. I once did a Mazda RX8 that way and eventually found the credit-card shape fob (Image 6) stuck to the foam inside the sunglasses holder on the roof.

FORD DOOR ISSUES

Earlier, I mentioned my misadventure with a Chevrolet Trax door handle. As a rule, I don't remove a door lock that I can pick by using a Lishi tool. I only removed that one because it was raining, and I wanted the job done fast.

On Ford/Lincoln HU-101 door locks, I've found that I can pick them more easily if I remove the lock and hold or clamp it vertically in a vise. But there's a real danger in doing that. On Fords, the outside door handle can pull out of the door easily after the lock has been removed. Putting it back in place will test your patience to the extreme. I compare it with building a ship model in a black bottle while wearing mittens.

I recently had this problem on a Ford Fusion at a body shop. While I was working on the lock inside my van, someone had to open the door to the Fusion, and when they did, the handle came off in their hand. I spent the next couple of hours trying to get that handle back in place.

So, now I avoid removing the lock unless I really am having trouble with it. If I remove the lock, I put masking tape over the handle hopefully to prevent anyone from pulling it.

In other words, if you have a job on a Ford or Lincoln, stop and think: Don't remove the door lock unless you absolutely have to and then take steps to keep anyone from messing with it while you work on the lock. You'll be glad you did.

Steve Young has been a locksmith since 1973 and has trained and taught locksmiths since 1988. He is a frequent contributor to Locksmith Ledger.

police and hung up. I got out of my truck, locked the car and settled in to wait for the police.

The customer showed up by cab a few minutes later, along with his wife, and went ballistic that I was still there and that the police weren't. I told him that he owed me for a service call, and as soon as that was paid, I would be on my way. He yelled at me while shaking his fists, so I got back in my truck to wait for the police. I had to wait a while, because the guy had given them the wrong information, and they were at the wrong end of the beach. Before they arrived, the guy and his wife started to walk back to their hotel, about 4 or 5 miles away.

After a bit, the police arrived, and we had our little chat. I already had decided to write off the service call and told the police that I had stuck around only so I could tell them my side of the story.

In the meantime, one of our North Florida thunderstorms rolled in off the

Gulf. As I pulled away, rain started to come down in sheets.

About a half-mile away, I saw the two tourists trudging through the pouring rain and decided to be a nice guy and offer them a ride back to their hotel. It was at this point that I learned that the guy's wife knew more profanity than her husband. I apologized for disturbing them and went on about my business watching them recede into the rain in my rearview mirror. My appreciation for Karma went up a notch or two that day.

The point of all of this is that if you don't know for sure what happened to a prox fob, always try to start the car before you do anything else. I did this once on a Lexus at an auction, and the car started right up. A mechanic and I searched for more than a half-hour but couldn't find the fob. We concluded that it must have gone down a defroster duct and went ahead and programmed a new prox, which would delete the old one.

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ALOA's New Automotive Division Ready to Serve

IAAL President Ed Woods discusses the new group's direction and what's ahead for locksmiths.

BY WILL CHRISTENSEN

Automotive locksmiths who seek a good resource for business and technical information have a new one in the International Association of Automotive Locksmiths (IAAL). IAAL is a new division of ALOA. It was founded after a vote by the ALOA board of executives in November 2021. The IAAL board consists of five representatives: one manufacturer representative, two ALOA ACE instructors and two so-called at-large representatives. The five members are: Jeff Baker of STRATTEC, Mannie Natal, Donnie Sherfield, Ed Woods and Travis Wright. The board will have split two- and three-year terms to start, with subsequent board members serving two-year terms.

Woods was named the first president of IAAL. He's a longtime automotive locksmith and instructor, having started in the industry in 1992. He's now part of the team at Lockout Express in Dyer, Indiana.

Locksmith Ledger recently caught up with Woods to discuss IAAL and the goals for the organization for 2022 and beyond.

Q Locksmith Ledger: Congratulations on the new post. It seems like a big responsibility.

Ed Woods: At the ALOA convention [last year], I won the coveted "golden globe," or whatever you want to call it



Images courtesy of Steve Young

Along with knowing how to program transponder keys, automotive locksmiths these days also have to be surgeons, knowing what pieces go where when performing work.

— the lifetime achievement award. Most guys are on their way out when they get the lifetime achievement award. Me, I took on a whole new venture. I guess that makes me not real bright, but it's something I'm dedicated to.

Q LL: How long do you plan to serve?

Woods: We just didn't figure one year was going to be enough to get anything done this first go-round, so what we did was we made it two and three [years], and then after that it would be two years.

Jeff Baker, myself and Donnie said we would take the three-year terms, and after that we'll go up for election, but I will be step down and be a trustee.

Q LL: How long has IAAL been in the works at ALOA?

Woods: Probably 10 years, but nobody took it seriously until about a year ago.

Q LL: Did anything in particular happen that made it click in for enough people to decide to do it now?

Woods: We missed a couple of ALOA conventions due to COVID. We missed one ALOA convention [in 2020] and were not sure we were going to get the second one in [in 2021]. But we did get it in.

At least 50% or more of the guys that are coming to the ALOA convention are coming just for the automotive classes. Over the past four or five years, every automotive class was full. There's 10 guys in the masterkeying class and six guys in the tubular lock class, and we're running over in the automotive classes.

We decided that we wanted to do something about expanding that, plus expanding the classes if you will and start our own little thing, sort of like the way SAVTA does it.



SAVTA has basic classes at the ALOA convention — safe servicing, safe combination, changing basic electronic safes. That's about it. Then, we have the SAVTA convention [Safetech] where we drill safes; we do advanced manipulation, that kind of stuff. We're wanting to do the same basic thing only for cars with this new ALOA division.

Q **LL: How long do you believe it will be before IAAL has a**

Safetech-type event on the schedule?

Woods: It'll probably be next year [2023]. We're hoping we can put it on late spring. Let SAVTA have the first [convention], then us and then ALOA.

We still want to support [the ALOA convention] as far as having classes, and probably this year, we'll have more automotive classes at ALOA than we've had in a long time. At our show, we're going to hopefully have classes on soldering, EEPROM, advanced programming of all kinds of vehicles and in a smaller venue where we can do more hands-on [instruction].

Q **LL: What has the reaction been from ALOA membership and automotive locksmiths**

in general?

Woods: I have gotten some very

positive feedback from manufacturers. I went to an event last October and talked about it in the hallways, and I got positive feedback from some very reputable high-end locksmiths that do 80% or more automotive, and they were like, "Run with it. We got your back."

Q **LL: Let's talk a little about the state of automotive locksmithing. How much has electronics transformed the industry?**

Woods: The automotive locksmith has to do more electronics than ever before — module programming — and the security is stored in multiple modules in the vehicle to where not just making keys but marrying the modules back together has become a locksmith job.

[Repair shops] change the ECM,



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electronic control module, on some vehicles, and now they won't start because it has a VIN from a vehicle where [the shop] got it out of a junkyard. The instrument cluster won't do anything, and you'll get a message on your programmer, "VIN mismatch." So, you have to go in and edit the VIN so the car says OK. Everything has to match up, so we're doing more electronics that's not just key generation, but also marrying modules back together.

More things are going to EEPROM [electrically erasable programmable read-only memory]. There are more motorcycles on the road today that are EEPROM than ever before. Part of that is due to Canada. Since 2006, Canada started putting transponders on everything, so the Can-Am motorcycle made in Canada, guess what? [It has a] transponder. The Vespa motorcycles coming from Europe? Transponder. And some of the Japanese bikes are even going to transponder. Even Harleys went to a transponder on their keys, and even if it stopped right now, what about all the ones that are out there on the road today?

Q **LL: Given that, what are the biggest challenges for an automotive locksmith in 2022, increasingly complicated gateways?**

Woods: A lot of it is the manufacturers putting in, not necessarily gateways, but things to make sure that they are the only ones that can [do the work]. Ford's doing it. I believe their system's called the FDRS. If you don't have that, there's certain Ford vehicles

Carmakers continue to add things such as the infamous FCA Star Connector gateway, found in Chrysler vehicles, that make things more difficult for automotive locksmiths.

you can't do. Toyota is doing the same thing. Toyota is making it harder for us.

Even GM came out with new hoops to jump through.

But the machine manufacturers are slowly but surely hacking away at that and making it to where we can program them. Part of [what] slowed some of it down was COVID. Guys didn't have vehicles to work on, but it's starting to come back. We had engineers from Istanbul, Turkey, who were working on some of the new breakthroughs for programming, [who] couldn't get visas to where they could even come into the country to test the software and the vehicles. A lot of the code-breaking, if you will, comes from overseas.

Q **LL: Where do you see the industry five to 10 years from now?**

Woods: I see the industry going more into electronics and more into EEPROM. I've seen more vehicles having to be EEPROMed, which involves taking the modules, literally the chips, off the boards, reading them and reinstalling them back and marrying it all together, or going in in some cases and capturing the key information off the chip that's already in the car and cloning that to a new chip for the key. I think that's going to become more commonplace than people like to admit.

Q **LL: How much will that affect locksmiths and in what ways?**

Woods: It's interesting. When VATS [vehicle anti-theft systems] first came out, there was a bunch of locksmiths who went, "No, no, no.

That's electronics. I'm not going to do that," and they jumped ship. Then the transponder came out, and they were like, "OK, well ..." That lasted about two years, and then it became, "Oh, when you can't onboard program it anymore, you have to buy this really expensive machine to be able to program," and hundreds of locksmiths bailed and said, "I don't need a programmer for an LCN door closer. I'm going to put them on." And more guys got away from the industry.

Now it seems, though, a lot of guys that got out of automotive locksmithing 10, 15 years ago are going, "Hey, those guys are making all the money. I want to be on their team." Now it's thousands and thousands of dollars in equipment, [but] they're still coming back. They see that the automotive locksmith can go out and make a pretty decent living making car keys.

Q **LL: What do you expect IAAL's role will be in this?**

Woods: Advancing education so we can train guys to be able to safely work on these cars. My main thing is educating people on as much as we can, so we can make these keys on a regular basis. I personally am going to be reaching back to the old days as far as IAAL goes. I quit teaching a lot of the classes that I used to teach back in the '90s, because people just weren't interested in the classes anymore, like steering-column teardown and impressing and stuff like that.

But there are some people out there who are restoring these old [cars], especially the street rods and the hot rods, who want to have somebody work on their vehicle who's a professional and isn't watching a YouTube video. And the truth of the matter is I'm getting more calls for learning how to do that stuff, so I'm bringing some of the old classes back, while others are going to be teaching the newest, latest, greatest,

state-of-the-art soldering and EEPROM.

When you have to take a 64-leg IC chip off a circuit board in order to read it, that's not for the faint of heart. I watch with awe as some of these guys will unsolder a 64-leg chip that's the size of a postage stamp off a board, solder five wires to it, read the information in it and turn around and make a key from that or two keys from the memory that's in that chip and then solder it right back on there, put the car back together and stick the key in there and — *voila!* — this Mercedes is running again.

Q **LL:** So, IAAL classes will be a mix of old and new. What else do you foresee?

Woods: We're going to let Brian's group come hang out with us, because

With the advent of electronics, steering-wheel teardowns have become something of a lost art and a good subject for IAAL classes.

they like to see how we steal the cars. Brian [Vandenburg, who is the CEO of Lockout Express] is president of the forensic locksmiths [IAIL]. So, the forensic automotive guys probably will have some classes at IAAL, just like they'll have forensic safe classes at SAVTA.

I've already talked to a couple of the investigators who are forensic automotive locksmiths, and they're already like, "Well, that's probably a good place to put on a class for forensic automotive



locksmithing." And I was like, "Yes, and you're more than welcome to come join us, and maybe we can share information."

I'm just here to try to bring the right people together to make this happen for the good of the industry. I really don't need anymore "golden globes."

For more information about IAAL, go to: www.aloa.org/iaal/iaal-home.html

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Get the Max from the Xhorse Key Tool Max

Knowing all of the essential commands will help automotive locksmiths to unlock this potentially powerful tool.

BY BRUCE HORNE

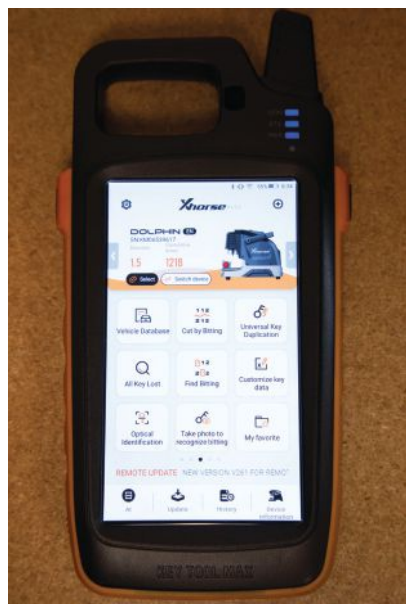


Image 1: The Dolphin menu on the Xhorse Key Tool Max

Programming tools are essential to automotive locksmiths, and the Xhorse Key Tool Max is one of the most underused tools that people have in their arsenal. This device is a powerful tool if you use it properly.

I use it extensively, and I still don't use it to its full capacity. Nevertheless, here's a primer on some of the commands and functions and how automotive locksmiths can use the Key Tool Max effectively. Keep this handy as a future reference.

KEY COMMANDS

Dolphin Use: You can look up vehicles in the Key Tool Max's Vehicle database.

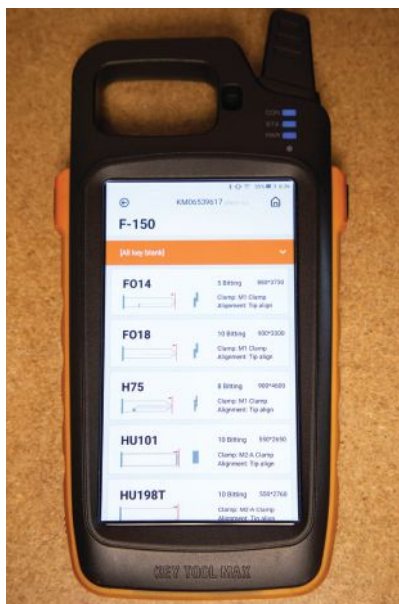


Image 2: Key options for a Ford F-150

(Image 1) When you select the make and model you want, the tool will give you the option of selecting what key blank to cut. After you select the key blank, the tool will tell you how to load the blank and also what jaw to use on your Xhorse key machine. After that's determined, you can select one of the four choices at the bottom.

Info: In here, you'll find useful information, such as what key blank to use, the number of bittings, what clamp to use, whether the key is tip stop or shoulder stop and what Lishi tool to use, if necessary.

Find Bitting: This option works similarly to a fill program. The command will give you the missing cuts and key code if

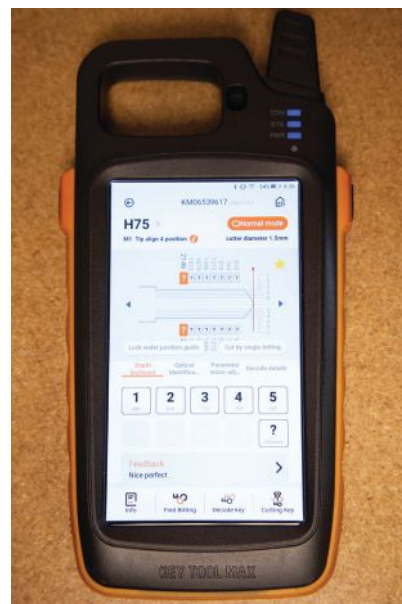


Image 3: Select Decode key at the bottom

you input the majority of the cuts.

Decode Key: This will decode your existing key to show you the key cuts. Here you also can use half-cuts (explained in a bit) if the key is worn badly or not working properly to cut a new key to factory specs. After you choose this option, on the continue screen, you'll see the Learn key via photo box. You can use this option if you have an image of the key. It takes a little work, but you can be successful using this.

You start by going to Vehicle Database, where you select your vehicle and the corresponding blank. (Image 2) In this case, I used a Ford F-150. The tool shows you what clamp to use and whether the key is tip stop

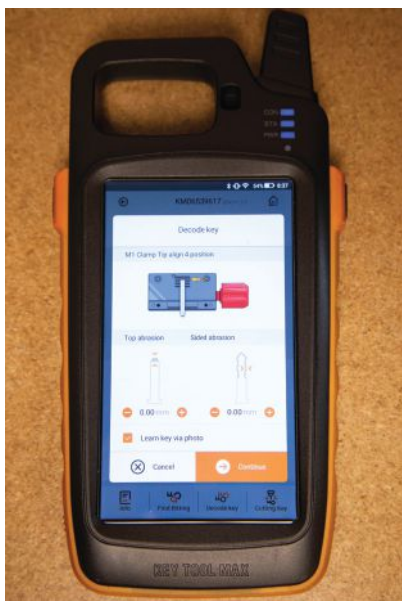
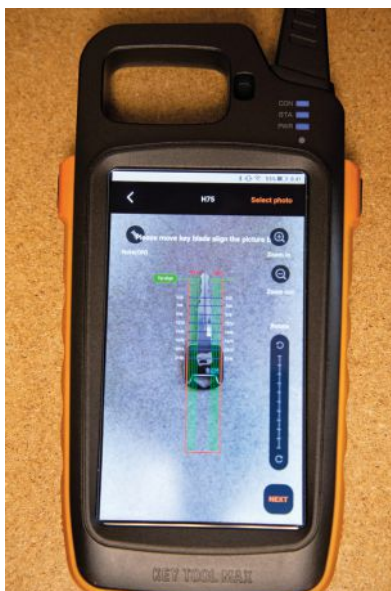


Image 4: Click on Learn key via photo

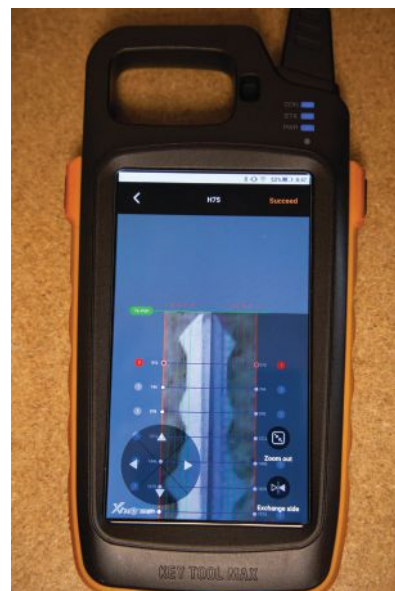
or shoulder stop. Next, you choose Decode key, where you'll see the option box for Learn key via photo. Select that box and then select Continue. (Images 3 and 4)

A screen will come up where you can take a picture of a key blade,



Images 5 and 6: Adjusting is necessary for alignment and depth when using an image.

keeping the tip of the key at the top of the outline. On the next screen, you'll zoom in until the sides of the blade line up with the sides of the screen outline and drag the image to align the key cuts with horizontal lines on the outline. (You'll have to do some



adjusting here.) (Images 5 and 6)

When you're satisfied with the alignment, you select Next. On this screen, you'll adjust the depths of the cuts by moving the left and right arrows to move the dots in or out. After you have the correct depth, you select up or down

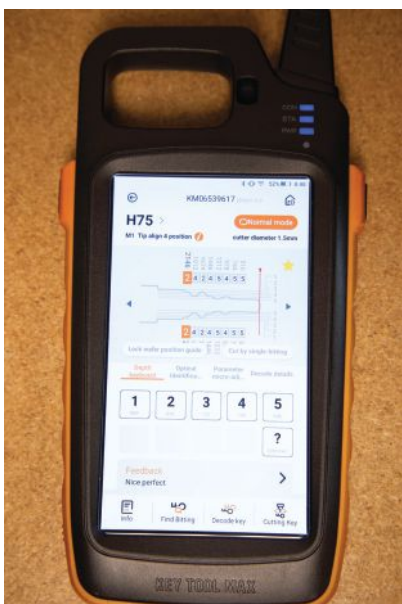


Image 7: After the depths have been decoded, you can select Cutting Key to cut the blank.

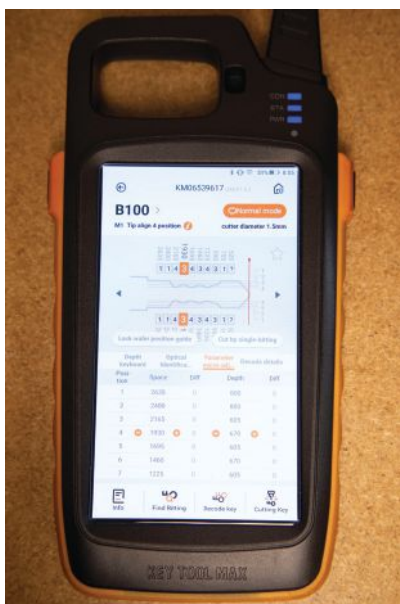


Image 8: Remember if you adjust depths for half-cuts, the Key Tool max uses millimeters, not inches.

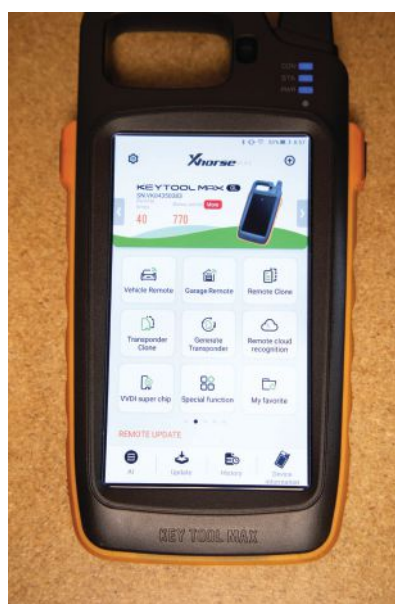


Image 9: The Key Tool Max menu for transponder work

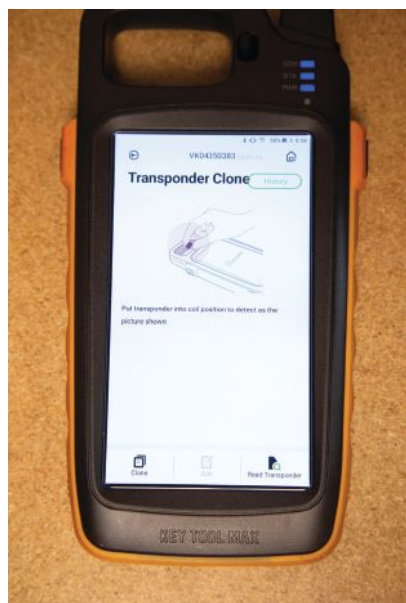


Image 10: The tool directs you to place the transponder in the proper position.

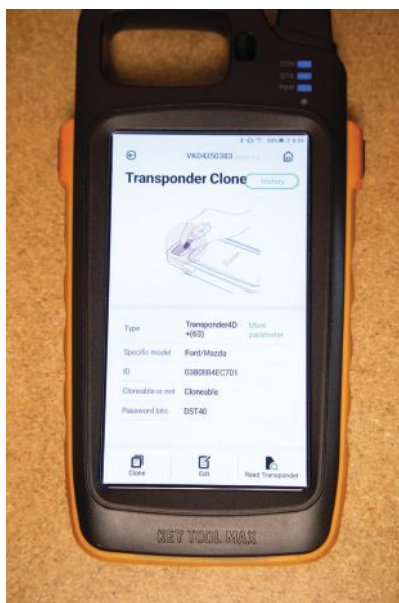


Image 11: Reading the transponder delivers important information.

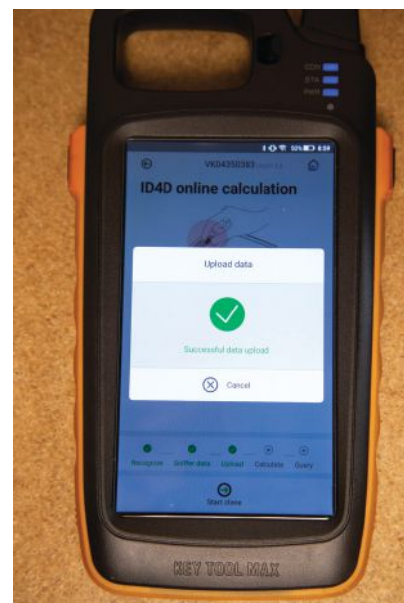


Image 12: A Wi-Fi connection is necessary to upload transponder information.

arrows to move to the next space.

After you select all of your depths, you select Succeed to go to the next screen and it will show you a silhouette of the cut key. Now, all you have to do is select Cutting Key to cut your decoded key. (Image 7)

Cutting Key: This option allows you to cut the key either by the code you input or by the biting you've come up with.

Half-cuts: You start by selecting your vehicle from the Vehicle Database. In this case, I used a 2007 Cadillac DTS. You then select the key blank that

corresponds with the make and year. (You might have several options, so I chose B103). The Key Tool Max will show you which clamp or jaw to use and what position to place the key blank.

The Parameter micro adjustment button will show you the OEM depths. (You'll see measurements for space and depth, but we're focusing on the depth part of it.) (Image 8)

Now you'll have to do a little math. The Key Tool Max uses the metric system, so depths for each cut are listed in micrometers rather than inches. If you use a key guide, remember to make the adjustment to metric.

In either case, you subtract the amount from one depth to the next to get the full depth. In this case, the depth for a 4 cut is 670 and a 3 is 605, so $670 - 605 = 65$ for the full depth. Dividing that by half (and rounding up) is 33. For each position, you'll see on either measurement a plus or minus button. You'll want to change the depth distance to minus-33, because our number was the difference of 33.

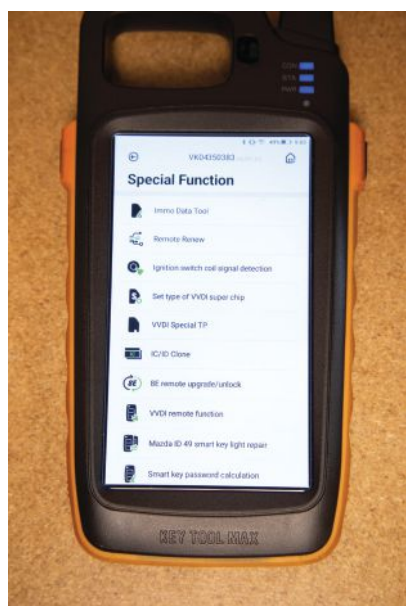


Image 13: Several useful functions are under Special Function, including Set type of VVDI super chip.

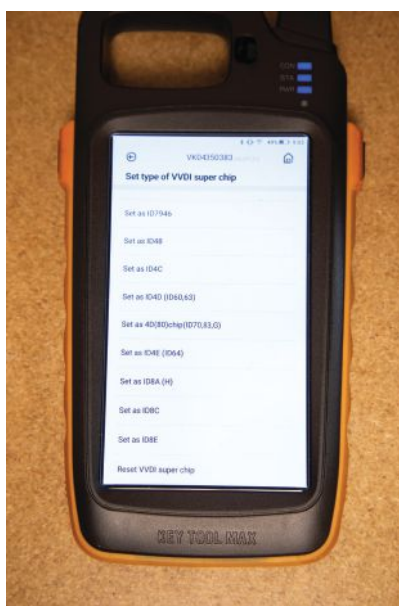
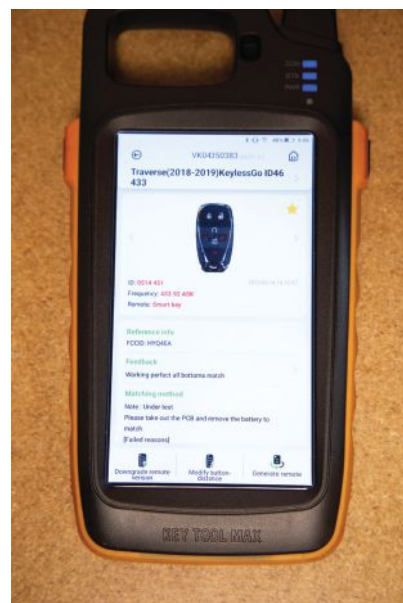
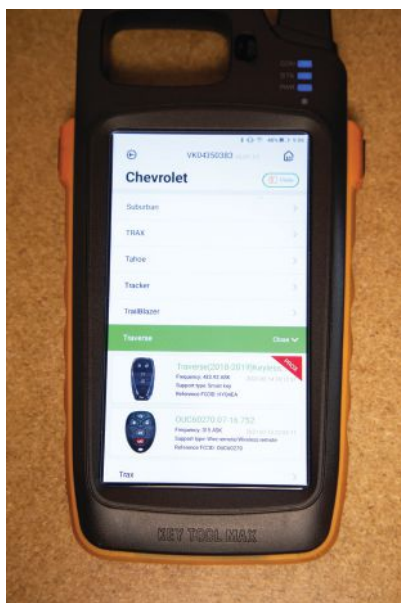
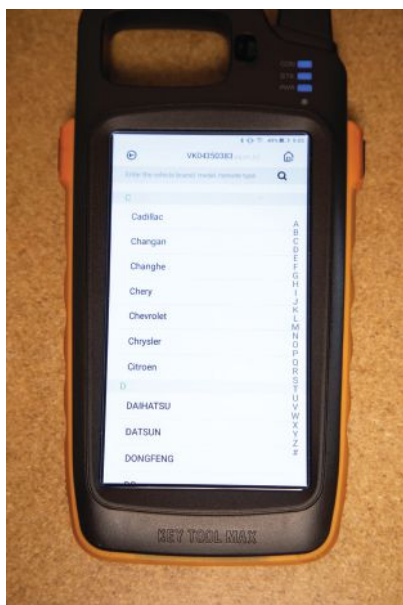


Image 14: Note Reset VVDI super chip at the bottom of the menu.



Images 15 and 16: In selecting by vehicle model, you'll get a range of options.

Image 17: After identifying the proper remote, you can generate the remote.

TRANSPONDER COMMANDS

Transponder cloning: This is in the Key Tool Max menu. (Image 9) In this example, I'm using a Ford 4D63 chip. After selecting Transponder Clone, the tool will direct you to put the transponder into the reader to detect. (Image 10) Select Read transponder, and you can see the type, model, whether it's cloneable, whether it's locked and password bits. (Image 11) You then select Clone and then Start clone.

Make sure you have an internet connection, because the tool will read the chip information and send it to Xhorse's server for calculation. (Image 12) After completion, you then insert the chip into the chip slot. The tool alerts you when it writes to the chip successfully.

Generate Transponder: Here you can generate chips to different vehicles. You can search by chip or car model. The steps are otherwise similar to cloning.

Chip Renew: This is for Xhorse super chips that can be reused repeatedly. In the Key Tool Max menu, you select VVDI Super Chip, scroll to the bottom and hit Reset VVDI Super Chip. You also can go to Set type of super chip and again

scroll to the bottom, for the Reset VVDI Super chip command. You also can set these chips as certain types.

Set type of VVDI super chip: This is found under Special Functions. (Image 13) Here you can set the super chips as specific types, such as 7936, 7937 and 4C. Also under this menu, you'll find Reset VVDI super chip again. (Image 14)

Vehicle remote generation: Here's where you generate Xhorse remotes or the Xhorse smart watch to work as a remote for your vehicle. Under Vehicle Remote, you'll find the frequency key type and Federal Communications Commission ID, depending on the page. You also can select the model of vehicle. I selected a Chevrolet Traverse in this example. (Images 15 and 16) After you know what remote you're generating, you can generate the remote. (Image 17) Note that you have to place the new remote in the proper position. (Image 18)

Remote and key renew: This also is found under Special Functions to renew remotes and remote head keys. You either can solder wires or use cradles that are sold separately. This won't unlock all remotes.

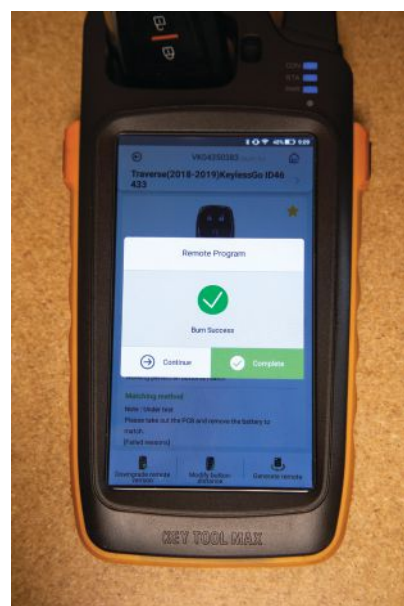


Image 18: Make sure the remote is in the proper position (top left).

Coil detector: Another Special Function, this simple test will tell you whether the Key Tool Max's antenna ring is sending out a signal.

Bruce Horne operates AAAA Key in Houston. He also is the automotive specialist at Banner Solutions.

Remotes, Pinning Kits on Tap from STRATTEC

The fobs will cover certain GM vehicles, while the kits are aimed at new Ford keyways.

BY JEFF BAKER

STRATTEC expects to unveil several products and services for automotive locksmiths over the next several months. Here's a look at the company's lineup for 2022 as of this publication.

REMOTE KEYLESS ENTRY FOBS

STRATTEC will add four General Motors remote keyless entry fobs to its existing line of OEM aftermarket equipment. These products are expected to be available in mid-December 2022 and will work with Cadillac, Chevrolet and GMC models.

The applications for the fobs are as follows:

- Model numbers 5942706 and 5942488: 2015-2019 Cadillac ATS, 2015-2019 Cadillac XTS and 2014-2019 Cadillac CTS.
- Model number 5942490: 2015-2020 Chevrolet Suburban, 2015-2020 GMC Yukon and 2016-2019 Chevrolet Tahoe.
- Model number 5942494: 2016-2020 Chevrolet Malibu, 2016-2020 Chevrolet Cruze and 2016-2019 Chevrolet Camaro.

Onboard-programming instructions for these makes and models will be on STRATTEC's aftermarket website.

FORD PINNING KITS

During the past couple of model-years, Ford has introduced different high-security keyways for its vehicles. STRATTEC has provided unique pinning kits for these vehicles, as well as webinars and in-person training on

pinning for these locks. It also has videos and links on its website.

There are primarily two new Ford keyways. The first was introduced on the 2020 Escape and also covers the Bronco Sport and the new Maverick compact pickup, among

other vehicles. The keyway is an internal two-track and has five depths. Many locks are associated with these vehicles, including a unique tailgate lock used only on the Maverick.

The pinning kit that's unique to this keyway is model number 7038551, and it covers the following vehicles:

- Ford Bronco Sport 2021-2022
- Ford Escape 2020, 2022
- Ford Focus 2019-2022
- Ford Maverick 2022
- Lincoln Corsair 2020-2022

The other new keyway is for the high-selling F-150 pickup. This keyway is an internal two-track but with only four depths. The unique pinning kit that services the many mechanical locks on these vehicles for model-years 2021 and 2022 is model number 7041339.

PRODUCT BROCHURES

STRATTEC recently has released a number of products that are associated with the past couple of model-years by manufacturers. Two guides that identify the latest releases can be found



STRATTEC Pinning Kit 7038551 for the Ford Maverick, among others



STRATTEC 5942494 for the Chevrolet Camaro, among other vehicles



STRATTEC 5942488 for Cadillac vehicles

at STRATTEC's aftermarket website

The first is a comprehensive guide to the remotes STRATTEC offers for OEM and aftermarket automobiles. It's current through fall 2021 and includes new additional aftermarket lines, such as Mazda. The guide notes vehicles covered, model years and programming type. For remotes that allow for onboard programming, STRATTEC has detailed instructions in the remotes guide on its website.

The second guide is a listing of what STRATTEC has added since for Ford and GM and supplements the comprehensive catalog. This guide notes the proximity keys, including the models listed above, mechanical locks and additional batteries that have been added.

To download the guides, for more information or to check out STRATTEC's vehicle match to determine appropriate products depending on the make and model of vehicle, go to aftermarket.strattec.com.

Jeff Baker is distributor sales manager for STRATTEC Security Corp.



Auto Lock Pick Innovation

WedgeCo has developed a series of tools that are comfortable to hold and easy to use.

BY HERMAN MANZANARES III, RL

The method of picking open a lock has been around since the 1700s, and many companies have introduced successful picks into the market. The latest is a lineup of automotive picks from WedgeCo, and we recently got our hands on these tools to give them a tryout.

The lineup includes three tools, the 2000 series tension wrench, the 4000 series four-blade red handle pick, and the 6000 series four-blade black handle pick. (Image 1) The 4000 series and 6000 series are identical in shape but differ in length, with the 4000 series being the shorter of the two picks evaluated at 1-3/4 inches. The 6000 series pick measures 2 inches in length.

The picks are easy to use and best used on double-sided auto locks that don't contain a split wafer, because the picks will jam the split wafers in the lock cylinder. WedgeCo says the tools

are meant for Chevrolet, Chrysler, Ford and Jeep automobiles but not Chevy or GMC vehicles that have sidebar locks. The lock we tested was a 2005 Ford F-150 driver side door lock.

We found the WedgeCo picks easy to use and comfortable to hold, and the products are well-constructed from heavy-duty stainless steel for long-lasting use.

The tools' four-blade pick design allows for the blades to compress in the lock cylinder, which provides enough stability for ease of picking when used with the 2000 series tension wrench. (Images 2 and 3) Picking open the F-150 cylinder with the 4000 series or 6000 series picks took only a few minutes each time.

More information on WedgeCo products can be found at www.wedgeco.com or via a text message to 425-881-7777.



Image 1: The WedgeCo lineup of new tools

Herman Manzanares III, RL, is co-owner of Los Alamos Lock & Key in Los Alamos, New Mexico. He has more than 25 years of locksmith experience. He can be reached via the web at www.losalamoslock.com.



Images 2 and 3: The tools worked to open a Ford F-150 cylinder quickly.

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New Releases from Ilco

Keys and software are rolling out after a mostly quiet year.

BY WILL CHRISTENSEN

After having been relatively quiet as far as producing new product, Kaba Ilco has revved up its engines.

The automotive arm of dormakaba, which includes key brand Ilco, key-machine brand Silca and programmer brand Advanced Diagnostics, had been a regular producer of new remotes and software, but that stopped toward the end of 2020.

After March 2021, Ilco produced only a single remote keyless entry fob — for multiple Mercedes-Benz vehicles — for the next eight months. On the Advanced Diagnostics side, it released no new software for 11 months after September 2020.

The reasons for the silence were twin culprits that have affected the entire security industry for the past year and a half, according to Todd Adams, product manager of automotive for North America at Kaba Ilco: the COVID pandemic and ensuing delays as a result of production bottlenecks.

“With COVID, a lot of people were working

remotely and not in the office,” he says. “It gets difficult for an engineer to do his thing when he’s sitting in a home office versus in his lab where he has all the tools at his disposal.”

The dam finally broke in fall 2021. Since then, Ilco has released five pieces of software, the latest in March 2022, as well as nearly 100 models of remotes.

Adams expects the releases to continue more regularly again, adding that the company is increasing staff to help to produce more product. With that in mind, here’s what’s new with Kaba Ilco.

ILCO LOOK-ALIKE REMOTES

A flood of new remotes — 70 total — were released in November 2021,

and 22 more were expected to be released on the market by the time you read this.

Adams says the latest batch of keys, which were expected to be released in April 2022, will include coverage for late-model Fords, including the Explorer and F-150, Lexus up to 2021 and up to the 2021



A prox fob for BMW vehicles, including the 5 Series

Ram 1500, among other vehicles.

“Those are the big hitters,” Adams says. “There’s going to be some good stuff in there.”

All of the releases are part of Ilco’s Look-Alike line of aftermarket keys and cover a wide gamut of models and model-years. The two releases included:

- Twenty models for Fiat Chrysler (three-, four-, five-, six- and seven-button fobs) that cover the 2008-2016 Chrysler Town & Country, the 2008-2019 Dodge Grand Caravan, the 2015-2021 Jeep Compass and the 2013-2021 Ram 1500, among others.
- Sixteen models for Toyota (three-, four- and five-button remote head or flip keys and three- or four-button fobs) that cover various vehicles, including the 2002-2009 Lexus SC430, the 2018-2021 Lexus NX300, the 2004-2009 Toyota Prius, the 2012-2020 Prius and the 2012-2017 Toyota Camry.



A flip key for 2016-2018 Hyundai Santa Fe



A fob for Chrysler Town & Country and Dodge Grand Caravan models, among others

- Thirteen models for Nissan (three-, four- and five-button fobs) that cover the 2016-2021 Nissan Titan, the 2013-2021 Nissan Pathfinder and the 2014-2018 Infiniti Q70, among others.
- Thirteen models for Ford (three- and four-button remote head or flip keys, and three-, four- and five-button fobs) that cover Ford, Lincoln and Mercury brand vehicles. Ford brand vehicles covered include the 2015-2021 Bronco, the 2012-2020 Escape, the 2019-2021 Explorer, the 2013-2020 Fusion, the 2018-2020 Mustang and the 2014-2021 Transit Connect. Two fobs cover older model Ford, Lincoln and Mercury brand vehicles from the 1995-2006 model-years.
- Ten models for Hyundai (four-button flip keys and three- and four-button fobs) that cover the 2009-2014 Hyundai Genesis Sedan, the 2009-2013 Kia Optima and the 2016-2020 Kia Sorento, among others.
- Nine models for General Motors (four- and five-button remote head or flip keys and four- and five-button fobs) that cover Buick, Cadillac, Chevrolet and GMC brand vehicles, including the 2011-2017 Buick Regal and the 2010-2019 Chevrolet Camaro. Four models cover 1997-2004 models and include vehicles from defunct brands Oldsmobile, Pontiac and Saturn.
- Four four-button fobs for BMW that cover various models, including the 2009-2018 3 Series, the 2009-2018 5 Series, the 2014-2018 X3 and the 2014-2018 X5.
- Two four-button fobs for Subaru that cover various models, including the 2016-2021 Forester and the 2015-2021 Outback.
- Two five-button flip and remote head keys for Volvo that cover



The 2021 Fiat 500X is covered by the latest Advanced Diagnostics software.

various models, including the 2004-2015 XC90.

- One four-button flip key for Acura that covers the 2009-2014 TL and TSX and 2010-2013 ZDX, as well as the 2008-2012 Honda Accord Coupe.
- One four-button flip key for Mercedes-Benz that covers the 1997-2005 ML.
- One four-button fob for Mazda that covers the 2008-2009 Mazda3.

Most of the keys in both releases require a laser key cutter. Most of the remotes have a transponder, but two of the Ford models allow for onboard programming (OBP).

Adams says the first massive single release was partly a business decision and partly the result of delays in getting certification from the Federal Communications Commission (FCC) for the radio signals.

“Those FCC certifications all can take time,”

he says. “And I don’t announce keys until I have inventory in stock in the warehouse. Then it was, ‘do I want to release 55 now and 15 more in two weeks? Let’s just wait and put them all on one big collection.’”

The latest release brings the Look-Alikes line to close to 400 different models, but Adams notes that the collection still has a few holes he’d like to fill, particularly Honda.

“Honda proximity has proven to be a little bit tougher nut to crack,” he says of keyless fobs. “We have all the Honda remote head keys, but proximity for Honda is a glaring hole for me.”

ADVANCED DIAGNOSTICS

After a long gap in producing software for the Advanced Diagnostics flagship Smart Pro programmer, a new release for Mercedes vehicles from 1996-2014 came out in summer 2021. This preceded three fall updates for software that covers BMW, Jaguar/Land Rover and Volkswagen vehicles.

Then, in March 2022, AD released software that’s designed to program proximity keys compatible with 2020



This fob covers older year models of Ford, Lincoln and Mercury.



and 2021 models of the Fiat 500X, 2021 models of the Jeep Compass and 2020 and 2021 models of the Jeep Renegade. Adams points to this release as being particularly important.

“Those two Jeep models are pretty big, because they are superpopular in the rental fleets,” he says. “And that’s a piece of software that we’ll add models to as we test and tweak the software further. It’s the baseline to cover some good stuff, even, hopefully, some of the ’22 models in that Jeep line.”

The latest release requires a Smart Pro, connection to the internet via Wi-Fi and an ADC2012 cable in addition to the standard ADC2000B cable to complete the programming procedure. The software bypasses the security PIN code and programs the remote and transponder simultaneously.

This software uses three tokens without UTP or none with. It also can be purchased outright. Add-key and erase-key functionalities are available with the presence of an existing or new key, although no working key is required.

Adams says more is in the pipeline although he didn’t provide specifics and couldn’t provide a timetable for when it might be made public.

“Any time we can do Ford, General Motors, Chrysler, Toyota, Nissan, Honda — what we refer to as the big six — it’s always good, and we do have

stuff in the pipeline on all six of those,” he says. Whether one of those is the delayed F-150 remains to be seen, however. “I told the engineers, if we’d be the first to market with that, it’s monumental.”

EVERYTHING ELSE

The latest key machine under the Silca brand was the Flash Mobile, which was released in August 2021. It’s a battery-powered version of the Flash 008, and we wondered whether a version that might cut laser keys on the go was in the offing, but Kaba Ilco has no news to report there.

Adams did, however, tease a new cloning tool that’s expected to be out by summer that will allow locksmiths to clone through the Smart Pro. It was supposed to be out by now, but the shortage of electronic components created a delay. Stay tuned.

In the meantime, Ilco has released its subscription version of the MYKEYS Pro app-driven software, which Adams calls “an all-inclusive catalog of all our product offerings.” It’s a nominal monthly fee, along the lines of a streaming-TV subscription.

MYKEYS Pro has been out for about a year, and it provides a key-programming database of thousands of vehicles, but the subscription side added functionality and interconnectivity among Ilco products.

“If you have the subscription, and your Smart Pro’s connected to Wi-Fi, I can look at the MYKEYS Pro app and see if I can program that 2021 Jeep Renegade,” Adams explains as an example. “If my Smart Pro is turned on and connected to my Wi-Fi, there’s an option on the [app] where I can [hit] ‘send to Smart Pro’ and it will send the Smart Pro straight to that Jeep Renegade menu. I don’t have to look it up on the app and then go punch it into the Smart Pro. It will send it straight to the machine, and all I have to do is just pick the machine up and I’m ready to rock and roll.”

For more information, go to: ilcolookalike.com for keys www.adusa.com for software www.mykeyspro.com for MYKEYS Pro and www.ilco.us for everything else.



A remote head key for Ford vehicles, including the 2014-2019 Transit Connect



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- ✓ Click on the file of the type of part you need. For example if you are working on a Honda ignition, click on "Honda ignition locks" and the file will open.
- ✓ Find the year and model you need on the chart for the information about the parts that are available for that car.
- ✓ Tumblers and keying kits are listed at the bottom of each file, referenced by the key blank used.
- ✓ Supplemental information is also listed at the bottom of each file when necessary to make sure that you have all of the information that you need. The general information at the beginning of each file can also be helpful.
- ✓ Almost all makes and models are listed. If we do not have the parts you need for a specific model we tell you who most likely does have them.



HONDA IGNITION LOCKS

Accord	1994-97	HD103	Coded cylinder Cylinder with steering column lock housing IMPORTANT: READ THE THE CORRECT PARTS F	C
Accord	1998-02	HD103	Coded cylinder	C
Accord	2003-12	HO03	Coded cylinder	C
Accord	2013-17	HO03	Coded cylinder	C
Civic	1975-79	X51	Complete lock	C
Civic	1977-80	X71	Coded cylinder 77-80 plug does not push in when turning the key	C
Civic	1980-81	X71	Coded cylinder 80-81 plug pushes in when turning the key	C



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