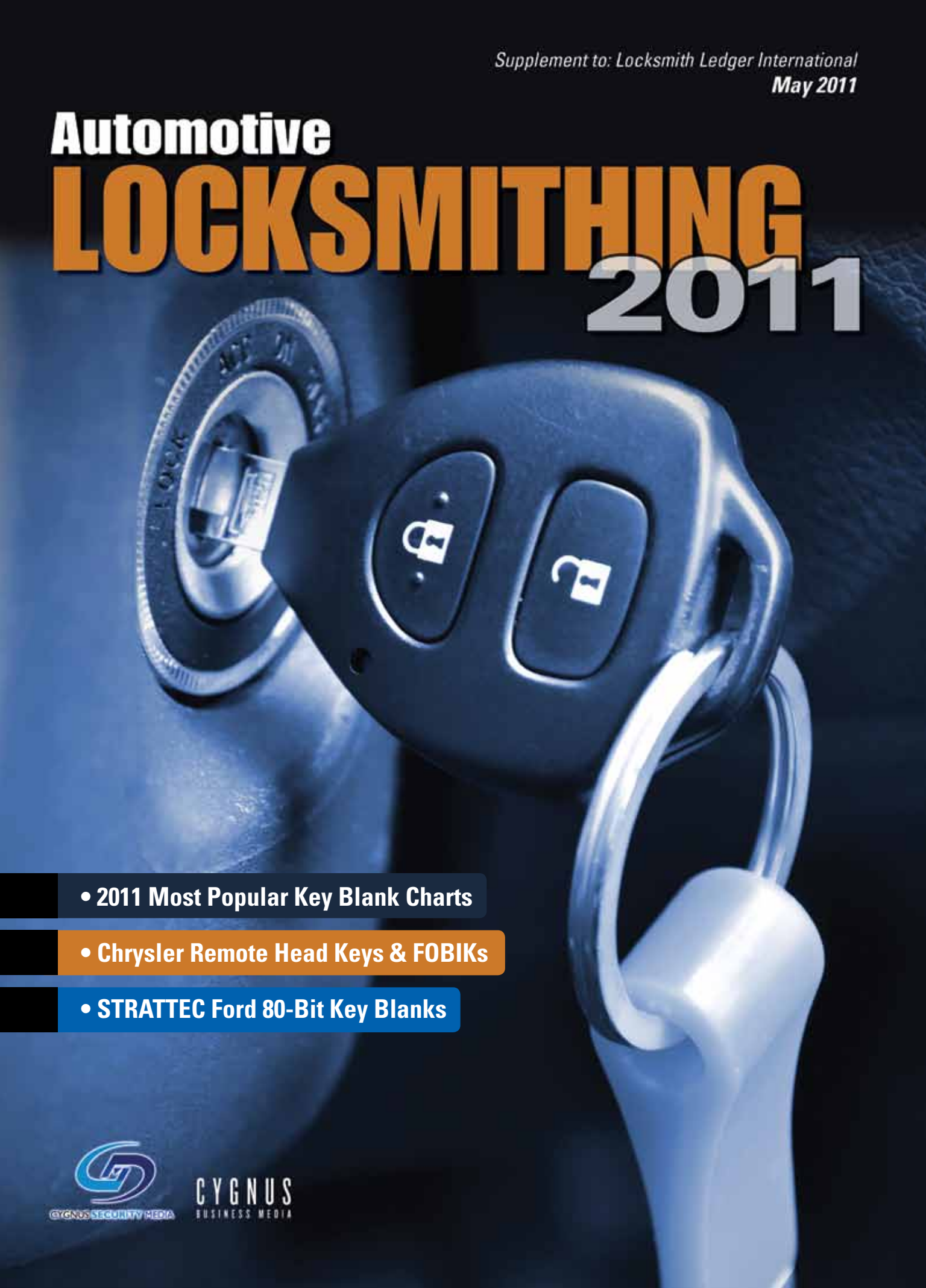
Supplement to: Locksmith Ledger International
May 2011

Automotive LOCKSMITHING 2011



- 2011 Most Popular Key Blank Charts
- Chrysler Remote Head Keys & FOBIKs
- STRATTEC Ford 80-Bit Key Blanks

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3030 Salt Creek Lane, Suite 200, Arlington Heights, Illinois 60005
Phone: 847-454-2702 • Fax: 847-454-2759

12735 Morris Road, Deerfield Point, Bldg. 200, Suite 180
Alpharetta, Georgia 30004
Phone: 800-547-7377

EDITORIAL

Editor-in-Chief Gale Johnson
847-454-2703
gale.johnson@cygnuspub.com
Fax: 847-454-2759

Managing Editor Emily Pike
emily.pike@cygnuspub.com

Technology Editor Jerry Levine
jilevine@sbcglobal.net

Contributing Editors
Tom Gillespie, CML • Steve Kaufman • Bill Neff, CML • Tim O'Leary • Tony Fiorini, CRL • Jeremy Reeder

SALES

Publisher Nancy Levenson-Brokamp
nancy.brokamp@cygnuspub.com

Sales Representative Ryan Olson
847-454-2719
ryan.olson@cygnusb2b.com

VP/Brand Director Mike Martin
800-547-7377, ext 1632
mike.martin@cygnusb2b.com

SALES OFFICES
Nancy Levenson-Brokamp
3030 Salt Creek Lane, Suite 200, Arlington Heights, Illinois 60005
Phone: 847-454-2702 • Fax: 847-454-2759

PACIFIC ASIA
Young Media Inc. –Young J. Beak
407 Jinyang Sangga, Chungmoro 4 ga, Jung-ku, Seoul, Korea 100-713
82 2 2273 4819 • Fax: 82 2 2273 4866 • ymedia@chol.com

Subscription/Book Customer Service Toll-Free (888) 556-2272
Local (847) 562-1603
Circ.locksmithledger@omeda.com

Classifieds, Marketplace and Reprints Erica Finger
800-547-7377 Ext. 1324
Fax: 920-328-9014
erica.finger@cygnusb2b.com

Art Director Kayla White
kayla.white@cygnuspub.com

Production Manager Jane Pothlanski
631-963-6296
jane.pothlanski@cygnuspub.com

Audience Development Manager Angela Kelty
800-547-7377 ext. 1781

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TECHNOLOGY ON THE MOVE:

Ford 80-Bit Key Blanks

STRATTEC 5912496 80 bit 5 Button IKT Key Blank

BY JEFF BAKER AND VERA LATUS

Ford Motor Company is upgrading its transponder-based engine immobilizer systems to the 80 Bit Texas Instrument technology, beginning with 2011 model Ford, Lincoln and Mercury vehicles. The Ford 80 bit technology expands security features as well as operational capabilities for the equipped vehicles. The 80 Bit transponder-equipped keys are available as IPATS (non-remote) and Integrated Key Transponder (IKT). PEPS (Passive Entry Passive Start) fobs for 2011 vehicles are continuing to use the 40 Bit technology.

Huf and STRATTEC are the only Ford authorized manufacturers of the Ford 80 Bit IKT Key blanks. The STRATTEC key blanks have "SA" stamped above the milling on one side of the blade. The Huf key blanks have "HA". STRATTEC is the only Ford authorized manufacturer of Ford 80 Bit IPATS key blanks. They also have "SA" stamped on the blade.

STRATTEC part numbers for the IPATS key blanks

Division	40 Bit	Logo	Jewel	Part Number
Ford	X	X	X	5904287
Ford	X	X		599114
Lincoln	X	X		691259
Mercury	X	X		599179
Division	**80 Bit**	**Logo**	**Jewel**	**Part Number**
Ford	X	X		5913441
Lincoln	X	X		5913437
Mercury	X	X		5913439

The Ford 80 Bit transponder-equipped IPATS key blanks and IKT Key blanks are backwards-compatible with 40 Bit technology vehicles. As a general rule, all vehicles manufactured for the 2010 model year or earlier are equipped with 40 Bit technology. However, Ford 40 Bit transponder-equipped IPATS key blanks and IKT Key blanks are <u>not</u> compatible with vehicles equipped with 80 Bit technology.

STRATTEC 5915217 80 bit 3 Button IKT

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A-17-116 - for new Fiat 500 door locks.

A-18-109 - for new Ford Transit Connect (this is the same kit that was used for Merkur Scorpio in 1988-89).

A-18-111 - for new Ford Fiesta and other new Ford models coming soon with 2-track high security keys.

A-23-103 - for new Chevrolet Camaro, Cruze & Equinox, Buick Lacrosse & Regal, GMC Terrain, and other new GM models coming soon with 2-track high security keys (this is the same kit that was used for the Saturn Astra 2008-09).

A-40-102 - for Kia Rio & others using 5.5 mm width tumblers.

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STRATTEC 5912561 80 bit 4 Button IKT Key Blank

The plastic head transponder-equipped IPATS key blanks having the 40 and 80 Bit technology transponder are available from STRATTEC with the Ford, Mercury and Lincoln logo coined into the plastic heads. They are also available as a Ford jewel key blank, the raised blue oval with the Ford name. The only way to identify the difference between a STRATTEC 40 Bit and an 80 Bit key blank Ford, Lincoln or Mercury key blank is if "S" or "SA" is stamped into the shank of the blade. *Note: 40 Bit IPATS key blanks are still being manufactured.*

As this point in time, 21 IKT key blanks are available for Ford, Lincoln and Mercury vehicles. They are model specific. They are available in different vehicle specific configurations including 40 Bit or 80 Bit, three, four or five buttons, with or without remote start or power liftgate, the Ford 8-Cut blade or the Ford side mill blade and having the Ford, PONY, Lincoln, Mercury or "BOSS 302" logo.

Important: Before cutting or programming an IKT Key blank, make certain it will operate the vehicle.

For example, the Mercury logo 40 Bit IKT key blank (part # 692811) will operate the 2007-10 Mariner, 2006-10 Milan, 2007 Montego and 2008-10 Sable. These vehicles are equipped with 40 Bit technology. The Mercury logo 80 Bit IKT key blank (part number 5914460) will operate the 2011 Mariner and Milan. These vehicles are equipped with 80 Bit technology. The 5914460 IKT key blank will also operate the three vehicles equipped with 40 Bit technology.

Ford has discontinued production of some 40 bit IKT key blanks. They may still be available from locksmith distributors. The 80 bit IKT key blanks are their direct replacement.

The Ford Fiesta and Transit Connect are two unique vehicles in the Ford line. First introduced for the 2010 model year, the Transit Connect is equipped with the Tibbe lock mechanism. For the 2011 model year, Ford added the 80 Bit transponder-based engine immobilizer on the XLT models. For the non-RFID models of the Transit Connect, there is a plastic head Tibbe key blank. For the 2011 Transit Connect XLT models, there is a three-button remote two-piece key (STRATTEC part number 5913139) and a Tibbe fork/blade, part number 5914117.

The 2011 Fiesta is equipped with a two track sidewinder lock mechanism, also using the 80 Bit transponder. As an option, the Fiesta is also available with the PEPS fob.

Use http://aftermarket.strattec.com to answer specific vehicle application questions.

Jeff Baker & Vera Latus have both been with STRATTEC for more than 12 years performing product demonstrations at trade shows and educational seminars. They are based out of the Milwaukee, WI, manufacturing facility.

STRATTEC 5913441 80 bit IPATS Key Blank

STRATTEC 2011 Catalog

STRATTEC's 2011 Comprehensive Catalog is a downloadable, 80-page resource containing a list of automotive parts by manufacturer. Most of the key blanks, locks and components are illustrated, which is helpful when looking for an unknown part. Locks with cases are exploded out showing the keyway and the tumbler position.

In addition to Chrysler, Ford and GM, STRATTEC has key blanks for Acura, Honda, Infiniti, Mazda, Mitsubishi and Nissan. A new products section includes key blanks and Lock Repair Kits now available from STRATTEC. A Lock Repair Kit contains the necessary components and wafer tumblers to key and assemble a replacement lock coded to the customer's key.

To download a copy of the STRATTEC 2011 Comprehensive Catalog, go to http://aftermarket.strattec.com and in the Literature area, highlight and press the 2011 Comprehensive Catalog. In addition, you can download historical catalogs (1939-up), service bulletins, key chart,

Professional Choice Catalog and repair kit instructions.

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Chrysler Remote Head Key

Guide To Chrysler Remote Head, FOBIK and Ford IKT Key Blanks

Every 2010 Chrysler, Dodge or Jeep model comes with a remote head key or FOBIK key. General Motors is also getting into the remote head market with keyless fobs for the Corvette.

BY JERRY LEVINE

Beginning with the 2004 model year, Chrysler, Dodge and Plymouth offered the remote head key with the mini-vans. Since then, just about every Chrysler, Dodge and Jeep began introducing either a remote head key or a FOBIK key as new models were introduced or existing models were upgraded. Looking at a 2010 listing of Chrysler, Dodge and Jeep vehicles, every model comes with a remote head key or FOBIK.

And Ford is not far behind. Ford first introduced a four-button IKT (Integrated Key Transponder) Key for the 2007 model year. Like the Chrysler remote head keys, this four-button remote was available with the Ford, Lincoln or Mercury logo, each a separate part number.

The STRATTEC 2011 Comprehensive Catalog lists 11 IKT, Remote Head and PEPS (Passive Entry – Passive Start) Key part numbers.

GENERAL MOTORS

General Motors has started making a serious effort in the Flip (remote head) Keys after having a few keyless fobs including the 2005-on Chevrolet Corvette. The Flip Key was first introduced onto the 2010 Camaro and has since expanded to a total of 13 Flip Keys and PEPS Key part numbers.

HATA and STRATTEC offer some Ford IKT Keys and PEPS Keys, and some General Motors Flip and PEPS Keys at this time through the locksmith distribution channel. Only HATA offers Chrysler Remote Head Keys at this time through the locksmith distribution channel.

In the chart on page 10, HATA lists the "must have" Chrysler Remote Head Keys and FOBIK Keys having the Chrysler logo on the rear. The Remote Head Keys and FOBIK Keys are brand-specific, having a Chrysler, Dodge or Jeep logo.

CHRYSLER

For the Chrysler charts, the number of buttons, their functions and the frequency separate the information. The next column includes the HATA part numbers for Jeep or Dodge logo remote head keys with the same configuration

Jeep Fobik

as the listed Chrysler part number. See the HATA Web Site, www.hatainc.com, for specific applications. The final column is the Chrysler original equipment part numbers. These part numbers can be used to confirm the correct remote head or FOBIK Key blank is correct.

Chrysler Remote Head Keys and FOBIK Keys are available with three to seven buttons. The highest number of buttons is for the mini vans in order to operate the side doors and remote start. It is important to know that not all remote head keys with the

2012 Ford Focus 4 button IKT

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same numbers of buttons contain the same buttons. For example, the two five-button remotes head keys on the Chrysler list have different buttons. The HAT5034 remote head key has L, UL, P, CT, T. The HAT5844 has L, UL, H, RS, P. The Sebring has a convertible top and a trunk. The minivan has a hatch and remote start.

Knowing the frequency is extremely important. The vehicle's remote operates on a specific frequency. HAT5145 and HAT1265 are both three-button remote head keys having the same functions. However, the frequencies are different and each remote will only operate with vehicles using the same frequency.

Important: When a Chrysler, Dodge or Jeep original equipment transponder-equipped key is programmed to a vehicle, the transponder becomes mated to the vehicle and cannot then be programmed to a different vehicle. This means that if the wrong frequency remote head key transponder is programmed, the engine can be started and operated; however, the remote buttons will not operate.

"MUST HAVE" CHRYSLER REMOTE HEAD KEYS

HATA PART #	BUTTONS	FUNCTIONS	FREQUENCY #	DIFFERENT LOGO REMOTE O.E. PART HEAD KEY HATA PART #S NUMBERS
HAT5145	3 BUTTON	L, UL, P	OHT692427AA	HAT1702 (J), HAT5786(D) 5175817AA
HAT1265	3 BUTTON	L, UL, P	KOBDT04A	HAT1266 (D) 5183675AA
HAT1430	4 BUTTON	L, UL, P, T	KOBDT04A	HAT5143 (J), HAT9512 (D) 5179514AA
HAT1958	6 BUTTON	L, UL, P, SDR, SDL, H	M3N5WY72XX	HAT1576 N(D) 5183681AA
HAT5815	4 BUTTON	L, UL, H, P	OHT692427AA	HAT1964 (D), HAT4413(J) 5175815AB
HAT5034	5 BUTTON	L, UL, CT, T, P	OHT692427AA	68025034AA
HAT5844	5 BUTTON	L, UL, H, RS, P	OHT692427AA	5175844AA

(J) = Jeep logo (D) = Dodge logo

"MUST HAVE" CHRYSLER FOBIKS

HATA PART #	BUTTONS	FUNCTIONS	O.E. PART #
HAT6100	3 BUTTON	L, UL, P	5026100
HAT6195	4 BUTTON	L, UL, P, RS	5026195
HAT6623	5 BUTTON	L, UL, P, SDL, SDR	5026623
HAT6098	6 BUTTON	L, UL, P, H, SDL, SDR	5026098
HAT6197	7 BUTTON	L, UL, P, H, SDL, SDR, RS	5026197
HAT6315	4 BUTTON	L, UL, P, H	5026315

LEGEND *H=HATCH, L=LOCK, P=PANIC, T=TRUNK, UL=UNLOCK, CT= CONVERTIBLE TOP RS= REMOTE START, SDL=SIDE DOOR LEFT, SDR=SIDE DOOR RIGHT*

STRATTEC

The STRATTEC list of the "must haves" includes the following Ford IKT keys which have the Ford logo on the rear. In addition to being model year specific, the IKT keys are brand specific, having the Ford, Lincoln or Mercury logo.

For the Ford chart the number of buttons, their functions, the 80 Bit Number and the Ford Original Equipment Part Number are included. See the STRATTEC Web Site, http://aftermarket.strattec.com, for specific applications.

Note: Ford, Lincoln and Mercury IKT Keys can be programmed more than once.

For the Ford IKT Key blanks and Chrysler remote head and FOBIK key blanks, you must know make, model, number of buttons and year of the vehicle to determine the correct key part number. Use available key blank cross references to help with the determination. When in doubt, call.

FMI

For more information contact:

HATA, Inc., 231 Moorestown Drive, Bath, PA 18014. Telephone: 866-888-4282. Web Site: www.hatainc.com.

STRATTEC SECURITY CORPORATION, 3333 West Good Hope Rd., Milwaukee, WI 53209. Telephone: 414-247-3333. Web Site: http://aftermarket.strattec.com.

STRATTEC "MUST HAVE" FORD IKT KEYS

STRATTEC PART #	BUTTONS	FUNCTIONS	TECHNOLOGY	LOGO	O.E. PART #
5912560	3 BUTTONS	L, UL, P	80 BIT	FORD	164-R8070
5914457	4 BUTTONS	L, UL, P, T	80 BIT	FORD	164-R7040
5912512	4 BUTTONS	L, UL, P, T	80 BIT	FORD	164-R8073
5912561	4 BUTTONS	L, UL, P, RS	80 BIT	FORD	164-R8067

LEGEND *L=LOCK, P=PANIC, T=TRUNK, UL=UNLOCK, RS= REMOTE START*

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- Mitsubishi keys
- Honda/Acura keys
- Infiniti/Nissan remotes & keys
- Mazda keys & bypasses outcode/incodes
- Lexus/Toyota remotes & keys
- Subaru remotes & keys

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-Joe Page, [redacted]

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Circle 370

Bianchi TK100

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Ilco Tri-Code HS

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Bolt Series Cable Locks

STRATTEC introduces two new BOLT series locks. The receiver lock comes with a 5/8" or ½" stainless steel pin and the cable lock has a 6' x ¼" coiled cable. Users simply select a GM, Ford, or Chrysler compatible lock, insert and turn their vehicle key, and the lock will be permanently coded to their key. BOLT series locks feature weather-resistant lock shutters, automotive-grade, 6-tumbler lock cylinders, and thousands more unique key-codes than standard padlocks. Information: http://aftermarket.strattec.com.
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KeylessRide Hotwire Software

Bypass Mazda Outcode/Incodes & Ford 10-minute waits with Hotwire. Keyless Ride has released two new software add-on modules, Mazda outcode/incode bypass and Ford 10-minute bypass. Mazda bypass has a 95% success rate and works with all vehicles under the Mazda transponder application list. Ford 10-minute bypass eliminates the 10-minute wait and works with all vehicles under Ford 1 (Ford 2 applications still under development). Both add-ons require the corresponding transponder software, purchase of a USB dongle (1 dongle can be used for both). Information: www.keylessride.com/locksmiths.
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It's A Miracle: New Miracle-A5 Key Machine From KeylessRide

Miracle-A5 key machine

This key machine can originate most sidewinder, standard single-sided and double-sided automotive keys all on the same key cutting machine.

BY GALE JOHNSON

The Miracle-A5 key machine, distributed by Keyless Ride, can either originate a new automotive key by known cuts or decode cuts and originate from an existing key. One of interesting features of the Miracle-A5 is the capability of originating most types of sidewinder, standard single-sided and double-sided automotive keys all on the same key cutting machine. Miracle-A5 instructions refer to sidewinder keys as laser keys.

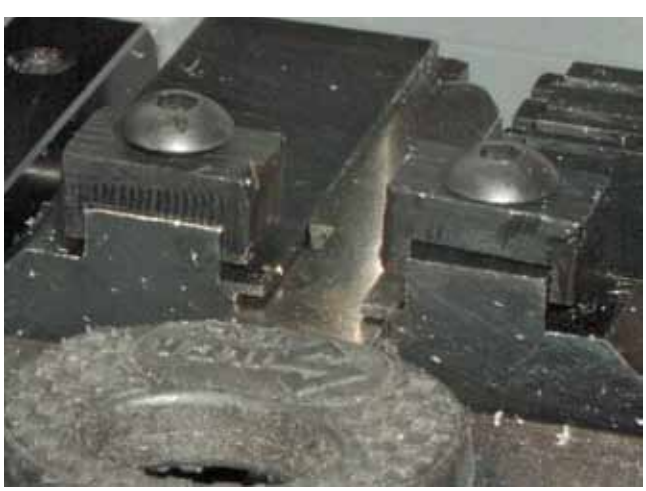
A unique key vise is used. The vise contains two height levels for holding keys. The upper level holds single-sided and double-sided keys by the blade section between the shoulder and the bow. The operating end of the blade section is held away from the jaw which allows complete cutting of both sides of a double-sided key in one operation without removing and reversing the key blank in the jaws.

Key machine, cover open

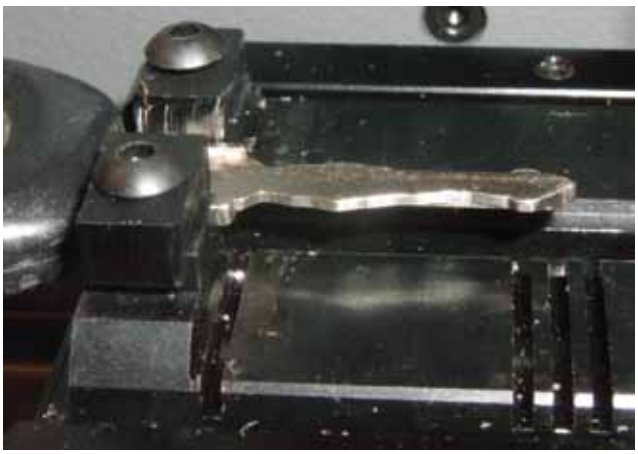
Most laser keys are held by the sides of the blade in the lower level of the jaw. A built-in sensor automatically adjusts to the required depth according to the installed height of the key blank.

All key cut depth/space dimensioning is in the machine memory. A multi-line LED screen on the key machine can be used to input the information needed for cutting almost any automotive key. Key cutting depth/space information depends on the individual car make and key blank information input by the user.

Once the car make is chosen, four key blank manufacturer choices - Ilco, JMA, Keyline and Silca - are displayed. After the key blank manufacturer is chosen, a list of auto key blanks from that key blank manufacturer is displayed on the screen. The locksmith must choose which key blank to use from the list of key blanks on the screen.



Cutting laser (sidewinder) key



Cutting flat key

Various automotive key blank types can either use tip stopping or shoulder stopping. Depending on the length and stop type, a removable block (alignment guide) is designed to fit into one of five different slots in the vise jaw. The block is solidly held into the chosen slot by a magnet which allows the user to concentrate on positioning and tightening the key blank into place. Convenient drawings on the LED screen show which slot to use for each key type.

The final step for originating a key with the Miracle-A5 key machine is to input the key cuts. The LED screen shows the proper amount of spaces, whether the same cuts are identical on both sides of a double-sided or sidewinder key, and the depth numbering system used by the key being cut.

After the key cuts are entered, the key machine 'enter' button is pushed to begin the key cutting procedure. Miracle-A5 instructions refer to the amount of material removed during each laser key cutting cycle as 'pitch'. When cutting laser keys, the Z axis (vertical direction) of the cutter can have the pitch set to remove a small, normal or large amount of blade material during each cutting cycle. The horizontal pitch number can also be adjusted so more or less key material will be removed during each cutting cycle. Pitch control is especially necessary to protect the cutter when originating keys with harder material such as steel or nickel. While multiple cycles may be necessary to originate a key, accuracy is much more important than speed.

DECODING PROCEDURE

When making a duplicate from an existing key, use the Miracle-A5 decoding procedure. First, a probe must be installed in place of the milling cutter. Next, the car model and key blank must be chosen. This provides the key machine with the proper depth/space information. Finally, choose 'Decode' on the LED screen and the Miracle-A5 will decode the cuts in a matter of seconds. Decoded cuts can then be used to originate a duplicate.

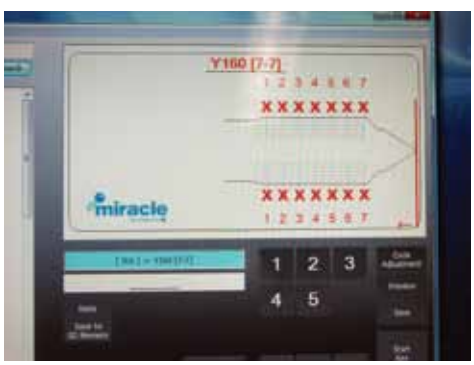
The machine can be set to either make a direct copy from the depths read, or the cuts can be rounded to the nearest original depth. The advantage of this decoding/duplicating system is that each new key can be made to original depth and space specifications even though the original key may be quite worn. Only keys that are conductive electrically can be decoded.

USING A COMPUTER OR PDA

While all the required cutting information is contained in the Miracle-A5 memory and can be displayed on the machine LED screen, a computer program is included for operation on bluetooth-equipped desktop, laptop or PDA computers. The computer program provides an enhanced, easy-to-use visual representation of machine procedures. All information from the computer program is sent wirelessly by bluetooth to the Miracle-A5 machine.

New key cutting information is continually appearing.

When Keyless Ride updates are available, the new information can be downloaded to the owner's main computer. An SD memory card located in the back of the Miracle-A5 can be temporarily removed from the key cutting machine and installed into an SD card slot on the owner's computer for updating the new information.



Screen view

The Miracle-A5 automated key machine is very simple to operate, but if there are any questions, help is on the internet. Videos on changing the cutter, how to hold shoulder or tip aligned keys and how to operate the decoding function smooth any rough spots there may be in using the Miracle-A5 key machine. With laser (sidewinder) keys appearing in large numbers on new vehicles, a laser key cutting machine is becoming an important piece of equipment for all locksmiths.

Controls

For more information, contact KeylessRide at: 877-619-136, or www.keylessride.com. ■

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05102247AA

KAG301

PK3

OE: 05010366AA,
05086275AA

KOF301

OE: 164-R0475
EZ: H84-PT

KAC300

KAC301

OE: 05134937AA,
05102247AA
EZ:Y-164-PT

KAC302

OE: 05010366AA,
05086275AA
EZ:Y-160-PT

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KAH302

OE: 35118-5DA

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OE: 35113-SEC

KAH900

HONDA 3 BUTTON

KAT902

TOYOTA 3 BUTTON
TOY43

KAC900

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A1 GMX-272C

2011 "Most Popular" Automotive Key Blanks

It is no longer practical for locksmiths to stock every automotive key blank. They must determine the most popular key blanks in their market and stock accordingly.

BY JERRY LEVINE

More and more vehicle manufacturers are using transponder-equipped mechanical keys and keyless fobs to operate their new vehicles. There is also an increase in the number of vehicles equipped with higher security mechanical lock mechanisms including Tibbe and sidewinder. The combination of mechanical and electronic locking mechanisms provides additional levels of security for the vehicle owner.

Automotive anti-theft technology is continually changing as more powerful transponders are being introduced. The latest is the Ford 80 Bit transponder that will be introduced on most 2011 model year vehicles throughout the calendar year. The Ford 80 Bit transponder is backwards compatible with 40 Bit technology Ford vehicles. However, 40 Bit technology vehicles cannot take full advantage of the capability of the 80 Bit transponder.

Another example of new introductions is the General Motors Flip key, a sidewinder remote-equipped key used by Buick, Chevrolet and GMC models. Ford is introducing the sidewinder lock mechanism onto the 2011 Fiesta and the 2012 Escape and Focus.

Continuing with Ford, four different mechanical lock mechanisms are available for the North American market - 8-cut, 10-cut, Tibbe (Transit Connect) and sidewinder. Five different transponders have been introduced since the model year 1996 including the Texas Instruments fixed code, the Motorola fixed code, the PATS III Encrypted, and the 40 Bit and 80 Bit Texas Instruments Encrypted.

For most locksmiths including those who do a significant amount of automotive work, it is no longer practical to stock every automotive key blank. Transponder and circuit board-equipped key blanks including remote head and Integrated Key Transponders are significantly more expensive than plastic head non-electronic key blanks.

We have received a number of requests from locksmiths wanting to know the most popular automotive key blanks - the ones that are "must haves" and which can wait and be ordered as needed. Automotive key blank popularity varies by many factors including location, population density, income and your customer base. No one list will provide the "must haves" for everyone. However, there are some general patterns that can be determined for many of the more popular automotive key blanks.

STRATTEC 2012 Ford Focus 4 button IKT

An excellent suggestion I received is to look at the vehicles around you when you are driving. See what makes, models and years are out there being driven in your area. This can give you insight into what your potential customers will own. In addition, are there rent-a-car companies, car dealerships and body shops in your area? Whose vehicle are being rented or repaired?

For this article, I have contacted A-1 Security Manufacturing, Bianchi USA, HATA, Kaba Ilco, Jet Hardware, JMA and STRATTEC, and requested lists of what they consider their "must haves" automotive key blanks.

The supplied "must have" lists range from more than 100 numbers to less than 20. I have limited the key blanks to cars, trucks, sport/recreational vehicles and vans. I have also limited the choices to primary key blanks.

I did request their lists include whenever possible only generic key blank part numbers. Key blank companies usually pay a fee for the right to sell logo key blanks. This adds additional cost to the transponder and non-transponder key blanks. Non-logo programmable transponder key blanks are designed to be functionally equivalent to the logo key transponders. However, some of your customers may be willing to pay additional to have a key with their manufacturer's logo.

If the key blank company has multiple logo key blanks, whenever possible

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HATA Chrysler Remote Head Key

only the generic will be listed in the primary charts in order to focus the number of included keys. Where there are only manufacturer's logo key blanks available, the logo will be indicated. For the generic key blanks, there will be separate lists for each key blank manufacturer containing their logo keys and the generic keys that operate them.

The key blank lists are divided into transponder and non-transponder types. In order to differentiate the transponder-equipped key blanks and the two-piece, electronic board key blanks, I have used the term "circuit board" as the generic term to identify these key blanks as each company identifies these keys differently. Bianchi identifies their keys as 2-Piece Clonable Keys. Ilco identifies their keys as Electronic Keys. Jet Hardware identifies their keys as the Smart Clone Keys. We will start with the transponder and circuit board-equipped key blanks chart. Then we will present the non-transponder key blank chart.

The third and fourth charts will be the remote head transponder key blanks - the "must have" Chrysler Remote Head Key Blanks and FOBIKS, and the Ford IKT (Integrated Key Transponder). Of the seven companies chosen, only HATA offers Chrysler Remote Head Key Blanks at this time through the locksmith distribution channel. STRATTEC and HATA are the only companies that offer Ford, Lincoln and Mercury IKT key blanks at this time through the locksmith distribution channel.

The reason for the separation is to better organize the key blank numbers to provide the most value of the charts. Each key blank chart is divided by vehicle manufacturers and their respective key blank numbers. The first column is the "Description." This column provides common information enabling locksmiths to determine what the key blank is either by a code series, transponder information and/or application information.

Then, each chart will be arranged by having the same key blank from each company on the same line. This way, the charts created will show which key blank companies do and do not consider specific key blanks "most popular." All key blank companies may not offer a complete line of comparable key blanks.

Some key blank companies only offer logo key blanks. When a logo key blank is included, an identifier will usually be with the part number.

If the seven companies include a key blank, it should probably be considered

JMA USA TP12GM-37.P with TP12 Transponder Chip and Insert

"most popular." Two examples are the Ford 8-cut equipped with the Texas Instruments Fixed Code transponder and the General Motors 93 (Z) groove (+) transponder-equipped key blank. You might want to consider popularity by the number of companies offering a specific key blank.

If only one company offers a specific key blank, it may or may not be considered "most popular." An important consideration is whether a particular transponder chip is available to other aftermarket key blank manufacturers. For example, at this time only STRATTEC has Ford authorized access to the 80 Bit Texas Instruments transponder chip.

If certain automotive key blank numbers are not included, this may also be important information. However, you are the final judge of which programmable and clonable automotive key blanks you purchase and stock. The following information should be considered only a guide. Contact your local locksmith wholesaler and determine which brands of automotive key blanks they maintain in stock and of those that they feel are the "most popular".

TRANSPONDER/CIRCUIT BOARD KEY BLANKS

The first chart will be the Transponder/Circuit Board Key Blank Chart. The Transponder Key Chart will include both programmable and clonable transponder and circuit board key blank numbers as supplied.

All programmable fixed and encrypted transponders have a preset code allowing them to be programmed to a vehicle. Most clonable transponder and circuit board-equipped key blanks do not have a preset code.

If these key blanks are being used for cloning, no additional steps are required. Just clone the clonable transponder or circuit board-equipped key blank to the customer's transponder-equipped key, test the operation using a "test" or metal head key and then originate the cuts onto the cloned key blank. Most clonable transponders and circuit board-equipped keys can be cloned more than once.

However, if a no preset code clonable transponder or circuit board-equipped key blank will be used with either device programming or on-board programming, a code must first be cloned onto the transponder or circuit board-equipped key blank. If not, attempting to program a no code transponder or no code circuit board-equipped key to a vehicle can result in a fault that requires the fault to be removed before another transponder value can be programmed. Some faults require dealer equipment to remove.

Once the code has been cloned, the clonable transponder or circuit board-equipped key operates like a programmable transponder-equipped key for the purposes of programming.

Jet Hardware has eight clonable transponder keys that come standard with codes already programmed onto them so that they can be used for cloning or device/on-board programming. They include transponder keys for General Motors, Honda, Mazda and Nissan vehicles.

There are different methods of programming a preset code transponder/circuit board key blanks to a vehicle. Some vehicles accept on-board programming when none, one or two already programmed keys is available.

Some vehicles can be programmed using a programming device without any additional information or procedures required. Some vehicles, such as Chrysler, require a P.I.N. that is either obtained from the programming device or must be obtained prior to programming. Other vehicles including some Nissan and Infiniti models require BCM conversion. The Body Component Module serial number is printed onto a label on the BCM. The serial number must then be converted to a PIN before a preset code transponder/circuit board key can be programmed to the vehicle.

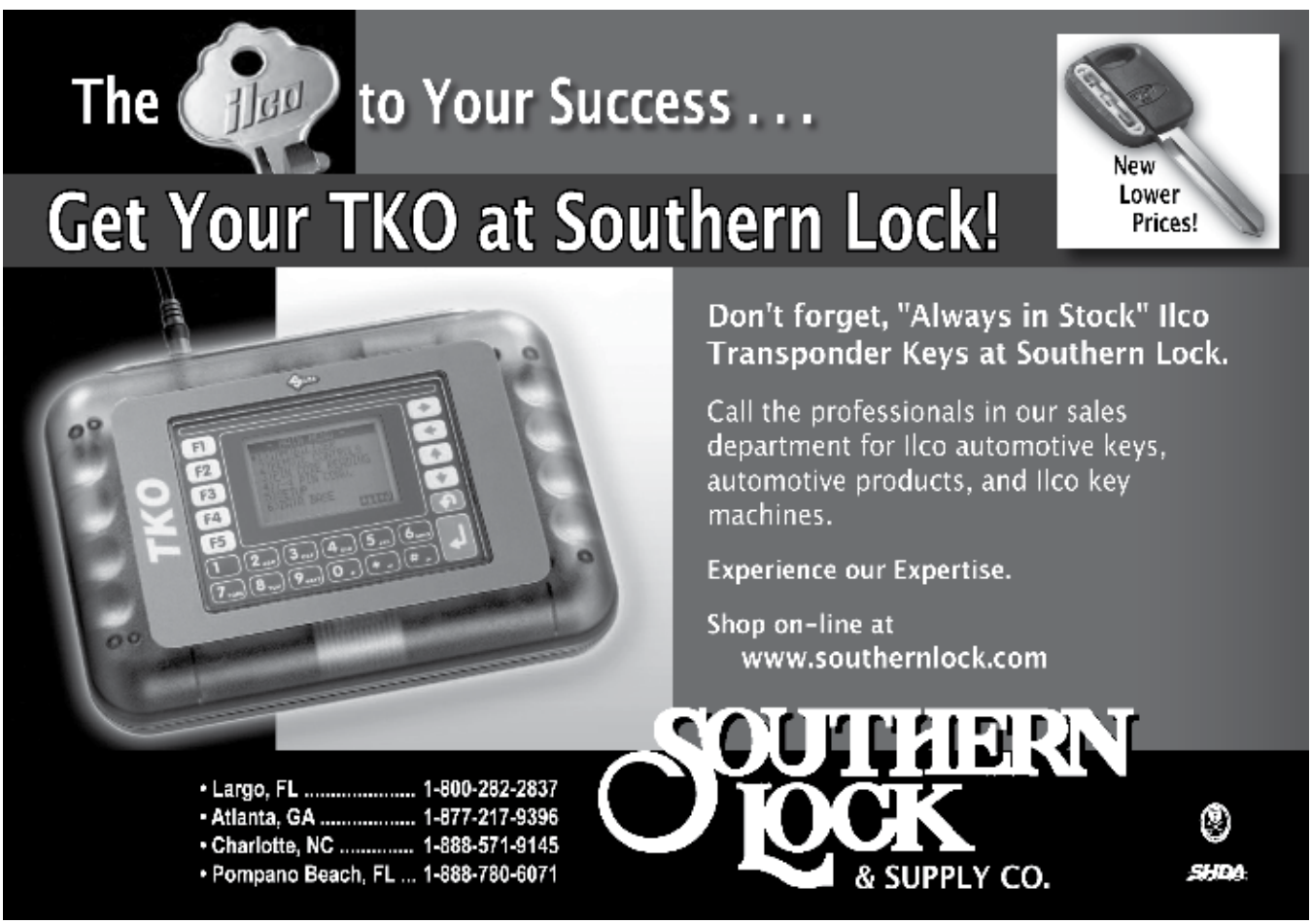
Nissan Fob

If you own a programming device, know which vehicle you can program, as the unit is equipped. Knowing how the device operates will also determine the vehicle years, makes and models you are able to program. Manufacturer specific software becomes available as new models are introduced.

Note: For some vehicles, it may be more practical to clone a key if one is available, rather than program a key.

GENERIC AND LOGO KEY BLANKS

Some key blank companies offer multiple versions of the same key blank either by having only logo key blanks or a generic key blank and logo key blanks. To give proper representation, I have included lists of the company's key blank offerings. For example, A 1 Security Manufacturing has six General Motors



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(+) key blank part numbers. There are one generic and five GM division logo key blanks including Buick, Cadillac, Chevrolet, GMC and Pontiac. For the chart, only the generic GMX-100C part number is included. The list will contain all six of the key blank numbers.

If the company has only logo key blanks, I included only one key blank number. For example, STRATTEC Ford 40 Bit key blanks are available for Ford, Mercury and Lincoln. Only the Ford 599114 part number is in the list.

A-1 Generic GM PK3 Key Blanks
B99-GPT large head 75 PK3 no logo generic
B99S-PT large head 75 PK3 GM logo

A-1 Generic GM (+) Key Blanks
GMX-100C 93 groove ⊕ generic
GMX-222C= 693126 93 groove ⊕ Buick logo
GMX-272C= 692933 93 groove ⊕ Cadillac logo
GMX-350C= 692932 93 groove ⊕ GMC logo
GMX-380C= 692931 93 groove ⊕ Chevrolet logo
GMX-381C= 693121 93 groove ⊕ Pontiac logo

A-1 Generic Ford Key Blanks
H86-PT no logo Generic 8-Cut PATS III Encrypted
H86-FPT Ford logo 8-Cut PATS III Encrypted

STRATTEC Ford Key Blanks
Generic 598333
Ford Logo 597602

STRATTEC Ford Key Blanks
Ford 599114
Mercury 599179
Lincoln 691259

STRATTEC GM Key Blanks
5903089 93 groove ⊕ Generic
692931 93 groove ⊕ Chevrolet logo
692932 93 groove ⊕ GMC logo
693121 93 groove ⊕ Pontiac logo

Jet Hardware GM Key Blanks
B112-CP-PHT 93 groove ⊕ generic
GMX222CP-PHT 93 groove ⊕Buick logo
GMX272CP-PHT 93 groove ⊕ Cadillac logo
GMX380CP-PHT 93 groove ⊕ Chevrolet logo
GMX381CP-PHT 93 groove ⊕ Pontiac logo

Jet Hardware Ford Key Blanks
J84-PHT 8-cut Encrypted TI generic
H84-PHT 8-cut Encrypted TI Ford

NON-TRANSPONDER KEY BLANKS

The non-transponder key blank chart lists the "must have" key blanks. They range from 40-year-old introductions to current applications. They have been listed as either plastic head or metal key blanks. If both numbers were provided, I included the metal key blank number. Stocking metal or plastic head key blanks depends on your customers' preference.

Over the years, aftermarket key blank manufacturers have been developing clonable transponders and circuit board-equipped keys. The advantage of the clonable is the ability to "clone" additional keys that can operate vehicles equipped with transponder based engine immobilizers. Cloning has several advantages over programming. One advantage is the ability to make as many keys as the customer wants by duplicating the same code onto clonable keys. All vehicles have a limited number of transponder codes that can be programmed.

Bianchi, Ilco and Jet Hardware offer two-piece, circuit board-equipped key blanks with heads and attachable blades. Each manufacturer offers a variety of different head and blade choices. The basic advantage is the heads can be installed onto different key blades providing a number of different electronic key blank configurations. In addition, if a circuit board-equipped key blade wears or the customer wants the bitting changed, a completely new key blank is not required. Simply remove the head and after cutting and testing the bitting, install the customer's head onto the blade. No need to program or clone, plus the customer can save money.

Bianchi TK60 and Horseshoe Blade

Bianchi has just introduced the TK100 electronic key head for their two-piece keys. The battery-less TK100 circuit board-equipped key head is designed to take the place of the Bianchi TK24, TK40 and TK60 electronic key heads. The TK24 is designed to clone most of the Temic T2 and T5, Megamos fixed code, Philips fixed code and Texas Instruments fixed code transponders. The TK40 key head is designed to clone most of the Texas Instruments Encrypted transponders. The TK60 head is designed to clone most of the Philips Crypto (circle +) and the "V" chip. Eight blades operate with the TK24 head. Fifteen blades operate with the TK40 head. Seventeen blades operate with the TK60 head. The Ford 40 Bit two piece circuit board key blank having the 8-cut blade complete key blank is the FD21UTK40 (TI only) or FD21UTK100. The head is the TK40 or TK100 and the replacement blade is FD21U.

Bianchi TK100 Head

Ilco two-piece electronic key blanks are available with the EH3 and the EH3P heads. The EH3 head is designed to clone most of the Texas Instruments Encrypted transponder chips. The Ilco EH3P head is designed to clone most of the Philips Crypto (circle +) and the "V" transponder chips. Fourteen blades

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Ilco Key

operate with the EH3 head. Thirteen blades operate with the EH3P head. The General Motors (+) two-piece circuit board key having the 93 (Z groove) blade complete key blank is EK3P-B111. The head is the EH3P and the replacement blade is EB3-R-B111.

Note: Ilco has most fixed code clonable transponder-equipped key blanks available.

Jet Hardware two-piece electronic key blanks are available with the SCH-1 and SCH-3 heads. The SCH-1 head is designed to clone most of the Temic T2 and T5, Megamos fixed code, Philips fixed code and Texas Instruments fixed code transponders. The SCH-3 head is designed to clone most of the Texas Instruments Encrypted transponders. Five blades operate with the SCH-1 head. Twelve blades operate with the SCH-3 head. The Jet Hardware two-piece circuit board clonable key blanks part number have an "N" in the middle. For example, the Chrysler Y160 two piece version has the complete part number of Y160-N-PHT. The head is the SCH-3 and the replacement blade is Y160-N-B.

A locksmith can order multiple blades with a limited number of heads in order to create the head and blade match to operate a specific vehicle. For example, a Texas Instruments Encrypted circuit board head can be used with blades for Chrysler, Ford 40 Bit, Mitsubishi, Nissan, Subaru and Toyota 40 Bit models. The Philips Crypto (circle +) and the "V" chip circuit board head applications include the late model Chrysler, GM, Honda, Land Rover, Mitsubishi and Nissan.

Jet Hardware J84-PHT

The ability to clone transponder and circuit board-equipped keys is not universal. The only transponder that is almost universal to all cloning equipment at this time is the Temic, Megamos and Phillips Fixed Code transponders used by most automotive key blank companies including JMA USA (TP05) and Ilco (Silca T1, T2 and T5).

Many encrypted clonable transponder and circuit board-equipped key blanks can only be cloned using their company's equipment. This means most of the Bianchi circuit board keys cannot be cloned using Ilco or JMA cloning equipment. Most of the Ilco circuit board key blanks cannot be cloned using Bianchi, Jet Hardware, STRATTEC or JMA equipment. And some of the JMA encrypted transponder-equipped key blanks cannot be cloned using Bianchi, Ilco, Jet Hardware or STRATTEC equipment.

Important: Most of the cloning equipment available can read other companies' transponder and circuit board-equipped keys and then clone the value onto their clonable transponder-equipped and/or circuit board-equipped key blanks.

JMA USA transponder key blanks are similar to the two-piece electric keys as they are designed so a transponder can be removed and also key blanks can be ordered less transponder. A locksmith can order multiple key blanks and a limited number of transponders. This provides the ability to stock more transponder accommodating key blanks.

JMA USA has two types of transponders, clonable and programmable. All of the transponder key blanks are designed to accommodate any of the transponders, providing the ability to create different configurations by manufacturing every key with a removable insert. Chipless JMA key blanks are available when an existing transponder-equipped key wears out or a key blank is mis-cut.

Note: JMA USA offers programmable transponders for all of their automotive transponder compatible key blanks.

The four main JMA USA clonable transponders are the TP05, TPX1, TPX2 and TPX3. The TP05 transponder is designed for Megamos, Philips and Temic fixed code applications. The TPX1 transponder is designed for the Texas Instruments Fixed code applications. The TPX2 transponder is designed for Texas Instruments Encrypted applications. The TPX3 transponder is designed for Philips 2nd generation Encrypted (Crypto) applications.

There are a number of different ways to choose the transponder and the circuit board-equipped key blanks a locksmith shop will have available. Research is necessary to insure the choices are the most beneficial for you and your customers.

FOR MORE INFORMATION

For more information, contact your local locksmith distributor or:

A1 Security Mfg, 3001 West Moore St., Richmond, VA 23230. Phone: 877-725-2121. Web: http://demanda1.com/

Bianchi USA, Inc., 31336 Industrial Parkway, Suites 3 & 4, North Olmsted, OH 44070. Telephone: 800-891-2118. Web Site: www.bianchi1770usa.com

HATA, Inc., 231 Moorestown Drive, Bath, PA 18014. Telephone: 866-888-4282 Web Site: www.hatainc.com.

Kaba Ilco Corp., 400 Jeffreys Road, Rocky Mount, NC 27804 Telephone 800-334-1381 Web Site: www.kaba-ilco.com/key_systems.

Jet Hardware Manufacturing Corp., 800 Hinsdale Street, Brooklyn, NY 11207. Web Site: www.jetkeys.com.

JMA USA, 1513 Geenview Drive, Grand Pairie, TX 75050. Telephone: 817-385-0515 Web Site: www.jmausa.com.

STRATTEC Security Corporation, 3333 West Good Hope Rd., Milwaukee, WI 53209. Telephone: 414-247-3333. Web Site: http://aftermarket.strattec.com.

TRANSPONDER AND CIRCUIT BOARD EQUIPPED KEY BLANKS

Compiled by Jerry Levine

The following chart contains the "most popular" key blanks as determined by the seven companies. The Description provides information for identifying each specific key blank. If you are not familiar with a particular companies part number, you can recognize the key blank using a corresponding company's part number. Additionally, you can look-up the individual part numbers in the company's key blank catalog and view a drawing.

Description	A-1	Bianchi	HATA	Ilco EZ	Jet Hardware	JMA USA	STRATTEC
ACURA/HONDA							
HS 4 tr "V"	---	BHO02-PT	HD112HPT	---	HD112-PHT	TP12HOND-31V.P	---
HS 4 tr fixed	---	BHO01-PT	---	HO01-PT	---	TP05HOND-31V.P	---
HS 4 tr fixed clon	---	BHO01T5	---	HO01-PT5	HD110-N-PHT	TP05HOND-31.P	692082
5001-8442 "V"	---	---	---	HD111-PT	---	---	---
5001-8442	HD106-PT	BHD106-PT	HD106HPT	---	---	---	692246
5001-8442 Clon	---	BHD106-PT5	HD106PT5	---	HD106-N-PHT	TP05HOND-21.P	692057
CHRYSLER							
Hybrid FOBIK	---	BY170-PT	HAT3740	Y170-PT	---	TP12CHR-15.P1	5909874
Sprinter van	---	BYS15TK1	---	YM15T5-SI	---	---	---
Tan head	CHY-250	BY165-PT	HAT1718	Y164-PT	Y165-PHT	TP12CHR-15.PC	---
Gray head	Y160S-PT	BY160-PT	Y160HPT	Y160-PT	Y160-PHT	TP21CHR-15.PG	---
FORD							
8-cut Encrypt 80	---	---	HAT997	---	---	---	5913439 (M)
8-cut Encrypt 80	---	---	HAT997	---	---	---	5913437 (L)
8-cut Encrypt 80	---	---	HAT997	---	---	---	5913441 (F)
8-cut Encrypt 40	---	---	HAT9114	---	J84-PHT	TP20FO-30D.P	599114 (F)
4D60 Sh blade	H86-PT	BH86-PT	H-86-HPT	H86-PT	H86-PHT	TP06FO-15D.P	---
4D60 Lo blade	H74-PT	---	H74HPT	---	H74-PHT	TP06FO-15D.P	691643
8-cut fixed	H72-FPT	BH72-PT	H72HPT	H72-PT	H72-PHT	TP02FO-15D.P	598333
10-cut fixed	---	---	---	H73-PT	---	---	---
GENERAL MOTORS							
Sm 75 PK3	B97-GPT	---	B-97-HPT	B97-PT	B97-PHT	TP05GM-27V.P	690552
Sm 75 PK3 Clon	---	---	---	B97-PT5	---	TP05GM-27.P	---
Lg 75 PK3	B99-GPT	BB99-PT	B-99-HPT	B99-PT	B99-PHT	TP05GM-28V.P	690898
Lg 75 PK3 Clon	---	BB99-PT5	---	B99-PT5	---	TP05GM-28.P	---
Sm 88 PK3	---	---	---	B103-PT	B103-PHT	---	690556
Sm 88 PK3 Clon	---	---	---	B103-PT5	---	TP05GM-43.P	692064

LEGEND

4C = Texas Instrument Fixed Code Transponder
4D = Texas Instruments Encrypted Code Transponder
F = Ford
L = Lincoln
M = Mercury
8-cut = 0001X-1706X code series
10-cut = A-B-C-D-E code series

75 = Keyway groove used by General Motors
PK3 = PASS-Key III Fixed code transponder
"Z" = 93 groove keyway

⊕ = Philips Crypto transponder
Sm = Small
Lg = Large
Bu = Buttons
B logo = Buick logo

C logo = Chevrolet logo
Ca logo = Cadillac logo
P logo = Pontiac logo
Sh = Short blade
Lo = Long blade
Enc = encrypted transponder
HS = high security
4 tr = four track
Int = Internal
"V" = "V" transponder chip

TI Enc = Texas Instruments Encrypted transponder
Ph Enc = Philips Encrypted transponder
Clon = Clonable
RS = Remote Start
Sq = Square
Rd = Round
Hd = Head
SKM = Sidewinder Key Machine

Description	A-1	Bianchi	HATA	Ilco EZ	Jet Hardware	JMA USA	STRATTEC
GENERAL MOTORS							
Lg 75 PK3+	---	---	---	B112-PT	---	---	5912114 (Ca)
B logo 75 PK3	B107S-PT	---	---	---	---	---	---
Ca logo 75 PK3	GMX-320	---	HAT-320	---	---	---	---
"Z" ⊕	GMX-100C	BB112PT	B107CP	B111-PT	B112-CP-PHT	TP12GM-37.P	5903089
"Z" PK3	---	BPT04-PT	B107HPT	B107-PT	---	TP05GMV-37.P	---
"Z" PK3 Clon	---	---	---	B107-PT5	B107-N-PHT	TP05GM-37.P	---
P logo "Z" PK3	---	---	---	---	---	---	---
Flip 4 bu C logo SKM	---	---	HAT2543	---	---	---	5912543
Flip 5 bu C logo SKM	---	---	HAT2534	---	---	---	5912545
INFINITI/NISSAN							
1-22185 Ph Enc	---	BNI04T	HAT104	NI04T	DA40-PHT	TP12DAT-15.P4	7003526
1-22185 RD HD*	---	BNI02T	DA34HPT	NI02T	DA34-PHT	TP19DAT-15.P3	692061
1-22185 SQ HD*	---	---	---	---	---	---	692060
X1-X8000 clone	---	---	DA31HPT	---	---	---	---
* Same blade same transponder different head shapes							
LEXUS							
4 tr int short 4C SKM	---	---	---	---	---	TP07TOYO-30.P	---
4 tr int long 4C SKM	---	---	---	---	---	TP07TOYO-18.P	---
4 tr int medium 4D SKM	---	---	---	---	---	TP29TOYO-36.P	---
4 tr int short clon SKM	---	---	---	---	TR48-N-PHT	TPXTOYO-30.P	---
MAZDA							
All 2004-11	---	---	---	---	---	TP20MAZ-20D.P2	---
10100-12283							
MITSUBISHI							
"R" MIT1 blade	---	---	---	---	---	TP19MIT-12.P2	---
E5001-E7679							
"R" MIT6 blade	---	---	---	---	---	TP19MIT-18.P	---
F1-F1571							
"N" MIT1 blade	---	---	---	---	---	TP26MIT-12.P2	---
E5001-E7679							
"N" MIT6 blade	---	---	---	MIT13-PT	---	TP26MIT-18.P	692564
F1-F1571							

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4D = Texas Instruments Encrypted Code Transponder
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75 = Keyway groove used by General Motors
PK3 = PASS-Key III Fixed code transponder
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Circle+ = Philips Crypto transponder
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B logo = Buick logo
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Clon = Clonable
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Sq = Square
Rd = Round
Hd = Head
SKM = Sidewinder Key Machine

Description	A-1	Bianchi	HATA	Ilco EZ	Jet Hardware	JMA USA	STRATTEC
MITSUBISHI							
"N" MIT3 blade	---	---	---	---	---	TP26MIT-8D.P2	---
30010-32009							
"A" MIT6 blade	---	---	---	MIT16A-PT	---	TP12MIT-18.P	692562
F1-F1571							
"A" MIT3 blade	---	---	---	---	---	TP12MIT-8D.P2	---
F1-F1571							
TOYOTA							
10001-15000	TOY43-AT4	---	TR47HPT	---	TR47-PHT	TP07TOYO-15.P	692062
50000-69999	---	---	HAT8020	---	TR51-PHT	TP30TOYO-15.P	5910834
VOLKSWAGEN							
0001-6000	---	BHU66T6	---	---	HU67-PHT	TP08HU-HAA.P1	---

NON-TRANSPONDER EQUIPPED KEY BLANKS

Compiled by Jerry Levine

The following chart is of non-Transponder/Circuit board key blanks. I have included metal key blanks where possible as they are usually less expensive than a plastic or rubber head key blank. If you are originating a mechanical key for a vehicle, it is important to use either a metal key blank or a "Service" key blade to first determine if the originated key operates the mechanical locks. Then the transponder key blank can be cut to the correct bitting. Saving a transponder key blank if the originated key does not operate the locks.

I did include a number of high security key blanks. They require a special key machine (SKM) to either originate or duplicate them. This is a questionable cost for a locksmith who is just starting out in automotive work.

I did include the VATS/PASSKEY I, II diode pellet equipped key blanks. They are a unique form of automotive security and require either a secondary ignition lock or an interrogator to determine the correct resistance value. The single sided VATS keys are used in General Motors vehicles from the 1986 Chevrolet Corvette to the 2003 Cadillac Eldorado.

Description	A-1	Bianchi	HATA	Ilco EZ	Jet Hardware	JMA USA	STRATTEC
AUDI/VOLKSWAGEN							
1-6000 SKM	---	BHU66-P	---	---	---	HU-HAA.P1	---
AH 001-9282	---	---	---	---	---	AU-AH	---
ACURA/HONDA							
SW 4 tr SKM	---	---	---	HO01-SVC*	---	HOND-31	---
5001-8442	---	---	HD103HP	HD103	HD103	HOND-16D	---

LEGEND

A – K = Keyway
GM = General Motors
Int = Internal
Pl = Plastic head
DS = Double Sided
SS = Single Sided
SW = Sidewinder
Sq Hd = Square Head
2 tr = Two Track
4 tr = Four Track
VATS = Vehicle Anti-Theft System
B/O = Buick/Oldsmobile
10-Cut = Lock mechanism
Sec = Secondary
SKM = Special Key Machine required to cut keys

Strattec 75-Groove GM
598007 Chevrolet logo

Strattec 75-Groove GM
598007 Chevrolet logo
598009 GMC logo

A-1 VATS Key Blanks
201-S-215-S Generic SS VATS
GM-201-GM-215 logo
771-S-785-S Generic DS VATS
B104-P-2-B104-P-15 Corvette logo
GM-772-GM-785

Description	A-1	Bianchi	HATA	Ilco EZ	Jet Hardware	JMA USA	STRATTEC
ACURA/HONDA							
5001-8442	---	---	---	---	---	HOND-15	---
3001-4481	---	---	---	---	---	HOND-10	---
The Ilco H001SVC is a test key blade used when originating a first key for the vehicle. The test key blade can save a locksmith a transponder key blank, if the decoded and cut key does not operate the vehicle locks.							
AMERICAN MOTORS/JEEP/18 Wheelers							
K/L1-1000	---	---	---	RA4	RA4	---	321490
BMW							
BH1-BH241009 SKM	---	BS7BW-P	---	---	---	BM-5.P	---
CHRYSLER							
M 1-2618	---	BY159	Y159HN	Y159	Y159	CHR-15	692346
L 1-3580	---	BY157	Y157HN	Y157	Y157	CHR-14	---
J 1-3580	---	---	---	Y155	---	CHR-10	---
F/G 1-1394	---	---	---	Y154	---	CHR-9	---
DP/EP 1-3000	---	---	---	---	---	CHR-18	320514
DP/EP 1-3000	---	---	---	---	---	CHR-8	---
DS 1-1500	---	---	---	---	---	CHR-12	---
ES/DS 1-1500	---	---	---	---	---	CHR-13D	---
FORD							
Tibbe Ford logoSKM	---	----	---	---	---	---	5914577
10100-12283	---	---	---	H76	---	---	---
0001X-1706X	---	BH75	H75HN	H75	H75	FO-15D	597638 (F)
A-B-C-D-E Sq Head	---	---	H67PF	H67	---	---	---
A-B-C-D-E Lg blade	---	---	---	H60	H60	FO-11D	---
A-B-C-D-E	---	---	---	H54	H54	FO-20D	---
FA0001-FA1863	---	---	---	---	H51	FO-21D	321207
FB0001-FB1863	---	---	---	---	H50	FO-19	---
GENERAL MOTORS							
DS VATS	---	---	B82P2-	---	---	---	596772-
			B82P15				596785
70000-75928	---	---	---	B110	---	GM-38	---
G0001-G3631	---	---	B109HN	B106	B106	GM-37	---
S000A-S999K	---	---	B102HN	B102	B102	GM-39	598007 (C)
B/O 10-Cut Sec	---	---	---	---	---	GM-41	---
0001-2000	---	---	---	B96	B96	GM-40	---

LEGEND

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2 tr = Two Track
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VATS = Vehicle Anti-Theft System
B/O = Buick/Oldsmobile
10-Cut = Lock mechanism
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A-1 VATS Key Blanks
201-S-215-S Generic SS VATS
GM-201-GM-215 logo
771-S-785-S Generic DS VATS
B104-P-2-B104-P-15 Corvette logo
GM-772-GM-785

Strattec
598007 Chevrolet logo
598009 GMC logo

Description	A-1	Bianchi	HATA	Ilco EZ	Jet Hardware	JMA USA	STRATTEC
GENERAL MOTORS							
Lg Hd 10-Cut	---	---	---	B93	---	---	---
Sm Hd 10-Cut Lng	---	---	---	B92	B92	GM-36	---
AA00-7T51	---	---	B91HN	B91	B91	GM-34	597791 (C)
S000A-S999K	---	---	B89HN	B89	B89	GM-30	597749
R/T001-999	---	---	---	B88	---	---	---
Sm Hd 10-Cut	---	BB86	---	B86	B86	GM-14	---
Sm Hd 10-Cut	---	---	---	---	---		596222
Plastic Head							
SS VATS	201-S-	---	B-62-P-1	---	---	GM-16.PV01-	595511-
	215-S	---	B-62-P-15	---	---	GM-16.PV15	595525
SS D	---	---	---	---	---	GM-11	---
SS C	---	---	---	---	---	GM-7	---
SS B	---	---	---	---	---	GM-10	---
SSA	---	---	---	---	---	GM-6	---
SS K	---	---	---	---	---	GM-13	---
SS J	---	---	---	---	---	GM-9	---
SS H	---	BB45	---	B45	B45	GM-12	320405
SS E	---	---	---	B44	B44	GM-8	---
8000-9499	---	---	---	---	---	---	32318
HYUNDAI							
F/V/M	---	---	HY17HP	---	HY17	HY-11	---
V0001-V1200	---	---	HY16HP	HY16-P	HY16	HY-12	---
F/V/M	HY15-P	---	HY15HP	HY15-P	HY15	HY-13D	---
T0001-T1000	---	---	HY14HP	HY14	HY14	HY-10	---
R0001-R1000	---	---	---	HY13	---	HY-5	---
S0001-S1000	---	---	---	HY12	---	HY-6D	---
INFINITI/NISSAN							
00001-22185	---	BDA34	DA34HN	DA34	DA34	DA-16	---
X0001-X8000	---	BDA31	---	DA31	DA31	DA-22	---
X0001-X8000	---	---	---	DA25	DA25	DA-12	---
KIA							
WA1001-WA3040	---	---	---	---	---	KI-6	---
Y2001-Y3000 Long Shank	---	---	---	---	KI-4D	---	---
Y2001-Y3000 Short Shank	---	---	---	---	KI-3D	---	---
MAZDA							
10100-12283	---	---	---	MZ31	---	MAZ-11D	---
10100-12283	---	---	---	MZ27	---	MAZ-13D	---
10100-12283	---	---	---	MZ19	---	MAZ-17D	---

Description	A-1	Bianchi	HATA	Ilco EZ	Jet Hardware	JMA USA	STRATTEC
MERCEDES BENZ							
HA 2 tr SW Pl SKM	---	---	---	---	---	ME-10.P	---
HS 4 tr SW Pl SKM	---	---	---	---	---	ME-2.P	---
HA 2 tr SW Pl SKM	---	---	---	---	---	ME-4.P	---
MITSUBISHI							
F0001-F1571	---	---	---	MIT6	---	MIT-18	---
30010-32009	---	---	---	MIT3	---	MIT-8D	---
E5001-E7679	---	---	---	MIT1	---	MIT-16	---
SAAB							
BC 2 tr SW Pl SKM	---	---	---	---	---	SAA-1.P1	---
SUBARU							
30001-37850	---	---	---	SUB-1	---	SUB-1	---
TOYOTA							
10001-15000	---	BTR47	TR47HN	TR47	TR47	TOYO-15	692063
G0001-G2377	---	---	---	TR40	TR40	TOYO-20D	---
S0001-S2878	---	---	---	TR39	---	---	---
F5951-F9710	---	---	---	TR37	---	TOYO-13	---
R5001-R6924	---	---	---	TR33	---	---	---
VOLVO							
1V-5V12295 SKM	---	---	---	---	---	NE-40.P	---
MULTIPLE							
H 1-5143	---	---	---	DC3	DC3	---	---
Int 4 tr SKM	---	BLXP90-P	---	LXP90-P	---	TOYO-18.P	---
Various	---	---	---	B1	---	---	---

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Isuzu - Iveco - Jeep - Kenworth - KIA - Land Rover - Lexus - Lincoln - Mack - Mazda - Mercury - Merkur
Mitsubishi - International - Nissan/Datsun - Oldsmobile - PeterBuilt - Peugeot - Plymouth - Pontiac - Porsche
Renault - Saturn - Scion - Sterling - Subaru - Suzuki Toyota - Volkswagen - Volvo - White - Yamaha - Artic Cat
Kawasaki - Suzuki - Yahama - Honda - Kwikset - Schlage - I/Core A2,A3,A4 - Master Pad Lock - RV

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LC1406/LC1406U	LC1438	LC1604	LC6177/LC6177U	Ford
DL5883	DL1590	DL5885	DL5886	Ford
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