

Antitheft System - Immobilizer System (Type 3)

01-027

June 27, 2007

*Applies To:

2003-06 MDX - ALL
2002-06 RSX - ALL*

Immobilizer System (Type 3)

(Supersedes 01-027, dated April 28, 2003, to update the information marked by the black bars and asterisks.)

All 2003-06 MDXs and 2002-06 RSXs have a Type 3 immobilizer system that disables the vehicle unless a programmed ignition key is used. A programmed ignition key is a transponder-type key that is cut to fit the ignition switch and whose transponder ID code is recognized by the immobilizer system. If you try to start the engine without a programmed ignition key, the engine cranks, but it will not start.

This service bulletin covers these subjects:

- ^ Immobilizer system components
- ^ Adding programmed ignition keys
- ^ Replacing all programmed ignition keys
- ^ Clearing transponder codes of lost programmed ignition keys
- ^ Starting the engine without a programmed ignition key
- ^ Replacing the immobilizer control unit-receiver
- ^ Replacing the ECM/PCM

It also has a client situation and required items chart. You can find more information about the immobilizer system in the Body Electrical section of the appropriate service manual.

WARRANTY CLAIM INFORMATION

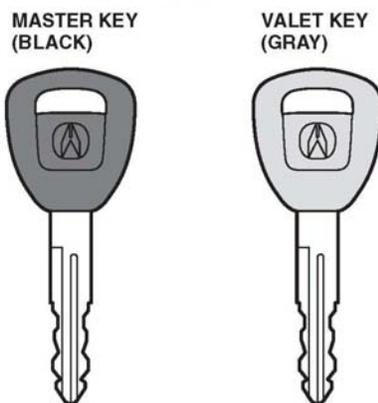
None. This service bulletin is for information only.

IMMOBILIZER SYSTEM COMPONENTS

The immobilizer system includes these components:

- ^ Immobilizer system keys (two master keys and one valet key at new vehicle delivery)
- ^ Immobilizer system indicator
- ^ Immobilizer control unit-receiver
- ^ ECM/PCM

Immobilizer System Keys

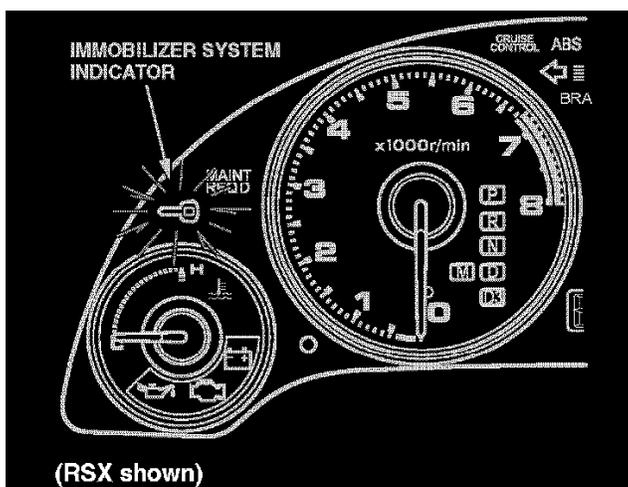


The vehicle comes with two master keys (black grip) and one valet key (gray grip).

Each master key and valet key has a transponder in its grip that outputs an ID code when you insert the key into the ignition switch. The immobilizer system uses this ID code to determine whether to start the engine. There are no batteries or other serviceable parts inside the keys.

Make sure you use the proper key blanks. Refer to the parts catalog for the P/N, and search by VIN.

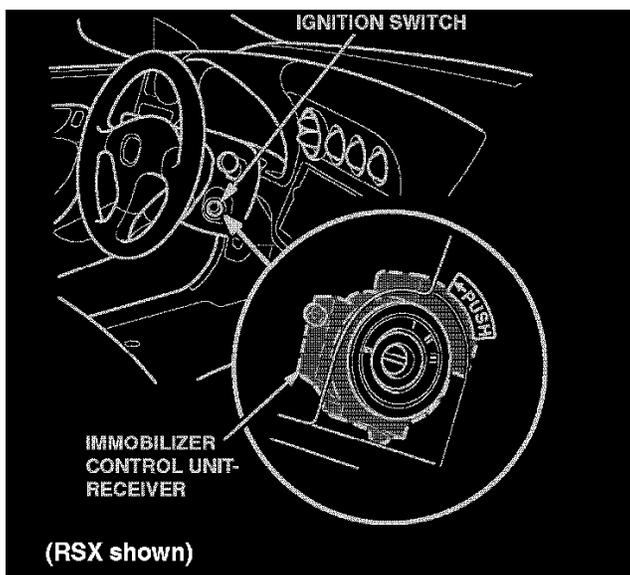
Immobilizer System Indicator



The immobilizer system indicator is on the instrument panel. If you insert a programmed ignition key (master or valet) into the ignition switch and turn the switch to ON (II), the indicator comes on for 2 seconds and then goes off. When you turn the ignition switch to LOCK (0), the indicator blinks for 5 seconds and then goes off.

If you insert a nonprogrammed ignition key into the ignition switch and turn the switch to ON (II), the indicator comes on for 2 seconds and then starts to blink. The indicator keeps blinking until you turn the switch to LOCK (0). If you try to start the engine with a nonprogrammed ignition key, the engine cranks, but it will not start.

Immobilizer Control Unit-Receiver



The immobilizer control unit-receiver is inside the bezel around the ignition switch. It uses electromagnetic induction to power the transponder in the key. There is no direct electrical connection. Once the transponder is activated, it sends its ID code to the immobilizer control unit-receiver, which checks the ID code against the codes in its memory. If the code matches, the immobilizer control unit-receiver sends a unique serial code to the ECM/PCM. But if the transponder ID code does not match, no serial code is sent.

ECM/PCM

The ECM/PCM is an integral part of the immobilizer system. When the ECM/PCM receives the unique serial code from the immobilizer control unit-receiver it communicates with the immobilizer control unit-receiver by sending back its own unique serial code. If the serial codes are mutually recognized, the ECM / PCM activates the fuel supply system and the ignition system so the engine can start.

CLIENT SITUATION AND REQUIRED ITEMS CHART

Client Situation	Required Items
Your client has at least one programmed ignition key, but wants an additional key(s).	<p>Ilco immobilizer key code duplicator with Ilco programmable key blanks preferred (see S/B 99-029 for details)</p> <p>Immobilizer key blank (master or valet) (Refer to the parts catalog for the P/N, and search by VIN for the correct blanks.)</p> <p>One programmed ignition key (master, valet, T5)</p> <p>Suitable key cutter and the key code for the vehicle (if cutting by code)</p> <p>HDS and 1st Password</p>
Your client wants to clear the transponder code of a lost programmed ignition key and has at least one programmed ignition key.	<p>All programmed ignition keys (master, valet, T5)</p> <p>HDS and 1st Password</p>
Your client has lost all of the programmed ignition keys.	<p>Immobilizer key blank (master or valet) (Refer to the parts catalog for the P/N, and search by VIN for the correct blanks.)</p> <p>Suitable key cutter and the key code for the vehicle</p> <p>HDS and PCM Code</p>
The immobilizer control unit-receiver is faulty.	<p>Replacement immobilizer control unit-receiver (Refer to the parts catalog for the P/N, and refer to the appropriate service manual for the procedure.)</p> <p>All programmed ignition keys (master, valet, T5)</p> <p>HDS and PCM Code</p>
The ECM/PCM is faulty.	<p>Replacement ECM/PCM (Refer to the parts catalog for the P/N, and refer to the appropriate service manual for the procedure.)</p> <p>One programmed ignition key (master, valet, T5)</p> <p>HDS and PCM Code</p>
The ignition key cylinder is faulty or damaged.	<p>If you know how to rekey locks, order the steering lock assembly, and rekey the other locks to match. If you do not know how to rekey locks, order this kit only if your client does not insist on all the locks matching. If your client insists on all the locks matching, but you do not know how to rekey locks, order the key cylinder set. Refer to the parts catalog for the P/Ns.</p> <p>Order the steering lock assembly <i>only</i> if your client does not insist on all the locks matching; otherwise, order the key cylinder set. Refer to the parts catalog for the P/Ns.</p> <p>Refer to the appropriate service manual for the immobilizer control unit receiver replacement procedure.</p>
One or more of these locks are damaged: door(s), tailgate, glove box, trunk, trunk release handle, or rear seat trunk access.	<p>Replace locks individually if you know how to rekey them; otherwise, order the key cylinder set. Refer to the parts catalog for the P/N.</p> <p>Refer to the appropriate service manual for the immobilizer control unit receiver replacement procedure.</p>

This chart lists the client situations most commonly associated with the immobilizer system along with the items needed to remedy each situation. If you need to repair the system, refer to the Body Electrical section of the appropriate service manual. If you need the HDS, make sure it is loaded with current software and that the setup for it is correct before you use it. If you are adding multiple programmed ignition keys, clearing the transponder codes of lost programmed ignition keys, or replacing the immobilizer control unit-receiver, make sure you get all of your client's programmed ignition keys (master, valet, and 15 keys) for the vehicle, along with the key code for the vehicle (if available).

CUSTOMER INFORMATION: The information in this bulletin is intended for use *only* by skilled technicians who have the proper tools, equipment, and training to correctly and safely maintain your vehicle. These procedures should not be attempted by "do-it-yourselfers," and you should not assume this bulletin applies to your vehicle, or that your vehicle has the condition described. To determine whether this information applies, contact an authorized Acura automobile dealer.

Disclaimer

Part One

ADDING PROGRAMMED IGNITION KEYS

This vehicle originally comes with three programmed ignition keys. The immobilizer control unit-receiver accepts a total of six transponder codes, so three more codes can be added to its memory. Use the procedures below to add a key or to add multiple keys.

Ilco Immobilizer Key Code Duplicator (Preferred Method)

If your client wants an additional ignition key(s), use the Ilco Immobilizer Key Code Duplicator with Ilco programmable key blanks (look for a T5

(stamped on the shank or molded into the grip). The key code duplicator offers a low-cost, quick, and convenient way to make a duplicate key from a programmed ignition key. Refer to S/B 99-029, Ilco Immobilizer key Code Duplicator; for details.

HDS (Alternate Method)

If the key code duplicator is not available, use the Honda Diagnostic System (HDS) with Acura key blanks. The HDS programs (rewrites) the immobilizer control unit-receiver, storing the transponder code of the new key(s) in the immobilizer control unit-receiver memory.

Adding One Key

*Preparation

To add one key with the HDS, you need these items:

- ^ Immobilizer key blank (master or valet)
(Refer to the parts catalog for the P/N, and search by VIN for the correct blanks.)*
- ^ One programmed ignition key (master, valet, T5) for the vehicle
- ^ Key code for the vehicle (if cutting by code)
- ^ Suitable key cutter
- *^ HDS with the latest software*

NOTE:

Make sure the setup and time are correct before you use the HDS. Select the F12 key in the upper right corner to get the Set-up Details screen. Make sure Market: is set to USA. Select the time display in the lower right corner to get the Date/Time Properties pop-up window. Make sure the date and time are correct. For details, refer to the Honda Diagnostic System (HDS) Setup Instructions listed under Tool Information in ISIS.

- *^ 1st Password (Get this five-character code from the iN Immobilizer Code Inquiry.)*

Procedure

1. Use an Acura key blank and a suitable key cutter to cut a new ignition key (see S/B 99-010, Cutting keys With the Exacta key Code Cutter).
2. Connect the HDS to the 16P data link connector (DLC).
3. Insert the programmed ignition key into the ignition switch, and turn the switch to ON (II). Turn on the HDS.
4. At the screen prompts, enter the VIN and the odometer reading, then verify the correct date and time.
5. From the System Selection Menu screen, select IMMOBI.
6. From the Mode Menu screen, select Immobilizer Setup.
7. From the Immobilizer Test Mode Menu screen, select Add and Delete Keys.
8. From the Add and Delete Keys screen, select Add 1 Key.
9. From the Add 1 Key screen, select Begin to add 1 key.
10. From the Password screen, enter the Password, then follow the screen prompts. When you are finished, turn the ignition switch to LOCK (0), then turn off and disconnect the HDS.

Adding Multiple Keys

*Preparation

To add multiple keys with the HDS, you need these items:

- ^ Immobilizer key blank (master or valet)
(Refer to the parts catalog for the P/N, and search by VIN for the correct blanks.)*

^ All of your client's programmed ignition keys (master, valet, and T5) for the vehicle

^ Key code for the vehicle (if cutting by code)

^ Suitable key cutter

^ HDS with the latest software

NOTE:

Make sure the setup and time are correct before you use the HDS. Select the F12 key in the upper right corner to get the Set-up Details screen. Make sure Market: is set to USA. Select the time display in the lower right corner to get the Date/Time Properties pop-up window. Make sure the date and time are correct. For details, refer to the Honda Diagnostic System (HDS) Setup Instructions listed under Tool Information in ISIS.

^ 1st Password (Get this five-character code from the iN Immobilizer Code Inquiry.)

Procedure

1. Use appropriate key blanks and a suitable key cutter to cut new ignition keys (see S/B 99-010, Cutting keys With the Exacta key Code Cutter).
2. Gather up all of your client's programmed ignition keys (master and valet) for the vehicle. Set aside any 15 keys.
3. Stick a small piece of masking tape to the grip of each programmed ignition key and each new key. Starting with the programmed ignition keys, mark them as A, B, C, etc. (The immobilizer control unit-receiver stores a maximum of six transponder codes.)
4. Connect the HDS to the 16P data link connector (DLC).
5. Insert key A into the ignition switch, and turn the switch to ON (II). Turn on the HDS.
6. At the screen prompts, enter the VIN and the odometer reading, then verify the correct date and time.
7. From the System Selection Menu screen, select IMMOBI.
8. From the Mode Menu screen, select Immobilizer Setup.
9. From the Immobilizer Test Mode Menu screen, select Add and Delete Keys.
10. From the Add and Delete Keys screen, select Delete or Add Multiple Keys.
11. From the Delete or Add Multiple Keys screen, select Begin to Delete or Add Multiple Keys.
12. From the Password screen, enter the Password, then follow the screen prompts. When you are finished, turn the ignition switch to LOCK (0), then turn off and disconnect the HDS.
13. T5 keys only: Start the engine with each of the 15 keys you set aside in step 2.
 - ^ If all of the 15 keys start the engine, the transponder codes are already recognized by the immobilizer control unit-receiver and the immobilizer procedure is complete.
 - ^ If any of the 15 keys do not start the engine, go to step 14.
- *14. The HDS accepts only one key of a certain transponder code. If the total number of nonprogrammed 15 keys plus the keys you entered is greater than six, use the key code duplicator to recode the additional 15 keys to match an existing transponder code.

NOTE:

The HDS shows you the number of transponder codes stored in the memory of the immobilizer control unit-receiver. If any of the keys share the same transponder code (as might be the case with a 15 key), the number of codes shown may be fewer than the actual number of keys.

REPLACING ALL PROGRAMMED IGNITION KEYS

If your client has lost all of the programmed ignition keys, you need to replace the ignition keys and rewrite the immobilizer control unit-receiver with the HDS. The HDS clears all transponder codes from the memory of the immobilizer control unit-receiver and stores the transponder codes of the replacement ignition keys.

***Preparation**

To replace all programmed ignition keys, you need these items:

^ Immobilizer key blank (master or valet)

(Refer to the parts catalog for the P/N, and search by VIN for the correct blanks.)*

^ Key code for the vehicle

^ Suitable key cutter

^ HDS with the latest software

NOTE:

Make sure the setup and time are correct before you use the HDS. Select the F12 key in the upper right corner to get the Set-up Details screen. Make sure Market: is set to USA. Select the time display in the lower right corner to get the Date/Time Properties pop-up window. Make sure the date and time are correct. For details, refer to the Honda Diagnostic System (HDS) Setup Instructions listed under Tool Information in ISIS.

^ PCM Code (This four-digit code is available on the iN Immobilizer Code Inquiry.)

Procedure

1. Use Acura key blanks and a suitable key cutter to cut the requested number of ignition keys (see S/B 99-010, Cutting keys With the Exacta key Code Cutter).
2. Connect the HDS to the 16P data link connector (DLC).
3. Insert a newly cut ignition key into the ignition switch, and turn the switch to ON (II). Turn on the HDS.
4. At the screen prompts, enter the VIN and the odometer reading, then verify the correct date and time.
5. From the System Selection Menu screen, select IMMOBI.
6. From the Mode Menu screen, select Immobilizer Setup.
7. From the Immobilizer Test Mode Menu screen, select Add and Delete Keys.
8. From the Add and Delete Keys screen, select All Keys Lost.
9. From the All Keys Lost screen, select Begin to register keys.
10. From the PCM-Code screen, enter the PCM Code, then follow the screen prompts. When you are finished, turn the ignition switch to LOCK (0), then turn off and disconnect the HDS.

Part Two

CLEARING TRANSPONDER CODES OF LOST PROGRAMMED IGNITION KEYS

If your client has lost one or more (but not all) of the programmed ignition keys, you should rewrite the immobilizer control unit-receiver with the HDS to prevent the lost keys from starting the engine. The HDS clears the transponder codes from the immobilizer control unit-receiver, then stores the transponder codes of your client's remaining programmed ignition keys. This process, in effect, clears the codes of the lost keys, so they could not start the engine.

Preparation

To clear the transponder codes of lost programmed ignition keys, you need these items:

^ All of your clients remaining programmed ignition keys (master and valet) for the vehicle. (This includes any master or valet keys with a T5 stamped on the shank or molded into the grip. These are duplicate keys made with the Ilco Immobilizer Key Code Duplicator.)

*^ HDS with the latest software

NOTE:

Make sure the setup and time are correct before you use the HDS. Select the F12 key in the upper right corner to get the Set-up Details screen. Make sure Market: is set to USA. Select the time display in the lower right corner to get the Date/Time Properties pop-up window. Make sure the date and time are correct. For details, refer to the Honda Diagnostic System (HDS) Setup Instructions listed under Tool Information in ISIS.

^ 1st Password (Get this five-character code from the iN Immobilizer Code Inquiry.)

Procedure

1. Gather up all of your client's remaining programmed ignition keys (master and valet) for the vehicle. Set aside any T5 keys.
2. Connect the HDS to the 16P data link connector (DLC).
3. Insert a programmed ignition key into the ignition switch, and turn the switch to ON (II). Turn on the HDS.
4. At the screen prompts, enter the VIN and the odometer reading, then verify the correct date and time.
5. From the System Selection Menu screen, select IMMOBI.
6. From the Mode Menu screen, select Immobilizer Setup.
7. From the Immobilizer Test Mode Menu screen, select Add and Delete Keys.
8. From the Add and Delete Keys screen, select Delete or Add Multiple Keys.
9. From the Delete or Add Multiple Keys screen, select Begin to Delete or Add Multiple Keys.
10. From the 1st Password screen, enter the 1st Password, then follow the screen prompts. When you are finished, turn the ignition switch to LOCK (0), then turn off and disconnect the HDS.
11. T5 keys only: Start the engine with each of the T5 keys you set aside in step 1.
 - ^ If all of the T5 keys start the engine, the transponder codes are already recognized by the ECM/PCM, and the immobilizer procedure is complete.
 - ^ If any of the T5 keys do not start the engine, go to step 12.
12. The HDS accepts only one key of a certain transponder code. If the total number of nonprogrammed T5 keys plus the keys you entered is greater than six, use the key code duplicator to recode the additional T5 keys to match an existing transponder code.

NOTE:

The HDS shows you the number of transponder codes stored in the memory of the immobilizer control unit-receiver. If any of the keys share the same transponder code (as might be the case with a T5 key), the number of codes shown may be fewer than the actual number of keys.

STARTING THE ENGINE WITHOUT A PROGRAMMED IGNITION KEY

If your client is stranded because he or she has no programmed ignition keys, or a part of the immobilizer system has failed, you can still start the engine using a properly cut key blank and the five-digit Immobilizer Brake Code.

This procedure is suited for situations where your stranded client either plans to drive the vehicle directly to an Acura dealership for immobilizer system repair, or he or she has the other programmed ignition keys at home and plans to drive there with no side trips.

If your client has lost his or her programmed ignition keys, but has programmed ignition keys at home, advise him or her to schedule an appointment to have the immobilizer control unit-receiver rewritten for the remaining ignition keys; this way the transponder codes of the missing keys are cleared from the memory of the immobilizer control unit-receiver. Refer to CLEARING TRANSPONDER CODES OF LOST PROGRAMMED IGNITION KEYS.

If your client has lost all of the programmed ignition keys, he or she will need to have them replaced and to have the immobilizer control unit-receiver rewritten. Refer to REPLACING ALL PROGRAMMED IGNITION KEYS.

Preparation

To start the engine without a programmed ignition key, you need these items:

- ^ Acura key blank
- ^ Key code for the vehicle
- ^ Suitable key cutter

^ Immobilizer Brake Code (This code is available on the iN Immobilizer Code Inquiry.)

Procedure

1. Use a key blank and a suitable key cutter to cut a temporary ignition key (see S/B 99-010, Cutting keys With the Exacta key Code Cutter).
2. Release the parking brake.
3. Insert the temporary key into the ignition switch.
4. Turn the ignition switch to ON (II), and wait for the brake system indicator bulb check to complete.
5. Enter the first digit of the five-digit Immobilizer Brake Code by setting and releasing the parking brake that number of times within 30 seconds. For example, if the first digit is four, set and release the parking brake four times.
6. Turn the ignition switch to LOCK (0). (This enters the digit into the immobilizer control unit-receiver.)
7. Turn the ignition switch to ON (II), set and release the parking brake the appropriate number of times, and turn the ignition switch to LOCK (0) to enter the second, third, fourth, and fifth digits.

NOTE:

When you turn the ignition switch to ON (II), the immobilizer system indicator does not blink but stays on. The immobilizer system indicator stays on even when the ignition switch is turned to LOCK (0).

8. After you enter the fifth digit and turn the ignition switch to LOCK (0), the immobilizer system indicator blinks three times and then goes off. You can now start the engine with the temporary key.

NOTE:

This procedure is only a temporary fix. When you start the engine with the temporary key, the immobilizer system indicator comes on and stays on while the engine is running. Also, when you turn the ignition switch to LOCK (0), the indicator does not blink five times as it normally would.

9. Start the engine within 10 minutes or you must repeat this procedure entirely.

REPLACING THE IMMOBILIZER CONTROL UNIT- RECEIVER

When you replace the immobilizer control unit-receiver, you must rewrite it with the HDS or the engine will not start. The HDS stores the transponder codes from the programmed ignition keys, transfers the codes to the memory of the new immobilizer control unit-receiver, and instructs the immobilizer control unit-receiver and the ECM/PCM to recognize each other's unique serial code.

Preparation

To replace the immobilizer control unit-receiver, you need these items:

^ Replacement immobilizer control unit-receiver

^ All of your client's programmed ignition keys (master and valet) for the vehicle. (This includes any master or valet keys with a T5 stamped on the shank or molded into the grip. These are duplicate keys made with the Ilco Immobilizer Key Code Duplicator.)

^ HDS with the latest software

NOTE:

Make sure the setup and time are correct before you use the HDS. Select the F12 key in the upper right corner to get the Set-up Details screen. Make sure Market: is set to USA. Select the time display in the lower right corner to get the Date/Time Properties pop-up window. Make sure the date and time are correct. For details, refer to the Honda Diagnostic System (HDS) Setup Instructions listed under Tool Information in ISIS.

^ PCM Code (This four-digit code is available on the iN Immobilizer Code Inquiry.)

Procedure

1. Replace the immobilizer control unit-receiver. Refer to the Body Electrical section of the appropriate service manual.
2. Gather up all of your client's programmed ignition keys (master and valet) for the vehicle. Set aside any T5 keys.

3. Connect the HDS to the 1 6P data link connector (DLC).
4. Insert a programmed ignition key into the ignition switch, and turn the ignition switch to ON (II). Turn on the HDS.
5. At the screen prompts, enter the VIN and the odometer reading, then verify the correct date and time.
6. From the System Selection Menu screen, select IMMOBI.
7. From the Mode Menu screen, select Immobilizer Setup.
8. From the Immobilizer Test Mode Menu screen, select Replace Immobilizer Receiver/Control Unit.
9. From the Replace Immobilizer Receiver/Control Unit screen, select Begin to register Keys in the new Immobilizer Receiver/Control Unit.
10. From the PCM-Code screen, enter the PCM code, then follow the screen prompts. When the process is complete, turn the ignition switch to LOCK (0), then turn off and disconnect the HDS.
11. T5 keys only: Start the engine with each of the 15 keys you set aside in step 2.
 - ^ If all of the 15 keys start the engine, the transponder codes are already recognized by the immobilizer control unit-receiver and the immobilizer procedure is complete.
 - ^ If any of the 15 keys do not start the engine, go to step 12.
- *12. The HDS accepts only one key of a certain transponder code. If the total number of nonprogrammed 15 keys plus the keys you entered is greater than six, use the key code duplicator to recode the additional 15 keys to match an existing transponder code.*

NOTE:

The HDS shows you the number of transponder codes stored in the memory of the immobilizer control unit-receiver. If any of the keys share the same transponder code (as might be the case with a 15 key), the number of codes shown may be fewer than the actual number of keys.

REPLACING THE ECM/PCM

When you replace the ECM/PCM, you must use the HDS to instruct the new ECM/PCM and the immobilizer control unit-receiver to recognize each other's unique serial code, or the engine will not start.

Preparation

To replace the ECM/PCM, you need these items:

- ^ Replacement ECM/PCM
- ^ One programmed ignition key (master, valet, 15) for the vehicle
- *^ HDS with the latest software

NOTE:

Make sure the setup and time are correct before you use the HDS. Select the F12 key in the upper right corner to get the Set-up Details screen. Make sure Market: is set to USA. Select the time display in the lower right corner to get the Date/Time Properties pop-up window. Make sure the date and time are correct. For details, refer to the Honda Diagnostic System (HDS) Setup Instructions listed under Tool Information in ISIS.

- *^ PCM Code (This four-digit code is available on the iN immobilizer Code Inquiry.)*

Procedure

1. Replace the ECM/PCM. Refer to the Fuel and Emissions section of the appropriate service manual, and follow the procedure.
 2. Connect the HDS to the 1 6P data link connector (DLC).
 3. Insert the programmed ignition key into the ignition switch, and turn the ignition switch to ON (II). Turn on the HDS.
- At the screen prompts, enter the VIN and the odometer reading, then verify the correct date and time.
5. From the System Selection Menu screen, select IMMOBI.

6. From the Mode Menu screen, select Immobilizer Setup.
7. From the Immobilizer Test Mode Menu screen, select Replace ECM/PCM.
8. From the PCM-Code screen, enter the PCM Code, then follow the screen prompts. When you are finished, turn the ignition switch to LOCK (0), then turn off and disconnect the HDS.
9. Do the idle learn procedure:
 - ^ Make sure all electrical items (NC, audio unit, defogger, lights, etc.) are off, then start the engine.
 - ^ Let the engine reach its normal operating temperature (the cooling fans cycle twice).
 - ^ Let the engine idle (throttle fully closed and all electrical items off) for 10 minutes.