

Immobilizer System (Type 4)

(Supersedes 02-053, dated September 19, 2008, to revise the information marked by the black bars)

REVISION SUMMARY

- Under VEHICLES AFFECTED, the 2009 Element has been added.
- Under IMMOBILIZER SYSTEM COMPONENTS, IMOES Unit 2008–09 has been added.
- On page 7, REPLACING THE IMOES (2008–09 models) procedures have been added.

BACKGROUND

All of the vehicles affected have a Type 4 immobilizer system that disables the vehicle unless a programmed ignition key is used. The Type 4 system is different than previous systems in that the transponder ID code in the key is a rolling-type code instead of a set code. In this service bulletin, a programmed ignition key refers to a transponder-type key that has been 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 does 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
- Replacing the IMOES unit

It also has a customer situation and required items chart.

For more information on the immobilizer system, refer to the Body Electrical section of the appropriate service manual.

VEHICLES AFFECTED

- 2003–07 Accord:** ALL
- 2007–09 Element:** ALL
- 2007–08 Fit:** ALL
- 2005–09 Odyssey:** ALL
- 2005–08 Pilot:** ALL
- 2006–09 Ridgeline:** ALL
- 2006–09 S2000:** ALL

WARRANTY CLAIM INFORMATION

None. This service bulletin is for information only.

IMMOBILIZER SYSTEM COMPONENTS

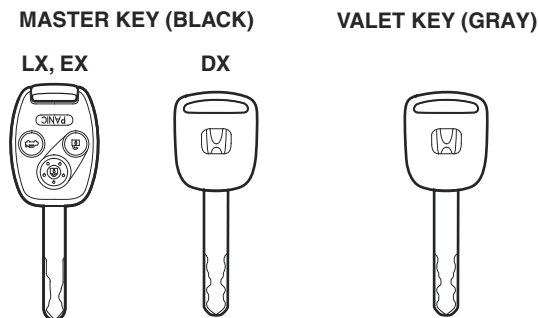
The immobilizer system includes these components:

- Immobilizer system keys (two master keys and one valet key at new vehicle delivery)
- Immobilizer indicator
- Immobilizer control unit-receiver
- ECM/PCM
- IMOES Unit (2008–09 models)

Immobilizer System Keys

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

Accord is shown.



Each master key and valet key has electronic circuits in its grip that output a rolling-type code (set by the immobilizer control unit-receiver) when you insert the key into the ignition switch. The immobilizer system uses this code to determine whether to start the engine.

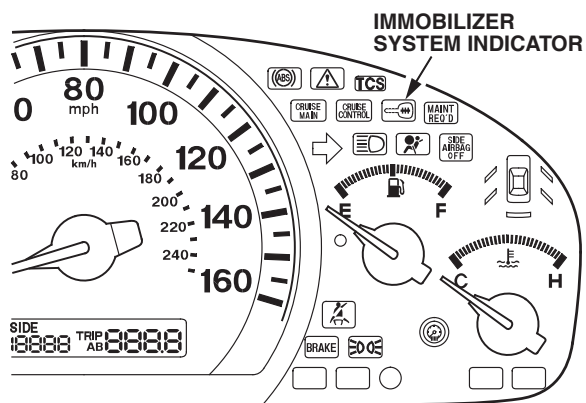
Some master keys have a battery-operated remote transmitter built into the grip that lets you lock and unlock the vehicle. The keys without remote transmitters contain no batteries or other serviceable parts.

Both the master and valet keys used with this system are sidewinder-type keys. You need a special key cutting machine to cut key blanks. Refer to Service Bulletin 01-077, *Cutting Sidewinder-Type Keys With the MATRIX H Key Cutting Machines*, or the Tri-Code H.S. operating manual.

Because of the rolling code characteristics of the Type 4 immobilizer system, you cannot use the Ilco Immobilizer Key Code Duplicator or Ilco programmable (T5) key blanks with this system.

Immobilizer Indicator

The immobilizer indicator is on the instrument panel. When 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.

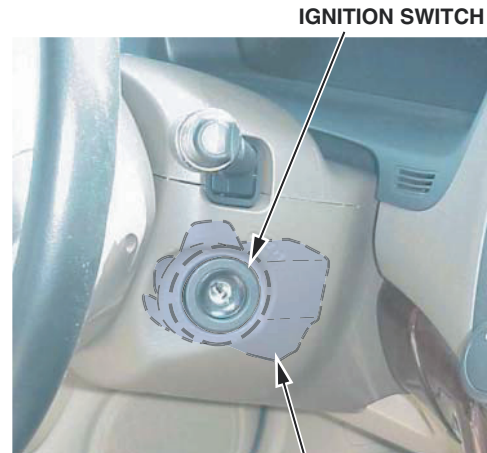


(Accord shown)

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 does not start.

Immobilizer Control Unit-Receiver

The immobilizer control unit-receiver is inside the bezel around the ignition switch. It uses electromagnetic induction to energize the electronic circuits in the key. There is no direct electrical connection. Once the electronic circuits are energized, the key sends its ID code to the immobilizer control unit-receiver, which checks the code against the codes stored in its memory. If the codes match, 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.



IMMOBILIZER CONTROL UNIT-RECEIVER

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 during this communication process, the ECM/PCM energizes the fuel supply system and the ignition system so the engine can start.

ADDING PROGRAMMED IGNITION KEYS

Vehicles come with three programmed ignition keys. The immobilizer control unit-receiver accepts a total of six transponder codes, so three more codes can be stored in its memory. Use the following procedures to add a key or to add multiple keys.

Adding a Key

Use the Honda Diagnostic System (HDS) with Honda key blanks to add a key. The HDS rewrites the immobilizer control unit-receiver, storing the transponder code of the new key in the memory of the immobilizer control unit-receiver.

Preparation

NOTE: Refer to the parts catalog for the P/Ns, and search by VIN for the correct parts.

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

- Immobilizer master key blank
or
Immobilizer and transmitter master key blank
or
Immobilizer valet key blank
- One programmed ignition key (master or valet) for the vehicle
- Key code for the vehicle (if cutting by code)
- MATRIX H or the Tri-Code H.S. Key Cutting Machine
- HDS with the latest software

NOTE: Make sure the market, the date, and the time on the HDS setup screen are correct. 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 **N** Immobilizer Code Inquiry.)

Procedure

1. Use an appropriate key blank and the MATRIX H or the Tri-Code H.S. Key Cutting Machine to cut a new ignition key (see Service Bulletin 01-077, *Cutting Sidewinder-Type Keys With the MATRIX H Key Cutting Machine*, or the Tri-Code H.S. operating manual).
2. Connect the HDS to the DLC (data link connector).
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 **Immobilizer Test 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 **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.

Adding Multiple Keys

Use the HDS with Honda key blanks to add multiple keys. The HDS rewrites the immobilizer control unit-receiver, storing the transponder codes of the new keys in the memory of the immobilizer control unit-receiver.

Preparation

NOTE: Refer to the parts catalog for the P/Ns, and search by VIN for the correct parts.

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

- Immobilizer master key blank
or
Immobilizer and transmitter master key blank
or
Immobilizer valet key blank
- All the programmed ignition keys (master and valet) for the vehicle
- Key code for the vehicle (if cutting by code)
- MATRIX H or the Tri-Code H.S. Key Cutting Machine
- HDS with the latest software

NOTE: Make sure the market, the date, and the time on the HDS setup screen are correct. 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 **N** Immobilizer Code Inquiry.)

Procedure

1. Use appropriate key blanks and the MATRIX H or the Tri-Code H.S. Key Cutting Machine to cut new ignition keys (see Service Bulletin 01-077, *Cutting Sidewinder-Type Keys With the MATRIX H Key Cutting Machine*, or the Tri-Code H.S. operating manual).
2. Gather up *all* of the remaining programmed ignition keys (master and valet) for the vehicle.
3. Connect the HDS to the DLC (data link connector).
4. Insert a programmed ignition key into the ignition switch, and turn the 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 **Immobilizer Test Mode Menu** screen, select **Immobilizer Setup**.

8. From the **Immobilizer Test Mode Menu** screen, select **Add and Delete Keys**.
9. From the **Add and Delete Keys** screen, select **Delete or Add Multiple Keys**.
10. From the **Delete or Add Multiple Keys** screen, select **Begin to Delete or Add Multiple Keys**.
11. 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.

REPLACING ALL PROGRAMMED IGNITION KEYS

If no programmed ignition keys are available, 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

NOTE: Refer to the parts catalog for the P/Ns, and search by VIN for the correct parts.

To replace all keys, you need these items:

- Immobilizer master key blank
or
Immobilizer and transmitter master key blank
or
Immobilizer valet key blank
- Key code for the vehicle
- MATRIX H or the Tri-Code H.S. Key Cutting Machine
- HDS with the latest software

NOTE: Make sure the market, the date, and the time on the HDS setup screen are correct. 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 **N** Immobilizer Code Inquiry.)

Procedure

1. Use appropriate key blanks and the MATRIX H or the Tri-Code H.S. Key Cutting Machine to cut the requested number of ignition keys (see Service Bulletin 01-077, *Cutting Sidewinder-Type Keys With the MATRIX H Key Cutting Machine*, or the Tri-Code H.S. operating manual).
2. Connect the HDS to the DLC (data link connector).
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 **Immobilizer Test 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.

CLEARING TRANSPONDER CODES OF LOST PROGRAMMED IGNITION KEYS

If one or more (but not all) of the programmed ignition keys are lost, 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 memory of the immobilizer control unit-receiver and then stores the transponder codes of the remaining keys. This process clears the codes of the lost keys so they cannot start the engine.

Preparation

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

- All of the remaining programmed ignition keys (master and valet) for the vehicle
- HDS with the latest software

NOTE: Make sure the market, the date, and the time on the HDS setup screen are correct. 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 **N** Immobilizer Code Inquiry.)

Procedure

1. Gather up *all* of the remaining programmed ignition keys (master and valet) for the vehicle.
2. Connect the HDS to the DLC (data link connector).
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 **Immobilizer Test 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.

STARTING THE ENGINE WITHOUT A PROGRAMMED IGNITION KEY

If your customer 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 customer either plans to drive the vehicle directly to a Honda 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 customer has lost the programmed ignition key but has additional 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 lost keys are cleared from the immobilizer control unit-receiver's memory. Refer to **CLEARING TRANSPONDER CODES OF LOST PROGRAMMED IGNITION KEYS**.

If your customer has lost *all* of the programmed ignition keys, he or she will need to have them replaced and have the immobilizer control unit-receiver rewritten. Refer to **Replacing All Keys under ADDING OR REPLACING ALL PROGRAMMED IGNITION KEYS**.

Preparation

NOTE: Refer to the parts catalog for the P/Ns, and search by VIN for the correct parts.

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

- Honda key blank
- Vehicle's key code for cutting a new ignition key
- MATRIX H or the Tri-Code key code cutter
- Immobilizer Brake Code (This five-digit code is available on the *IN* Immobilizer Code Inquiry.)

Procedure

1. Use appropriate key blanks and the MATRIX H or the Tri-Code H.S. Key Cutting Machine to cut new ignition keys (see Service Bulletin 01-077, *Cutting Sidewinder-Type Keys With the MATRIX H Key Cutting Machine*, or the Tri-Code H.S. operating manual).
2. Release the parking brake.
3. Insert the newly cut ignition key into the ignition switch.
4. Turn the ignition switch to ON (II). Wait for the brake 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 first digit into the ECM/PCM.
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 indicator stays on. The 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 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 indicator comes on and stays on while the engine is running. And when you turn the ignition switch to LOCK (0), the indicator does not blink as it normally would.
9. Start the engine within **10 minutes** or you must repeat this procedure entirely.

REPLACING THE IMMOBILIZER CONTROL UNIT-RECEIVER

If you replace the immobilizer control unit-receiver, you must rewrite it with the HDS or the engine cannot start.

Preparation

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

- Replacement immobilizer control unit-receiver
- All of the programmed ignition keys (master and valet) for the vehicle
- HDS with the latest software

NOTE: Make sure the market, the date, and the time on the HDS setup screen are correct. 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-keyless control unit-receiver.
 - Follow the procedure in the Body Electrical section of the appropriate service manual, or
 - Online, enter keyword **IMMOBI**, and select **Immobilizer-Keyless Control Unit-Receiver Replacement** from the list.
2. Gather up *all* of the programmed ignition keys (master and valet) for the vehicle.
3. Connect the HDS to the DLC (data link connector).
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 **Immobilizer Test 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.

REPLACING THE ECM/PCM

If 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 cannot start.

Preparation

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

- Replacement ECM/PCM
- *One* programmed ignition key for the vehicle
- HDS with the latest software

NOTE: Make sure the market, the date, and the time on the HDS setup screen are correct. 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 DLC (data link connector).
3. Insert a programmed ignition key into the ignition switch, and turn the ignition 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 **Immobilizer Test 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 the process is complete, 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 (A/C, 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**.

REPLACING THE IMOES UNIT (2008–09 models)

To replace the IMOES unit, you must use the HDS to instruct the new IMOES unit and the immobilizer control unit-receiver to recognize each other's unique serial code or the engine cannot start.

IMOES Unit Location:

- Element - under the middle of the dash
- Odyssey - under the left side of the dash

Preparation

To replace the IMOES unit, you need these items:

- Replacement IMOES unit
- One programmed ignition key for the vehicle
- HDS with the latest software

NOTE: Make sure the market, the date, and the time on the HDS setup screen are correct. 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 IMOES unit. Refer to the Body Electrical section of the appropriate service manual.
2. Connect the HDS to the DLC (data link connector).
3. Insert a programmed ignition key into the ignition switch, and turn the ignition 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 Immobilizer Test Mode Menu screen, select **Immobilizer Setup**.
7. From the Immobilizer Test Mode Menu screen, select **Replace IMOES Unit**.
8. 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.
9. Do the idle learn procedure:
 - Make sure all electrical items (A/C, 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**.