

2007-08 ACCESSORIES AND BODY, CAB

Immobilizer System - TL

COMPONENT LOCATION INDEX

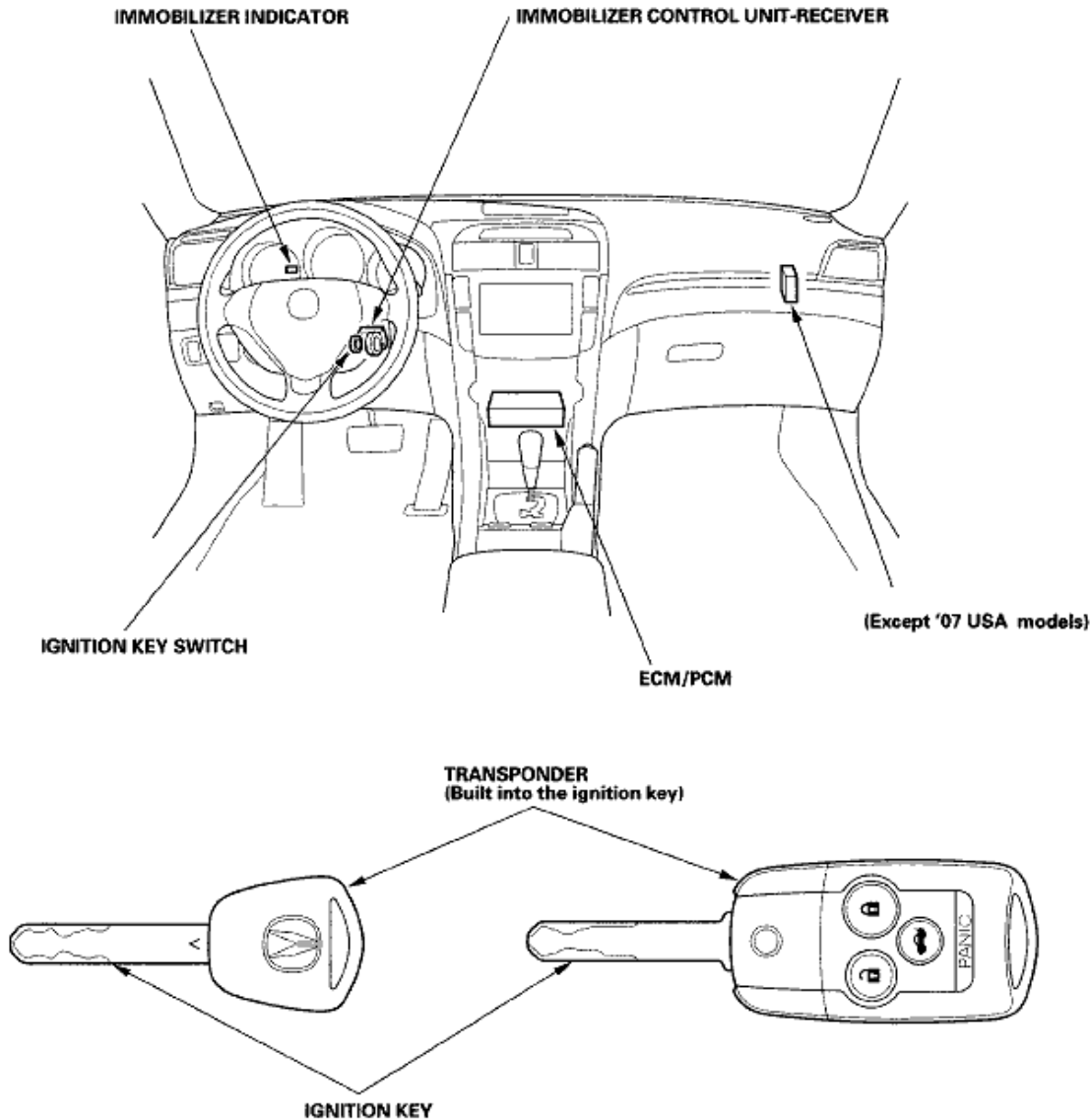


Fig. 1: Identifying Immobilizer System Component Location
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

SYSTEM DESCRIPTION

The vehicle is equipped with a type IV immobilizer system that will disable the vehicle unless a programmed ignition key is used.

This system consists of a transponder located in the ignition key, an immobilizer control unit-receiver, an indicator, imoes unit (Except '07 USA models), and the ECM/PCM.

When the immobilizer key is inserted into the ignition switch and turned to the ON (II) position, the

immobilizer control unit-receiver sends power to the transponder in the ignition key. The transponder then sends a coded signal back to the immobilizer control unit-receiver which sends a coded signal to the imoes unit, which confirms the code and signals the ECM/PCM to supply power to the fuel pump circuit.

A communication agreement with the HDS is required at the ECM/PCM or the imoes unit after repair or replacement. When replacing the immobilizer control unit-receiver, all keys are required to be registered into the new control unit-receiver. Any keys that were not registered in the control unit-receiver will not start the vehicle.

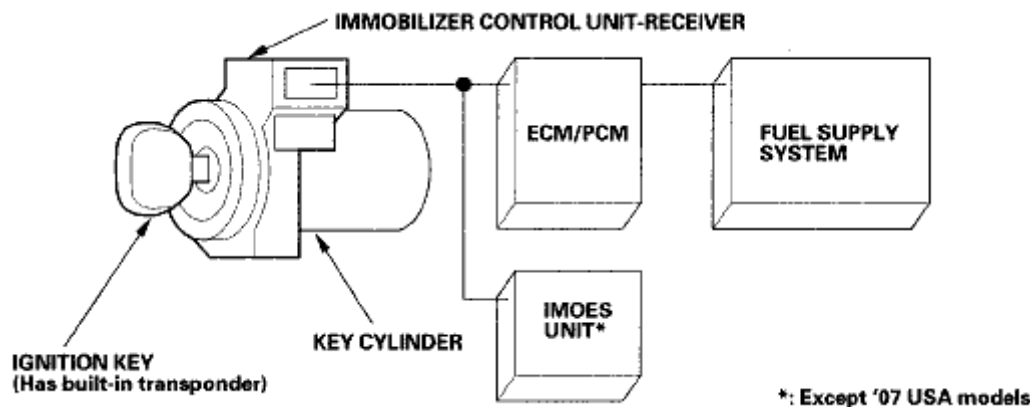


Fig. 2: Immobilizer Control Unit-Receiver - Communication Diagram

Courtesy of AMERICAN HONDA MOTOR CO., INC.

- If the programmed key has been used, the immobilizer indicator will come on for about 2 seconds, then go off. When the ignition switch is turned OFF, the indicator will blink for about 5 seconds to signal that the unit has reset correctly, then the indicator will go off.
- If the wrong key has been used or the code was not received or recognized by the unit, the indicator will come on for about 2 seconds, then it will blink until the ignition switch is turned OFF.

IMMOBILIZER INDICATOR BLINKING PATTERN:

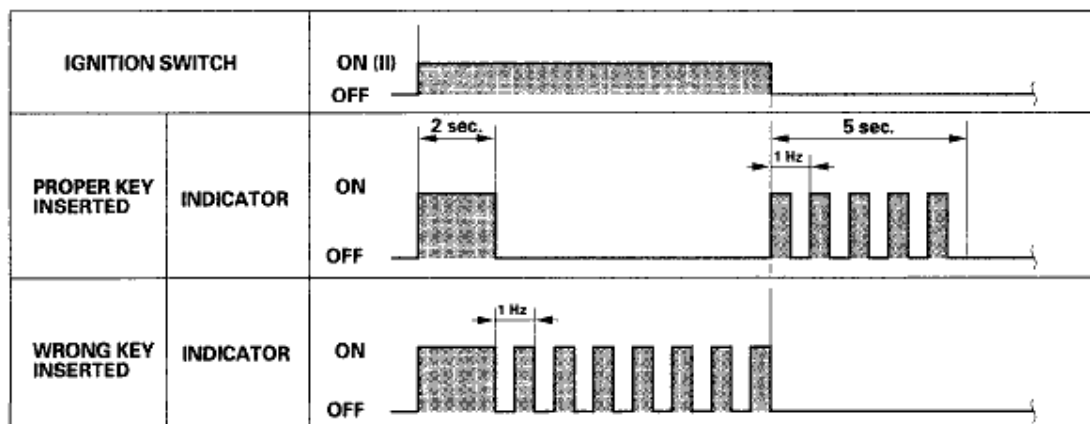


Fig. 3: Immobilizer Indicator Blinking Pattern Chart

Courtesy of AMERICAN HONDA MOTOR CO., INC.

CIRCUIT DIAGRAM

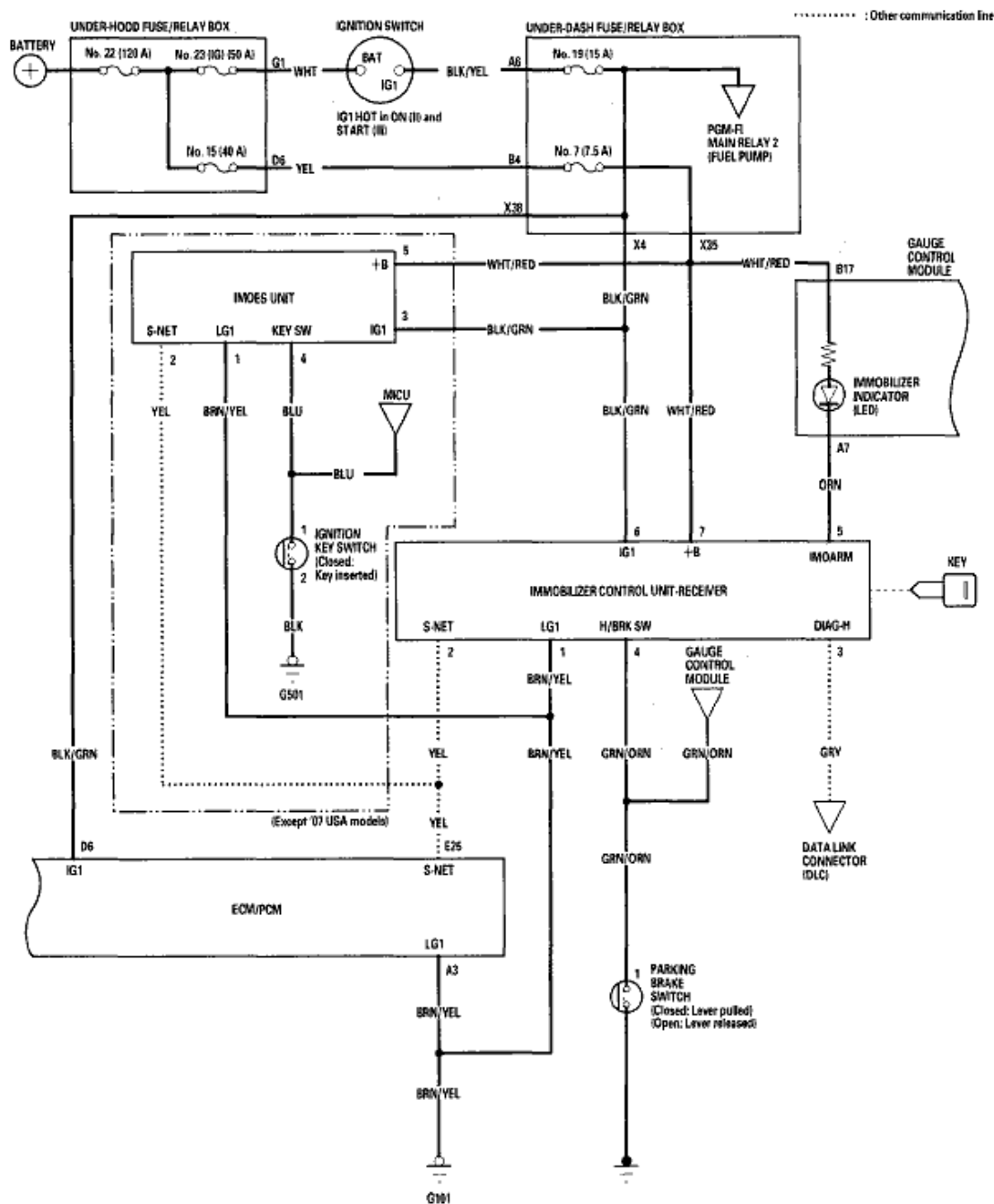


Fig. 4: Immobilizer System - Circuit Diagram

Courtesy of AMERICAN HONDA MOTOR CO., INC.

SYMPTOM TROUBLESHOOTING INFORMATION

GENERAL CHECK BEFORE TROUBLESHOOTING

Before troubleshooting the immobilizer system, check the following general items and solve any if applicable:

- If the battery is low; charge the battery fully, then troubleshoot the immobilizer system.
- If the ignition key is not a genuine Acura part; use the Acura-approved key blank, register the key,

then troubleshoot the immobilizer system.

- Check the key ring, or keys, or if a key case is used; remove the key from it, and troubleshoot the immobilizer system with a key only.
- If an aftermarket electrical part is attached; remove it, then troubleshoot the immobilizer system.

SYMPTOM TROUBLESHOOTING USING THE IMMOBILIZER INDICATOR LIGHTING PATTERN

The pattern of the immobilizer indicator light can help troubleshooting the condition of the immobilizer system. Following are descriptions of the five possible patterns:

Normal operation (Lighting pattern 1)

When the ignition switch is turned ON (II) and the immobilizer code is identified, the immobilizer indicator comes on for 2 seconds, then goes off.

The immobilizer indicator blinks five times when the ignition switch is turned OFF.

+B line open (Lighting pattern 2)

When the ignition switch is turned ON (II) and the immobilizer code is identified, the immobilizer indicator comes on for 2 seconds, then goes off.

The immobilizer indicator goes off when the ignition switch is turned OFF.

Immobilizer code is not identified (Lighting pattern 3)

When the ignition switch is turned ON (II) but the immobilizer code is not identified, the immobilizer indicator comes on for 2 seconds, then blinks. The state of the immobilizer key registration and the S-NET line can be checked by doing a SYSTEM CHECK with the HDS (see **SYSTEM CHECK**).

The immobilizer indicator goes off when the ignition switch is turned OFF.

Immobilizer indicator does not come on (Lighting pattern 4)

If the immobilizer indicator does not come on when the ignition switch is turned ON (II), check the following items:

- Check that there is battery voltage on the +B line.
- Check that the LG1 line is grounded to G101.
- Check for continuity between the immobilizer control unit-receiver and the gauge control module (IMOARM line).
- Gauge control module

Immobilizer indicator does not go off (Lighting pattern 5)

If the immobilizer indicator does not go off after the ignition switch is turned ON (II), check for a short to ground in the immobilizer circuit between the gauge module and the immobilizer control unit-receiver (IMOARM line).

SYMPTOM TROUBLESHOOTING USING MALFUNCTIONING CIRCUIT FUNCTIONS

If a malfunction occurs in the immobilizer circuit, use the following table to cross-reference the malfunctioning function to the line(s) that should be checked:

FUNCTION CHART

Line error Function	+B line open	IG1 line open	LG1 line open	S-NET line open	Immobilizer Indicator line open	Immobilizer Indicator line short
Immobilizer Indicator	No blinking when ignition switch OFF	Does not come on	Does not come on	Blinking	Does not come on	Does not go off
Engine start	Possible	Impossible	Impossible	Impossible	Possible	Possible
Key registration	Impossible	Impossible	Impossible	Impossible	Possible	Possible
Tester communication	Possible	Impossible	Impossible	Possible	Possible	Possible

SYSTEM CHECK AND STATUS LOG

NOTE: The HDS can be used to:

- Check the state of the immobilizer key registration and the S-NET line by doing a **SYSTEM CHECK**.
- Check the number of times the immobilizer control unit-receiver doesn't permit the engine to run by checking the **STATUS LOG**.

1. Connect the HDS to the data link connector, then turn the ignition switch ON (II) and follow the prompts to the **MAIN MENU**.

NOTE: If the HDS does not communicate with the vehicle, go to the **DLC circuit troubleshooting (see DLC CIRCUIT TROUBLESHOOTING (PART 2))**.

2. At the **MAIN MENU**, enter **IMMOBILIZER**, then select the **IMMOBILIZER SET UP**.
3. Do the **SYSTEM CHECK**. If there is a system check number, do the troubleshooting for the item indicated (see **SYSTEM CHECK**).
4. Check the status log using the HDS. Troubleshoot the line with the highest counts first (see **STATUS LOG**). If all the lines are "0" zero, the problem may not be caused by the immobilizer system, check for ignition or fuel problems.

NOTE: Once repaired, clear the status log by removing the No. 7 (7.5 A) fuse in the under-dash fuse/relay box or disconnecting the immobilizer control unit-receiver.

SYMPTOM TROUBLESHOOTING

1. Troubleshoot the immobilizer system by the order of the priority shown:

SYMPTOM TROUBLESHOOTING CHART

Order of Priority	Symptom	Possible cause
1	Immobilizer indicator blinks.	Symptom troubleshooting (see <u>SYMPTOM TROUBLESHOOTING</u>).
2	Engine does not start with the immobilizer key.	Symptom troubleshooting (see <u>SYMPTOM TROUBLESHOOTING</u>).
3	Immobilizer indicator does not come on.	Check the MIL indication. • If the MIL comes on, go to the PGM-FI system MIL circuit troubleshooting (see <u>MIL CIRCUIT TROUBLESHOOTING</u>). • If the MIL does not come on, go to the gauge control module self-diagnostic function (see <u>SELF-DIAGNOSTIC FUNCTION</u>).
4	Immobilizer indicator does not go off.	Symptom troubleshooting (see <u>SYMPTOM TROUBLESHOOTING</u>).

IMMOBILIZER INDICATOR BLINKS

NOTE: Before troubleshooting, check the following general items and solve any if applicable:

- If the battery is low; charge the battery fully, then troubleshoot the immobilizer system.
- If the ignition key is not a genuine Acura part; use the Acura-approved key blank, register the key, then troubleshoot the immobilizer system.
- Check the key ring, keys, or a key case is being used; remove the key from it, and troubleshoot the immobilizer system with only a key.
- If an aftermarket electrical part is attached; remove it, then troubleshoot the immobilizer system.

1. Turn the ignition switch OFF.
2. Connect the HDS, then turn the ignition switch ON (II), and follow the prompts to the MAIN MENU.
3. At the MAIN MENU enter the IMMOBILIZER, then select the IMMOBILIZER SETUP.
4. Check the SYSTEM CHECK and STATUS LOG information.

Is the SYSTEM CHECK or STATUS LOG information indicated?

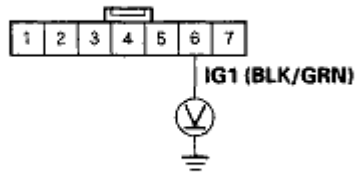
YES -Troubleshoot the immobilizer system according to the result of the SYSTEM CHECK/STATUS LOG (see **SYSTEM CHECK**).

NO -Go to step 5.

5. Turn the ignition switch OFF.
6. Enter the vehicle, and remove the ignition key from the ignition switch, then close the all doors.
7. Turn the ignition switch ON (II).

8. Measure the voltage between the immobilizer control unit-receiver 7P connector No. 6 terminal and body ground.

IMMOBILIZER CONTROL UNIT-RECEIVER 7P CONNECTOR



Wire side of female terminals

Fig. 5: Measuring Voltage Between Immobilizer Control Unit-Receiver 7P Connector No. 6 Terminal And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

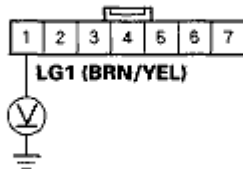
Is there battery voltage?

YES -Go to step 9.

NO -Check fuse No. 19 (15 A) in the under-dash fuse/relay box or for an open in the BLK/GRN wire between the under-dash fuse-relay box and the immobilizer control unit-receiver.

9. Measure the voltage between the immobilizer control unit-receiver 7P connector No. 1 terminal and body ground.

IMMOBILIZER CONTROL UNIT-RECEIVER 7P CONNECTOR



Wire side of female terminals

Fig. 6: Measuring Voltage Between Immobilizer Control Unit-Receiver 7P Connector No. 1 Terminal And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 0.5 V or more?

YES -Repair poor connection and poor ground (G101) or open between the immobilizer control unit-receiver 7P connector No. 1 terminal and G101.

NO -Replace the immobilizer control unit-receiver.

NOTE: Before troubleshooting, check the following general items and solve any if applicable:

- If the battery is low; charge the battery fully, then troubleshoot the immobilizer system.
- If the ignition key is not a genuine Acura part; use the Acura-approved key blank, register the key, then troubleshoot the immobilizer system.
- Check the key ring, keys, or a key case is being used; remove the key from it, and troubleshoot the immobilizer system with only a key.
- If an aftermarket electrical part is attached; remove it, then troubleshoot the immobilizer system.

1. Try to start the engine.

Does the engine start?

YES -Intermittent failure, the vehicle is OK at this time. Check status log.

NO -Go to step 2.

2. Turn the ignition switch OFF.
3. Turn the ignition switch ON (II), and check the immobilizer indicator light operation.

Does the indicator come on for 2 seconds, then go off?

YES -Go to step 4.

NO -Go to the **IMMOBILIZER INDICATOR BLINKS TROUBLESHOOTING** .

4. Turn the ignition switch to START (III).

Does the starter motor run?

YES -Go to step 5.

NO -Go to Starting System and check the starter motor.

5. Try to start the engine with the immobilizer key.

Does the engine start?

YES -Go to step 6.

NO -Go to the PGM-FI System Symptom Troubleshooting.

6. Wait for a few minutes with the engine running.

Does the engine stop?

YES -Go to the PGM-FI System Symptom Troubleshooting.

NO -The system is OK at this time.

IMMOBILIZER INDICATOR DOES NOT GO OFF

1. Turn the ignition switch OFF.
2. Connect the HDS to the data link connector.
3. Turn the ignition switch ON (II), and follow the prompts to the MAIN MENU.
4. At the MAIN MENU enter the IMMOBILIZER, then select the IMMOBILIZER INFORMATION.
5. Do the SYSTEM CHECK with the HDS.

Is N-1 OK indicated?

YES -Replace the gauge control module.

NO -Substitute a known-good immobilizer control unit-receiver, then register it and recheck. If the symptom goes away, replace the original immobilizer control unit-receiver.

IMOES UNIT INPUT TEST/REPLACEMENT

'07 CANADA MODELS

1. Remove the glove box (see **GLOVE BOX HOUSING REMOVAL/INSTALLATION**).
2. Disconnect the 5P connector (A) from the imoes unit (B).

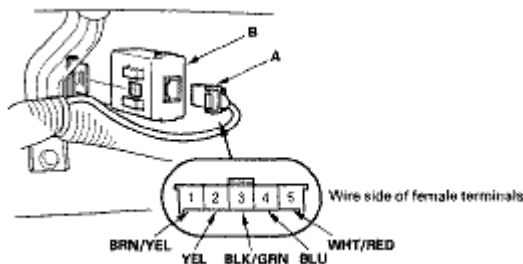


Fig. 7: Identifying 5P Connector From Imoes Unit
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Inspect the connector and socket terminals to be sure they are all making good contact.
 - If the terminals are bent, loose or corroded, repair them as necessary and recheck the system.
 - If the terminals look OK, go to step 4.
4. With the connectors still disconnected, make these input tests at the connector.
 - If any test indicates a problem, find and correct the cause, then recheck the system.
 - If all the input tests prove OK, replace the imoes unit.

TESTING CONDITION CHART

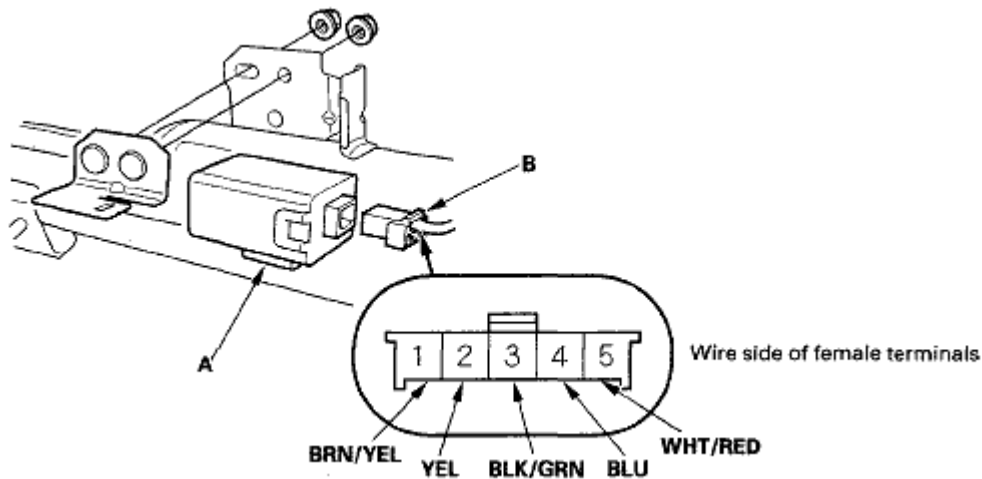
Cavity	Wire	Test condition	Test: Desired result	Possible cause if desired result is not
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	(Signal)			obtained
1	BRN/YEL (LG1)	Under all conditions	Check for continuity to ground: There should be continuity.	- Poor ground (G101) - An open in the wire
5	WHT/RED (+B)	Under all conditions	Measure the voltage to ground: There should be battery voltage.	- Blown No. 15 (40 A) fuse in the under-hood fuse/relay box - Blown No. 7 (7.5 A) fuse in the under-dash fuse/relay box - A short to ground in the wire - An open in the wire
3	BLK/GRN (IG1)	Ignition switch ON (II)	Measure the voltage to ground: There should be battery voltage.	- Blown No. 19 (15 A) fuse in the under-dash fuse/relay box - A short to ground in the wire - An open in the wire
4	BLU (KEY SW)	Ignition key is in the ignition switch	Measure the voltage to ground: There should be less than 1 V.	- Faulty ignition key switch - An open in the wire - Poor ground (G501)
		Ignition key is removed from the ignition switch	Measure the voltage to ground: There should be battery voltage.	- Faulty ignition key switch - A short to ground in the wire
2	YEL (S-NET (IM OCD))	Jump the SCS line with the HDS, disconnect ECM/PCM connector E (31P), and the immobilizer control unit-receiver unit 7P connector.	Check for continuity between the No. 2 terminal and ECM/PCM connector E (31P) No. 25 terminal: There should be continuity.	An open in the wire
			Check for continuity to	

			ground: There should be no continuity.	A short to ground in the wire
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'08 MODEL

1. Remove the glove box (see **GLOVE BOX HOUSING REMOVAL/INSTALLATION**).
2. Remove the two nuts and the imoes unit (A).

**Fig. 8: Identifying Imoes Unit Nuts**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Disconnect the 5P connector (B) from the imoes unit.
4. Inspect the connector and socket terminals to be sure they are all making good contact.
 - If the terminals are bent, loose or corroded, repair them as necessary and recheck the system.
 - If the terminals look OK, go to step 5.
5. With the connectors still disconnected, make these input tests at the connector.
 - If any test indicates a problem, find and correct the cause, then recheck the system.
 - If all the input tests prove OK, replace the imoes unit.

TESTING CONDITION CHART

Cavity	Wire (Signal)	Test condition	Test: Desired result	Possible cause if desired result is not obtained
1	BRN/YEL (LG1)	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G101) • An open in the wire
				• Blown No. 15 (40 A) fuse in the under-hood fuse/relay box

5	WHT/RED (+B)	Under all conditions	Measure the voltage to ground: There should be battery voltage.	- Blown No. 7 (7.5 A) fuse in the under-dash fuse/relay box - A short to ground in the wire - An open in the wire
3	BLK/GRN (IG1)	Ignition switch ON (II)	Measure the voltage to ground: There should be battery voltage.	- Blown No. 19 (15 A) fuse in the under-dash fuse/relay box - A short to ground in the wire - An open in the wire
4	BLU (KEY SW)	Ignition key is in the ignition switch	Measure the voltage to ground: There should be less than 1 V.	- Faulty ignition key switch - An open in the wire - Poor ground (G501)
		Ignition key is removed from the ignition switch	Measure the voltage to ground: There should be battery voltage.	- Faulty ignition key switch - A short to ground in the wire
2	YEL (S-NET (IM OCD))	Jump the SCS line with the HDS, disconnect ECM/PCM connector E (31P), and the immobilizer control unit-receiver unit 7P connector.	Check for continuity between the No. 2 terminal and ECM/PCM connector E (31P) No. 25 terminal: There should be continuity.	An open in the wire
			Check for continuity to ground: There should be no continuity.	A short to ground in the wire

SYSTEM CHECK

1. Connect the HDS to the data link connector.
2. Turn the ignition switch ON (II).
3. Monitor the System Check in the Immobilizer Info with the HDS.

4. If the HDS displays the "Immobilizer system is normal", the immobilizer system is OK. If the HDS displays any other messages, check as follows:

PROBLEM SYMPTOM CHART

Status Log No.	System Check	Possible Failures
A-1	Immobilizer system is not normal	• This key is not registered in the immobilizer control unit-receiver. Try to register keys by using "KEYS". • The communication was not good between the antenna and the immobilizer key by influence of metal such as key chains. • The communication was not good between the antenna and the immobilizer key by battery voltage low.
A-2	Immobilizer system is not normal	• Intermittent interruption between transponder and immobilizer control unit-receiver. • The immobilizer key type is different. It is not for this vehicle but for another one or for other company's one. • Key failure (transponder failure) • The communication was not good between the antenna and the immobilizer key by influence of metal such as key chains. • The communication was not good between the antenna and the immobilizer key by battery voltage low.
A-3	Immobilizer system is not normal	• The ignition switch was turned on with a non-immobilizer key. • The immobilizer key type is different. It is not for this vehicle but for another one or for other company's one. • Key failure (transponder failure) • The communication was not good between the antenna and the immobilizer key by influence of metal such as key chains. • The communication was not good between the antenna and the immobilizer key by battery voltage low. • Immobilizer control unit-receiver failure
B-1	Immobilizer system is not normal	• The ECM/PCM was not registered. Try to register the ECM/PCM by using "REPLACE ECM/PCM". • The communication was not good between the ECM/PCM and the immobilizer control unit-receiver by battery voltage low. • The communication was not good between the immobilizer control unit-receiver and the ECM/PCM by influence of some noise.
B-2	Immobilizer system is not normal	• The ECM/PCM was not registered. Try to register the ECM/PCM by using "REPLACE ECM/PCM". • The communication was not good between the ECM/PCM and the immobilizer control unit-receiver by battery voltage low. • The communication was not good between the immobilizer control unit-receiver and the ECM/PCM by influence of some

		noise.
C-1	Immobilizer system is not normal	The imoes unit was not registered. Try to register the imoes unit by using "REPLACE MICU/ IMOES".
C-2	Immobilizer system is not normal	• The imoes unit was not registered. Try to register the imoes unit by using "REPLACE MICU/IMOES". • The communication was not good between the immobilizer control unit-receiver and the imoes unit by influence of some noise.
D-1	Immobilizer system is not normal	• Harness short from the ECM/PCM to the immobilizer control unit-receiver. (S-net line short) • The communication was not good between the ECM/PCM and the immobilizer control unit-receiver by battery voltage low. • The communication was not good between the immobilizer control unit-receiver and the ECM/PCM by influence of some noise. • Immobilizer control unit-receiver failure • ECM/PCM failure
D-2	Immobilizer system is not normal	• Blown fuse • Harness open from the immobilizer control unit-receiver and the imoes unit. • The communication was not good between the immobilizer control unit-receiver and the imoes unit by influence of some noise.
D-3	Immobilizer system is not normal	• Blown fuse • Harness open from the ECM/PCM to the immobilizer control unit-receiver. • The communication was not good between the ECM/PCM and the immobilizer control unit-receiver by battery voltage low. • The communication was not good between the immobilizer control unit-receiver and the ECM/PCM by influence of some noise. • Immobilizer control unit-receiver failure • ECM/PCM failure

STATUS LOG

If you suspect there is a immobilizer system problem, check the status log.

1. Connect the HDS to the data link connector.
2. Turn the ignition switch ON (II).
3. On the HDS screen, select Honda systems, select immobilizer set-up, select immobilizer information, then select status log.
4. Check the status log count. Troubleshoot the status with the highest count first. If no counts are listed, the immobilizer system is OK. Continue with normal symptom troubleshooting.

PROBLEM SYMPTOM CHART

Status Log No.	Detected Item	Probable Cause
A-1	KEY CODE MISMATCH (Code format normal, but code data is mismatch)	1. The key was not registered 2. Interference from metal such as key chains 3. Low battery voltage
A-2	KEY CODE MISMATCH (Code format failure)	1. Ignition switch was turned on with another type of immobilizer key or aftermarket key 2. Interference from metal such as key chains 3. Low battery voltage
A-3	KEY CODE MISMATCH (No key code or non-immobilizer key)	1. Ignition switch was turned on with another type of immobilizer key or aftermarket key 2. Interference from metal such as key chains 3. Low battery voltage 4. Key failure 5. Immobilizer control unit-receiver failure
B-1	ECM/PCM CODE MISMATCH (Code format normal, but code data is mismatch)	1. ECM/PCM was not registered correctly 2. Low battery voltage 3. Poor or loose terminal connections at the immobilizer control unit-receiver 4. Communication line electrical noise
B-2	ECM/PCM MISMATCH (Code format failure)	1. ECM/PCM was not registered correctly 2. Low battery voltage 3. Poor or loose terminal connections at the immobilizer control unit-receiver 4. Communication line electrical noise
D-1	SECURITY-NET LINE PROBLEM (Short to ground)	1. Low battery voltage 2. Poor or loose terminal connections at the immobilizer control unit-receiver and the ECM/PCM 3. Communication line electrical noise
D-3	SECURITY-NET LINE PROBLEM (Open line or ECM/PCM failure)	1. Open or short in the harness from the ECM/PCM to the immobilizer control unit-receiver 2. Low battery voltage 3. Poor or loose terminal connections at the immobilizer control unit-receiver and the ECM/PCM 4. Communication line electrical noise

IMMOBILIZER KEY REGISTRATION

NOTE:

- **The HDS is required for registration of the immobilizer keys.**
- **Check for aftermarket electrical equipment that can cause problems with transponder operation.**
- **The immobilizer control unit-receiver can store up to six immobilizer Keys.**

ADD ONE NEW KEY

1. Have a registered key, a new immobilizer key, and the first pass word from the iN system.
2. Connect the HDS to the data link connector.
3. Turn the ignition switch ON (II).
4. Select "IMMOBILIZER" from the "SYSTEM SELECT" menu.
5. Select "Add and Delete Keys", then "Add 1 key".
6. Do the registration according to the instructions on the of HDS screen.
7. Check if the engine can be started by the newly registered key.

DELETE OR ADD MULTIPLE KEYS**NOTE:**

If any of the registered keys were lost, do the following procedure to delete the lost registered key.

1. Have all registered keys, all new keys, and the first password.
2. Connect the HDS to the data link connector.
3. Turn the ignition switch ON (II).
4. Select "IMMOBILIZER" from the "SYSTEM SELECT" menu.
5. Select "Add and Delete Keys", or "Delete or Add Multiple Keys".
6. Do the registration according to the instruction of HDS screen.
7. Check if the engine can be started by all the registered keys.

ALL KEYS ARE LOST

1. Prepare all new keys and have the immobilizer PCM code.
2. Connect the HDS to the data link connector.
3. Turn the ignition switch ON (II).
4. Select "IMMOBILIZER" from the "SYSTEM SELECT" menu.
5. Select "Add and Delete Keys", then "ALL KEYS LOST".
6. Do the registration according to the instruction of HDS screen.
7. Check if the engine can be started by all the registered keys.

IMMOBILIZER CONTROL UNIT-RECEIVER REPLACEMENT**NOTE:**

Requires ECM/PCM code and all of the client's keys.

1. Remove the driver's dashboard lower cover (see **DRIVER'S DASHBOARD LOWER COVER**

REMOVAL/INSTALLATION).

2. Remove the steering column covers (see **STEERING COLUMN REMOVAL AND INSTALLATION**).
3. Disconnect the 7P connector (A) from the immobilizer control unit-receiver (B).

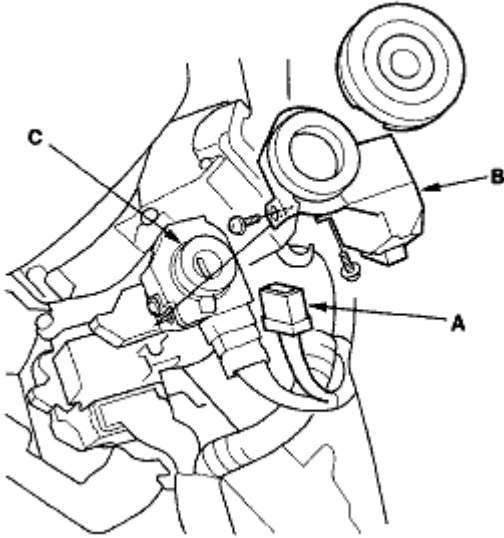


Fig. 9: Identifying 7P Connector From Immobilizer Control Unit-Receiver
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the two screws and the immobilizer control unit-receiver from the ignition key cylinder (C).
5. Install the immobilizer control unit-receiver in the reverse order of removal.
6. After replacement, register the immobilizer control unit-receiver (see **IMMOBILIZER KEY REGISTRATION**), and make sure the immobilizer system works properly.