2007-08 ACCESSORIES AND EQUIPMENT Keyless/Power Door Lock System - Element

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Keyless/Power Door Lock System - Element

## **COMPONENT LOCATION INDEX**

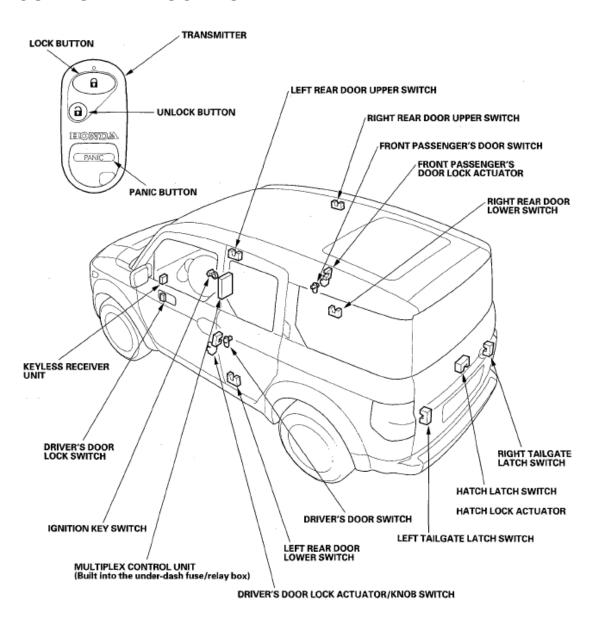
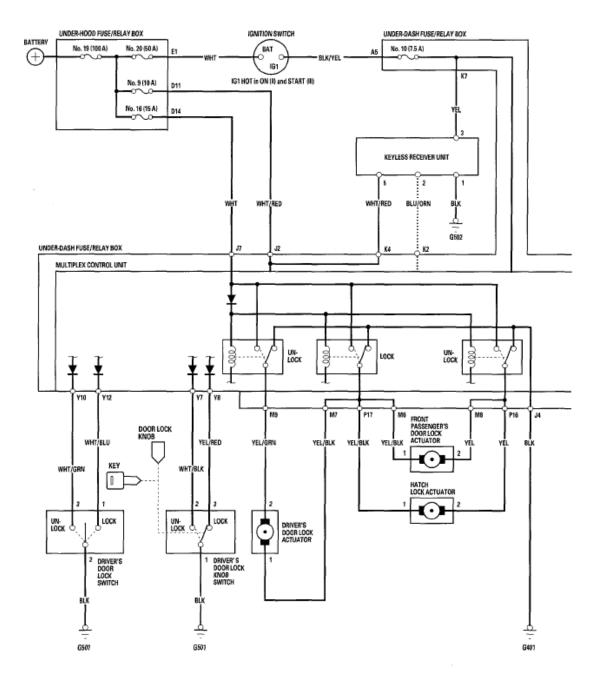


Fig. 1: Identifying Keyless/Power Door Lock System Components Location Courtesy of AMERICAN HONDA MOTOR CO., INC.

# **CIRCUIT DIAGRAM**



<u>Fig. 2: Keyless/Power Door Lock System Circuit Diagram (1 Of 2)</u> Courtesy of AMERICAN HONDA MOTOR CO., INC.

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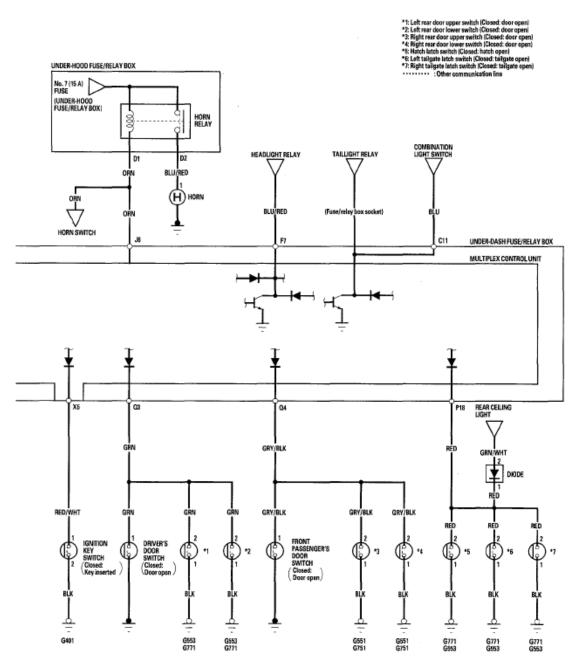
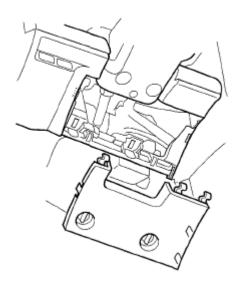


Fig. 3: Keyless/Power Door Lock System Circuit Diagram (2 Of 2) Courtesy of AMERICAN HONDA MOTOR CO., INC.

# **KEYLESS RECEIVER UNIT INPUT TEST**

1. Remove the driver's dashboard lower cover (see <u>DRIVER'S DASHBOARD LOWER COVER REMOVAL/INSTALLATION</u>).

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<u>Fig. 4: Identifying Driver's Dashboard Lower Cover</u> Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Disconnect the 5P connector (A) from the Keyless receiver unit (B).

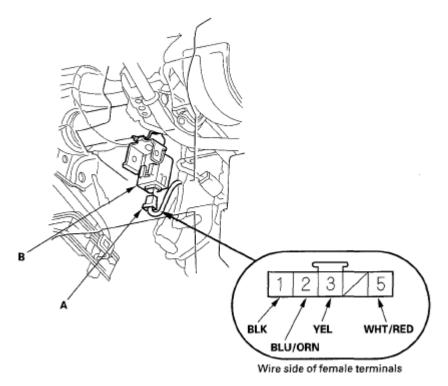


Fig. 5: Identifying Keyless Receiver Unit 5P Connector Terminals Courtesy of AMERICAN HONDA MOTOR CO., INC.

- 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.

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- If the terminals look OK, go to step 4.
- 4. Reconnect the connector, and 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, go to step 5.

## PROBLEM SYMPTOM CHART

Cavity	Wire	Test condition	Test: Desired result	Possible cause if desired result is not obtained
1	BLK	Under all conditions	Measure voltage to ground: There should be less than 1 V.	<ul><li>Poor ground (G502)</li><li>An open in the wire</li></ul>
3		Ignition switch ON (II)	Measure voltage to ground: There should be battery voltage.	<ul> <li>Blown No. 10 (7.5 A) fuse in the under-dash fuse/relay box</li> <li>An open in the wire</li> </ul>
3	YEL	Ignition switch OFF	1~	Short to power on No. 10 (7.5 A) fuse circuit
5	WHT/RED	Under all conditions	Measure voltage to ground: There should be battery voltage.	<ul> <li>Blown No. 9 (10 A) fuse in the under-hood fuse/relay box</li> <li>Faulty under-dash fuse/relay box</li> <li>An open in the wire</li> </ul>

- 5. Disconnect the connector, and make this input test at the connector.
  - If the test indicates a problem, find and correct the cause, then recheck the system.
  - If the input test proves OK, replace the keyless receiver unit.

## PROBLEM SYMPTOM CHART

Cavity	Wire	Test condition	Test: Desired result	Possible cause if desired result is not obtained
2	BLU/ORN	Ignition switch OFF,	iterminal of the under-dash	An open in the wire
		disconnected	Check for continuity between the No. 2 terminal and body ground: There should be no continuity.	

# **CONTROL UNIT INPUT TEST**

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# NOTE: Before testing, troubleshoot the multiplex control system (see <u>TROUBLESHOOTING</u>).

- 1. Remove the driver's dashboard lower cover (see **DRIVER'S DASHBOARD LOWER COVER REMOVAL/INSTALLATION** ).
- 2. Disconnect the under-dash fuse/relay box connectors C, F, J, K, M, P, Q, X and Y.

#### NOTE: All connectors are shown from wire side of female terminals.

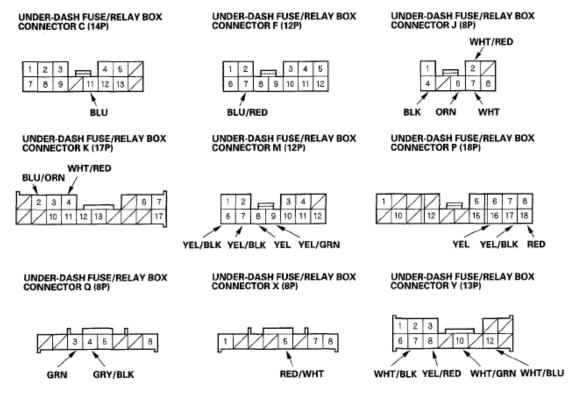


Fig. 6: Identifying Under-Dash Fuse/Relay Box Connectors Courtesy of AMERICAN HONDA MOTOR CO., INC.

- 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. Reconnect all connections to the under-dash fuse/relay box, and make these input tests at the appropriate connectors on the under-dash fuse/relay box.
  - If any test indicates a problem, find and correct the cause, then recheck the system.
  - If all the input tests prove OK, go to step 5.

#### PROBLEM SYMPTOM CHART

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	(	Cavity	Wire	Test condition	Test: Desired result	Possible cause if desired result is not obtained

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C11	BLU	Under all conditions	Attach to ground: Parking, side marker, license plate lights and taillights should come on.	<ul> <li>Blown No. 2 (15 A) fuse in the under-hood fuse/relay box</li> <li>Faulty taillight relay</li> <li>Faulty under-dash fuse/relay box</li> <li>An open in the wire</li> </ul>
F7	BLU/RED	Under all conditions	Attach to ground: Headlights should come on.	<ul> <li>Blown No. 15 or 17 (15 A) fuse in the underhood fuse/relay box</li> <li>Faulty headlight relay</li> <li>Blown headlight bulb</li> <li>An open in the wire</li> </ul>
J2 K4	WHT/RED	Under all conditions	Measure voltage to ground: There should be battery voltage.	<ul> <li>Blown No. 9 (10 A) fuse in the under-hood fuse/relay box</li> <li>An open in the wire</li> </ul>
J4	BLK	Under all conditions	Measure voltage to ground: There should be less than 0.5 V.	<ul><li>Poor ground (G401)</li><li>An open in the wire</li></ul>
		Hatch or tailgate open	Measure voltage to ground: There should be less than 0.5 V.	<ul> <li>Faulty tailgate latch switch</li> <li>Faulty hatch latch switch</li> <li>An open in the wire</li> </ul>
P18	RED	Hatch and tailgate closed	Measure voltage to ground: There should be battery voltage.	<ul> <li>Faulty tailgate latch switch</li> <li>Faulty hatch latch switch</li> <li>Short to ground in the wire</li> </ul>
Q3	GRN	Driver's door or left rear door open	Measure voltage to ground: There should be less than 0.5 V.	<ul> <li>Faulty driver's door switch</li> <li>Faulty left rear door switch</li> <li>An open in the wire</li> </ul>
		Driver's door and left	Measure voltage to ground:	<ul><li>Faulty driver's door switch</li><li>Faulty left rear door</li></ul>

		rear door closed	There should be battery voltage.	<ul><li>switch</li><li>Short to ground in the wire</li></ul>
		Passenger's door or right rear door open	Measure voltage to ground: There should be less than 0.5 V.	<ul> <li>Faulty passenger's door switch</li> <li>Faulty right rear door switch</li> <li>An open in the wire</li> </ul>
Q4	GRY/BLK		Measure voltage to ground: There should be battery voltage.	<ul> <li>Faulty passenger's door switch</li> <li>Faulty right rear door switch</li> <li>Short to ground in the wire</li> </ul>
X5	RED/WHT	Ignition key inserted into the ignition switch	Measure voltage to ground: There should be less than 0.5 V.	<ul> <li>Poor ground (G401)</li> <li>Faulty ignition key switch</li> <li>An open in the wire</li> </ul>
AS	KED/WIII	Ignition key removed from the ignition switch	Measure voltage to ground: There should be battery voltage.	<ul> <li>Faulty ignition key switch</li> <li>Short to ground in the wire</li> </ul>
V7	WIIT/DI V	Driver's door lock knob switch unlocked	Measure voltage to ground: There should be less than 0.5 V.	<ul> <li>Poor ground (G501)</li> <li>Faulty driver's door lock knob switch</li> <li>An open in the wire</li> </ul>
Y7	WHT/BLK	Driver's door lock knob switch locked	Measure voltage to ground: There should be battery voltage.	<ul> <li>Faulty driver's door lock knob switch</li> <li>Short to ground in the wire</li> </ul>
Y8	YEL/RED	Driver's door lock knob switch locked	Measure voltage to ground: There should be less than 0.5 V.	<ul> <li>Poor ground (G501)</li> <li>Faulty driver's door lock knob switch</li> <li>An open in the wire</li> </ul>
10	I DU/INDI	Driver's door lock knob switch unlocked	Measure voltage to ground: There should be battery voltage.	<ul> <li>Faulty driver's door lock knob switch</li> <li>Short to ground in the wire</li> </ul>
		Driver's door lock	Measure voltage to	• Poor ground (G501)

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		switch UNLOCK position	ground: There should be less than 0.5 V.	<ul><li>Faulty driver's door lock switch</li><li>An open in the wire</li></ul>
Y10	WHT/GRN	Driver's door lock switch in neutral or LOCK position	Measure voltage to ground: There should be battery voltage.	<ul> <li>Faulty driver's door lock switch</li> <li>Short to ground in the wire</li> </ul>
Y12	WHT/BLU	Driver's door lock switch LOCK position	Measure voltage to ground: There should be less than 0.5 V.	<ul> <li>Poor ground (G501)</li> <li>Faulty driver's door lock switch</li> <li>An open in the wire</li> </ul>
112	WIII/BLO	Driver's door lock switch in neutral or UNLOCK position	Measure voltage to ground: There should be battery voltage.	<ul> <li>Faulty driver's door lock switch</li> <li>Short to ground in the wire</li> </ul>

- 5. Disconnect the connectors, and make these input tests at the connectors.
  - If any test indicates a problem, find and correct the cause, then recheck the system.
  - If all the input tests prove OK, the multiplex control unit must be faulty, replace the under-dash fuse/relay box assembly.

#### PROBLEM SYMPTOM CHART

Cavity	Wire	Test condition	Test: Desired result	Possible cause if desired result is not obtained
J7	WHT	Under all conditions	Measure voltage to ground: There should be battery voltage.	• Blown No. 16 (15 A) fuse in the under-hood fuse/relay box
				• An open in the wire
M7	YEL/BLK		Check actuator operation:	• Blown No. 16 (15 A) fuse in the under-hood fuse/relay box
M9	YEL/GRN	and M9 [M7] terminal to J4 terminal.	The driver's door lock actuator should lock [unlock].	<ul> <li>Faulty driver's door lock actuator</li> <li>An open in the wire</li> </ul>
				• Blown No. 16 (15 A) fuse in the

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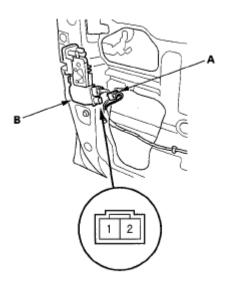
M6	YEL/BLK	Connect J7 terminal		under-hood fuse/relay box
M8	YEL		Check actuator operation: The front passenger's door lock actuator should lock [unlock].	<ul> <li>Faulty front passenger's door lock actuator</li> <li>An open in the</li> </ul>
				wire
P16	YEL	Connect J7 terminal to P17 [P16]	Check actuator operation:	Blown No. 16 (15     A) fuse in the under-hood fuse/relay box
P17	VEL/RLK	terminal, and P16 [P17] terminal to J4 terminal.	The hatch lock actuator should lock [unlock].	• Faulty hatch lock actuator
11/	7 YEL/BLK terminal.			An open in the wire
	on.v		Attach to ground:	Blown No. 7 (15     A) fuse in the under-hood fuse/relay box
J6	ORN	Under all conditions	The horn should sound.	Faulty horn relay
				<ul> <li>Faulty horn</li> </ul>
				An open in the wire
K2		Disconnect the keyless receiver unit 5P connector	Check for continuity between the K2 terminal and the keyless receiver unit 5P connector No. 2 terminal with the 5P connector disconnected: There should be continuity.	An open in the wire
			Check for continuity to ground: There should be no continuity.	

# **DOOR LOCK ACTUATOR TEST**

## **DRIVER'S DOOR**

- 1. Remove the driver's door panel (see **FRONT DOOR PANEL REMOVAL/INSTALLATION** ).
- 2. Disconnect the 2P connector (A) from the actuator (B).

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<u>Fig. 7: Identifying Door Lock Actuator 2P Connector Terminals (Driver's Door)</u> Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Check actuator operation by connecting power and ground according to **Fig. 8**. To prevent damage to the actuator, apply battery voltage only momentarily.

Terminal Position	1	2
LOCK	$\oplus$	$\Theta$
UNLOCK	Θ	<b>(</b>

Fig. 8: Battery Power And Ground Connection Chart Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. If the actuator does not work as specified, replace it.

## PASSENGER'S DOOR

- $1. \ \ Remove the passenger's door panel (see {\it {\it FRONT DOOR PANEL REMOVAL/INSTALLATION}}\ ).$
- 2. Disconnect the 2P connector (A) from the actuator (B).

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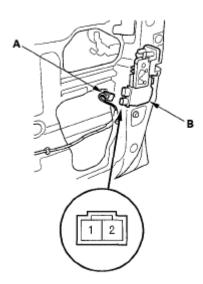


Fig. 9: Identifying Door Lock Actuator 2P Connector Terminals (Passenger's Door) Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Check actuator operation by connecting power and ground according to <u>Fig. 10</u>. To prevent damage to the actuator, apply battery voltage only momentarily.

Terminal Position	1	2
LOCK	$\oplus$	$\Theta$
UNLOCK	Θ	Θ

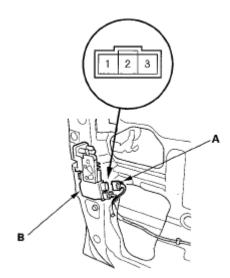
Fig. 10: Battery Power And Ground Connection Chart Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. If the actuator does not work as specified, replace it.

# DOOR LOCK KNOB SWITCH TEST

- 1. Remove the driver's door panel (see  $\underline{FRONT\ DOOR\ PANEL\ REMOVAL/INSTALLATION}$ ).
- 2. Disconnect the 3P connector (A) from the driver's door lock actuator (B).

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<u>Fig. 11: Identifying Driver's Door Lock Actuator 3P Connector Terminals</u> Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Check for continuity between the terminals in each switch position according to <u>Fig. 12</u>.

Terminal Position	1	2	3
LOCK	$\neg$		9
UNLOCK	0	0	

<u>Fig. 12: Driver's Door Lock Actuator Terminals Continuity Chart</u> Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. If the continuity is not as specified, replace the driver's door lock actuator.

# DOOR LOCK SWITCH TEST

- 1. Remove the door panel (see **FRONT DOOR PANEL REMOVAL/INSTALLATION** ).
- 2. Remove the two mounting screws and the door lock switch.

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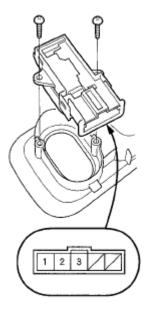


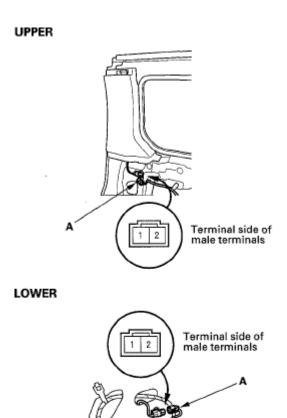
Fig. 13: Identifying Door Lock Switch Mounting Screws And Door Lock Switch Terminals Courtesy of AMERICAN HONDA MOTOR CO., INC.

- 3. Check for continuity between the No. 1 and No. 2 terminals:
  - There should be continuity when the door lock switch is in the LOCKED position.
  - There should be no continuity when the door lock switch is in the neutral or UNLOCKED position.
- 4. Check for continuity between the No. 2 and No. 3 terminals:
  - There should be continuity when the door lock switch is in the UNLOCKED position.
  - There should be no continuity when the door lock switch is in the neutral or LOCKED position.
- 5. If the continuity is not as specified, replace the door lock switch.

# **REAR DOOR SWITCH TEST**

- 1. Remove the rear door panel (see  ${\bf REAR\ DOOR\ PANEL\ REMOVAL/INSTALLATION}$  ).
- 2. Disconnect the 2P connector (A) from the rear door upper and rear door lower switch.

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<u>Fig. 14: Identifying Rear Door Switch 2P Connector Terminals</u> Courtesy of AMERICAN HONDA MOTOR CO., INC.

- 3. Check for continuity between the 2P connector terminals No. 1 and No. 2.
  - There should be continuity with the rear door open.
  - There should be no continuity with the rear door closed.
- 4. If the continuity is not as specified, replace the faulty switch.

# HATCH LOCK ACTUATOR TEST

- 1. Remove the hatch trim panel (see **FRONT DOOR PANEL REMOVAL/INSTALLATION** 9).
- 2. Disconnect the 2P connector (A) from the actuator (B).

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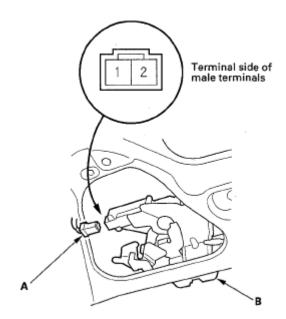


Fig. 15: Identifying Hatch Lock Actuator 2P Connector Terminals Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Check actuator operation by connecting power and ground according to **Fig. 16**. To prevent damage to the actuator, apply battery voltage only momentarily.

Terminal Position	1	2
LOCK	<b>(</b>	$\Theta$
UNLOCK	Θ	$\oplus$

Fig. 16: Battery Power And Ground Connection Chart Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. If the actuator does not operate as specified, replace it.

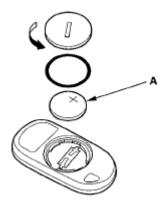
# TRANSMITTER TEST

#### NOTE:

- If the doors unlock or lock with the transmitter, but the LED on the transmitter does not come on, the LED is faulty; replace the transmitter.
- If any door is open, you cannot lock the door with the transmitter.
- If you unlocked the doors with the transmitter, but do not open any of the doors within 30 seconds, the doors relock automatically.
- The doors do not lock or unlock with the transmitter if the ignition key is in the ignition switch.
- 1. Press the lock or unlock button five or six times to reset the transmitter.

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- If the locks work, the transmitter is OK.
- If the locks don't work, go to step 2.
- 2. Open the transmitter, and check for water damage.
  - If you find any water damage, replace the transmitter.
  - If there is no water damage, go to step 3.
- 3. Replace the transmitter battery (A) with a new one, and try to lock and unlock the doors with the transmitter by pressing the lock or unlock button five or six times.
  - If the doors lock and unlock, the transmitter is OK.
  - If the doors don't lock and unlock, go to step 4.



<u>Fig. 17: Identifying Transmitter Battery</u> Courtesy of AMERICAN HONDA MOTOR CO., INC.

- 4. Reprogram the transmitter, then try to lock and unlock the doors with the transmitter.
  - If the doors lock and unlock, the transmitter is OK.
  - If the doors don't lock and unlock, replace the transmitter. If the new transmitter won't lock and unlock the doors, test the keyless receiver unit (see <u>KEYLESS RECEIVER UNIT INPUT TEST</u>).

# TRANSMITTER PROGRAMMING

Storing transmitter codes:

The codes of up to three transmitters can be stored into the keyless receiver unit memory. (If a fourth code is stored, the code that was programmed first will be erased.)

# NOTE: It is important to maintain the time limits between the steps. Make sure the doors and the tailgate are closed.

- 1. Turn the ignition switch ON (II).
- 2. Within 1 to 4 seconds, push the transmitter lock or unlock button.
- 3. Within 1 to 4 seconds, turn the ignition switch OFF.

- 4. Within 1 to 4 seconds, turn the ignition switch ON (II).
- 5. Within 1 to 4 seconds, push the transmitter lock or unlock button.
- 6. Within 1 to 4 seconds, turn the ignition switch OFF.
- 7. Within 4 seconds, turn the ignition switch ON (II).
- 8. Within 1 to 4 seconds, push the transmitter lock or unlock button.
- 9. Within 1 to 4 seconds, turn the ignition switch OFF.
- 10. Within 4 seconds, turn the ignition switch ON (II).
- 11. Within 1 to 4 seconds, push the transmitter lock or unlock button.
- 12. The door lock actuators will activate to confirm that the system has entered the transmitter programming mode. Within 1 to 4 seconds, push the transmitter lock or unlock button again to program that transmitter. The door lock actuator will activate to confirm that the transmitter code is stored.
- 13. Within 10 seconds, press the transmitter lock or unlock buttons on the two additional transmitters. The door lock actuators will activate each time after you press the lock or unlock button to confirm that the transmitter code is stored.
- 14. Turn the ignition switch OFF, and remove the key.
- 15. Confirm proper operation of the transmitters.