SB-10045879-9048

HONDA **Service Bulletin** **12-048**

Applies To: **2003–2011 Civic Hybrid** – ALL
2011–2012 CR-Z – ALL
2000–2006 Insight – ALL
2010–2012 Insight – ALL

September 5, 2012

Junction Board Replacement (IMA Battery Module Replacement and Transfer of Junction Board)

NOTE: You must be **fully certified** in the Electrical Fundamentals map, and have completed MAC 10 module, and 12 module in the Electrical Systems map to do junction board and IMA Battery module replacement.

BACKGROUND

American Honda is no longer shipping IMA replacement batteries with junction boards attached. The junction board will now need to be removed from the old IMA battery and mounted onto the new battery before the battery is installed into the vehicle.

This process will expose the technician to high voltage parts of the IMA battery that cannot be shut off. (With the junction board attached, no high voltage is accessible by the technician.)

The IMA battery module is made up of a number of individual cells wired in series. (The number of cells varies with the vehicle model and year.) All models break the module into two parts, with each part including several “packs” of cells. Each part includes individual plus and minus connections. Terminals on the junction board (two positive, two negative) combine these connections to form a complete battery assembly.

When replacing a junction board on an IMA battery, the technician will be exposed to high voltage at the four terminal connections. Specifically, a significant potential for electric shock exists in each half of the battery between the positive and negative terminal connections.

NOTE: Do not use power tools when working on the IMA battery or junction board. The bolt threads can be easily damaged with power tools, and the excessive torque may also damage the battery itself.

Safety Equipment

The process of junction board replacement is not difficult. Special safety high voltage insulated gloves are required and insulated tools can be used when working on the four electrical connections. The high voltage insulated gloves are marked with an inspection date. Their first use can be no later than 12 months from the inspection date or else recertification is required (per OSHA 1910.137). The gloves must be recertified every 6 months after their first use by an accredited laboratory. For more information on how and where to get the high voltage insulated gloves recertified, go to http: *www.nail4pet.org* to find an accredited laboratory.

The gloves should always be used with the leather outer protector gloves to protect the inner gloves from damage. Prior to each use the gloves should be inspected for any damage such as tears, holes, or chemical damage. The rubber and leather gloves should not be exposed to any cleaning solvents, gasoline or other chemicals and should be stored in the high voltage insulated glove bag. If used properly, the gloves should protect the technician from electrical shock if accidental contact with a positive and a negative battery connection occurs.

Insulated tools are available through the Honda Tool and Equipment Program or commercially. The primary purpose of an insulated tool is to protect the technician from an accidental short from a positive to negative battery connection due to contact with the tool. An accidental short with non-insulated tools would result in high, uncontrolled current and could possibly melt the tool and the battery, but could also result in molten metal flying out and contacting the technician.

Junction Board Components

In addition to junction board replacement, the technician will now be able to replace components on the junction board itself. If a junction board component needs replacement, first remove the junction board from the battery. Once the junction board has been removed, no special tools are required to replace the junction board components.

Skill Level R REPAIR

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 Honda automobile dealer.

TOOL INFORMATION

High Voltage Insulated Gloves Safety Kit:
T/N OTCHON-4755 (Kit includes the following)

High Voltage Insulated Gloves, Small (size 9):
T/N OTCHON-487551

High Voltage Insulated Gloves, Medium (size 10):
T/N OTCHON-487552

High Voltage Insulated Gloves, Large (size 11):
T/N OTCHON-487553

High Voltage Insulated Gloves Bag:
T/N OTCHON-566182

Insulated Tools: T/N OTCHON-5999, or equivalent 1000 volt certified insulated tools (commercially available)

Order through the Honda Tool and Equipment Program Online Catalog: Log on to the Interactive Network (iN), and click on **Service/Quick Links/Tool and Equipment Program,** or call 888-424-6857

NOTE: The High Voltage Insulated Gloves Safety Kit was shipped to your dealership automatically during the week of September 3, 2012.

WARRANTY CLAIM INFORMATION

The normal warranty applies.

OP#	Description	FRT
1181H5	*2003-2008 Civic Hybrid*: Remove the old IMA battery module, and install the new battery.	1.0
C	Transfer the junction board to the new battery.	0.4
1181H5	*2009-2011 Civic Hybrid:* Remove the old IMA battery module, and install the new battery.	1.0
C	Transfer the junction board to the new battery.	0.3
1181H5	*CR-Z:* Remove the old IMA battery module, and install the new battery.	1.7
C	Transfer the junction board to the new battery.	0.4
1181H5	*2000–2006 Insight:* Remove the old IMA battery module, and install the new one.	1.0
C	Transfer the junction board to the new battery.	0.6
1181H5	*2010–2012 Insight:* Remove the old IMA battery module, and install the new battery.	1.3
C	Transfer the junction board to the new battery.	0.4

Failed Part: 1D080-RMX-405RM

Defect Code: 03214

Symptom Code: 03217

NOTE: You must be **fully certified** in the Electrical Fundamentals map, and have completed MAC 10 module and 12 module in the Electrical Systems map to do junction board and IMA Battery module replacement.

REPAIR PROCEDURE

NOTE:

- The following seven steps are general procedures applying to all vehicle models and years. Any vehicle model or year specific differences are covered below these seven steps.
- Also refer to the online service manual for specific junction board replacement procedures.

1. Remove the IMA battery module assembly from the vehicle.
   - Refer to the appropriate service manual, or
   - Online, enter keywords **ENGINE**, then **IMA System**, and select **Battery Module Removal/ Installation** from the list.
2. Locate the IMA battery electrical connections. These are often covered in different ways depending on the vehicle model and year.
3. Refer to the vehicle model and year specific information to identify any low voltage connectors that must be disconnected, and note any other items that may also need to be transferred to the new battery.
4. Use the high voltage insulated gloves. These are only needed for work on the four electrical bolts/ terminals.
5. Remove the electrical terminal bolt covers, and save them for reuse later.
6. Remove the four electrical terminal bolts.
7. Remove the junction board bolts.

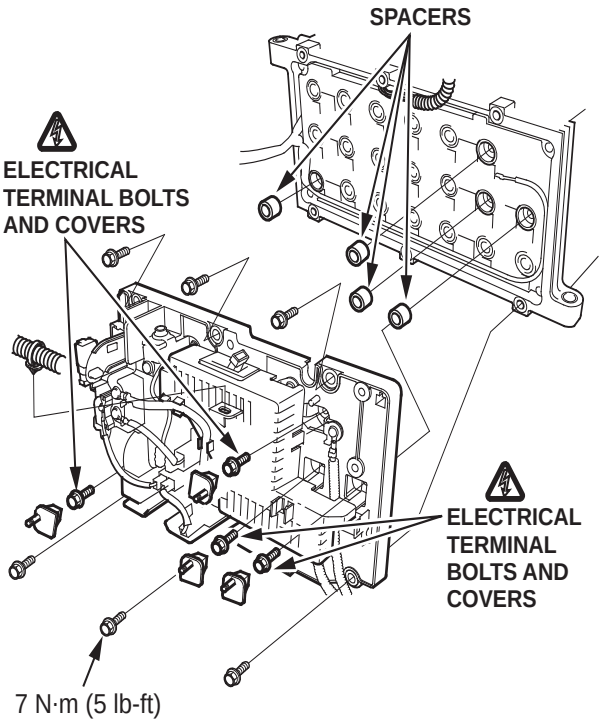
   NOTE: On models with spacers, high voltage insulated gloves and insulated tools are required for this operation.

The following vehicle models and years have specific differences listed below.

2003–2005 Civic Hybrid

NOTE: Make sure the ON/OFF switch on the top of the junction board is in the OFF position before proceeding with the IMA battery module replacement.

There are four spacers located between the four junction board connections and the battery. These spacers look like very thick washers. It is very important that these washers be transfered from the old battery to the new battery, or the electrical connection will not work properly and will most likely result in a DTC when the vehicle is driven.

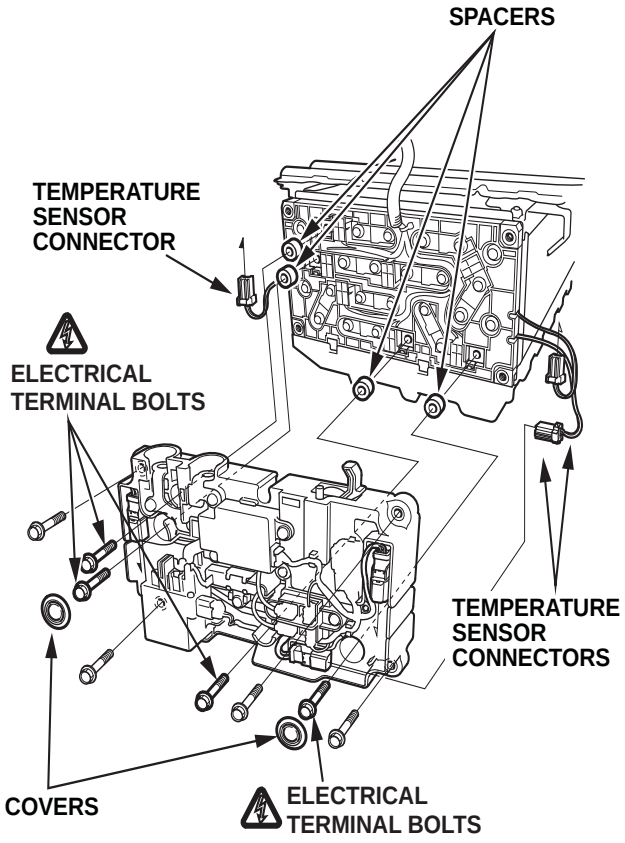


2006–2008 Civic Hybrid

NOTE: Make sure the ON/OFF switch on the top of the junction board is in the OFF position.

Disconnect the three 2-pin temperature sensor connectors and slide the wires out and to the side of the junction board.

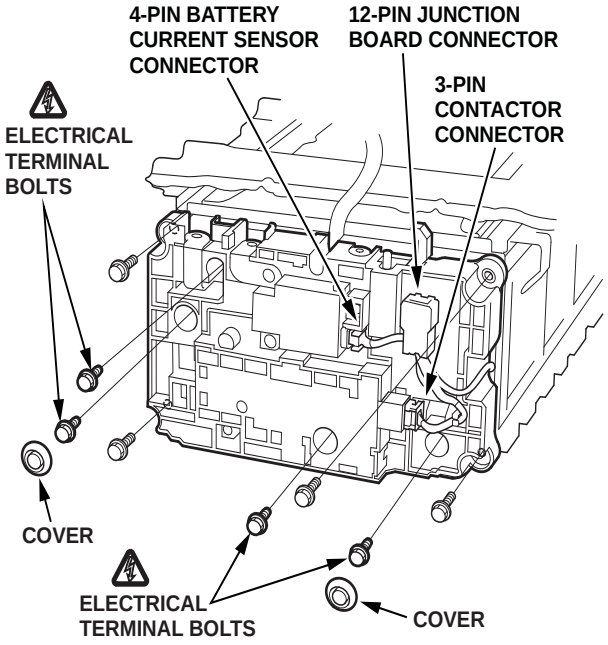
There are four spacers located between the four junction board connections and the battery. These spacers look like very thick washers. It is very important that these washers be transfered from the old battery to the new battery. If this is not done, the electrical connection will not work properly and will most likely result in a DTC when the vehicle is driven.



2009–2011 Civic Hybrid

NOTE: Make sure the ON/OFF switch on the top of the junction board is in the OFF position.

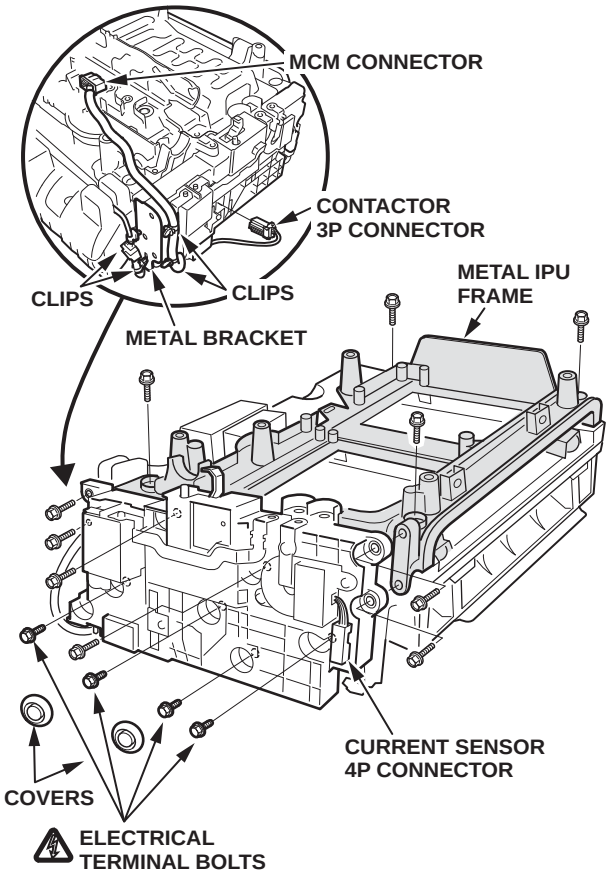
- Disconnect the 3-pin contactor connector.
- Disconnect the 4-pin battery current sensor connector.
- Remove the 12-pin junction board connector from the junction board.



2011–2012 CR-Z
2010–2012 Insight

NOTE: Make sure the ON/OFF switch on the top of the junction board is in the OFF position before proceeding with the IMA battery module replacement.

1. Release the clips holding the motor control module (MCM) wire from the metal frame.
2. Disconnect the 3-pin contactor connector.



3. Disconnect the 4-pin battery current sensor connector.
4. After the junction board has been removed, the metal IPU frame on the top of the battery and the small metal bracket on the side of the junction board will also have to be transferred to the new battery prior to installation of the junction board onto the new battery.

2000–2006 Insight

NOTE: Make sure the ON/OFF switch on the top of the junction board is in the OFF position.

The cooling fan and air duct need to be removed from the old battery and transferred to the new battery. This is a 12 volt system with no special safety issues.

There are four spacers located between the four junction board connections and the battery. These spacers look like very thick washers. It is very important that these washers be transferred from the old battery to the new battery. If this is not done, the electrical connection will not work properly and will most likely result in a DTC when the vehicle is driven.