

Knee Airbag Installation

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What is the knee airbag and how does it work?

The knee airbag is a part of the 4Front frontal collision protection system by IMMI -- the leading provider of advanced safety systems for fire apparatus.

The knee airbag is designed to work in conjunction with a 3-point seat belt. **ALWAYS WEAR YOUR SEAT BELT.**

Important Facts

PLEASE READ THIS ENTIRE GUIDE BEFORE INSTALLING THE knee airbag.

1. The knee airbag is to be used in a specific vehicle and seating position. Check the part number on the module to ensure correct application.
2. Always follow the vehicle manufacturer's installation guide. Use this guide in addition to the vehicle manufacturer's guide.

⚠ WARNING

DISCONNECT THE BATTERY

With battery disconnect in the OFF position, disconnect and isolate the battery negative cable before beginning knee airbag installation. Allow system capacitor to discharge to two minutes before beginning installation. Failure to disconnect the battery could result in accidental airbag deployment and could cause serious injury or death.

3. DO NOT PUNCTURE DRILL OR APPLY HEAT TO knee airbag.
4. DO NOT MOUNT ANYTHING NEAR THE knee airbag that could interfere with the inflation of the airbag.
5. The knee airbag is only designed to activate once. If the knee airbag is activated or damaged, unit must be replaced by authorized personnel.

⚠ WARNING

DO NOT APPLY HEAT

Temperatures over 150° C (257° F) could cause the unit to deploy. The deploying knee airbag could cause serious injury or death.

⚠ WARNING

HAZARDOUS OPERATION

Applying power prematurely could deploy occupant protective devices, causing serious injury to installer. Disconnect and tag out power. Always make connections to Roll Sensor last. Keep clear of protective devices when first applying power. Failure to follow instructions could cause serious injury or death.

Knee airbag location



Stowed



Deployed



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Unpacking the knee airbag

1. Remove unit from main carton. There are 2 units per carton. See **Figure 1**.
2. If parts need to be returned, they must be returned in the original packaging.

Product Identification

1. Locate the product identification labels, located on the bottom side of the unit. See **Figure 2**.
2. Verify your unit is the proper system for your configuration.
3. Scan or manually record unit S/N. Retain this record for 20 years.

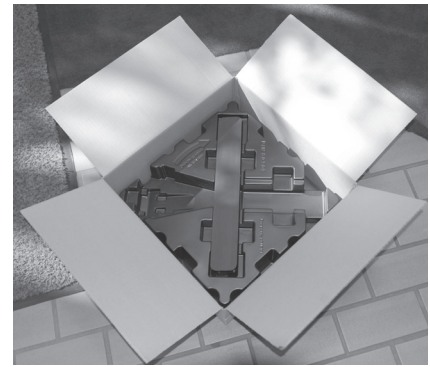


Figure 1

Electrical Connection and Test

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1. With the vehicle battery OFF, make connection between the vehicle wiring harness and the knee airbag. See **Figure 3**.
2. Verify that the electrical connectors are latched together.
3. Refer to Steps 4-6 of "Installing the knee airbag in the Instrument Panel for connecting electrical power to knee airbag.

Installing the knee airbag in the Instrument Panel

1. Position the unit in place in the instrument panel. Align the knee airbag trim cover in the opening in the vehicle trim. Ensure that the wiring harness is not crimped or pinched during this step.
2. The knee airbag includes two 5/16-18 weld nuts for attachment to the vehicle. Align the weld nuts with the pre-drilled mounting holes in the vehicle structure. Fasten the knee airbag to the vehicle at the pre-drilled holes using two Grade 5 or Grade 8 5/16-18 screws. Metal-to-metal contact is required between the knee airbag mounting brackets and the vehicle structure.
3. Torque the mounting screws to 10-15 ft-lb.

Important: The following steps MUST be performed prior to connecting the battery negative terminal cable.

4. Lower vehicle side window and turn ignition key/vehicle switch to ON position.
5. EXIT VEHICLE AND ENSURE NO ONE IS IN VEHICLE AND EVERYONE IS CLEAR OF OCCUPANT PROTECTIVE DEVICES.
6. After verifying that no one is in vehicle, connect the battery negative terminal cable. Turn the battery disconnect switch to the ON position.



Figure 2

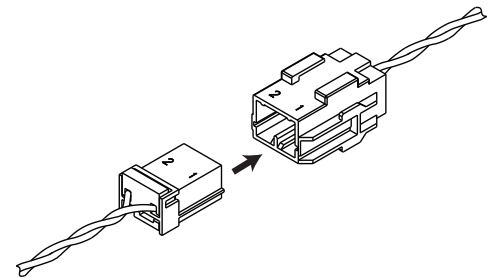


Figure 3



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