

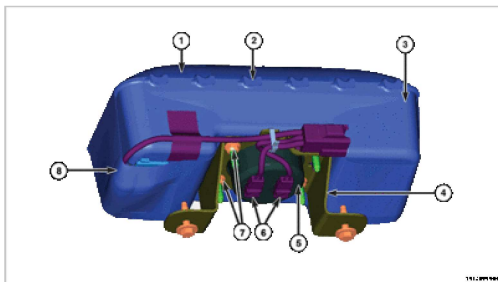
YOUR CURRENT VEHICLE

2018 Chrysler Pacifica

Description & Operation

DESCRIPTION AND OPERATION

DESCRIPTION



The horizontal surface of the instrument panel cover above the glove box is the most visible part of the Passenger AirBag (PAB). The PAB door is integral to the instrument panel cover forward of and above the glove box on the instrument panel in front of the front seat passenger seating position.

Located below the PAB door area of the instrument panel cover, the molded thermoplastic PAB retainer or chute is secured to the underside of the cover. The chute defines the airbag door breakout area of the cover and serves as the receptacle for the PAB cushion (1) and housing (2). Numerous small window openings on the forward and rearward flanges of the receptacle receive mating hook formations stamped into the airbag housing, which locate and secure the housing to the cover. The PAB also includes a lower mounting bracket (4) that is secured by two screws to the instrument panel structural support.

The PAB unit used in this vehicle is a multistage type that complies with revised federal airbag standards to deploy with less force than those used in some prior vehicles. The PAB unit consists of a stamped metal housing, the airbag cushion, the airbag inflator, and an electrically initiated airbag vent (8). The airbag inflator (5) is secured to the housing by four nuts (7). The airbag housing contains the folded airbag cushion.

The airbag inflator is a non-azide, pyrotechnic-type unit that is secured to and sealed within the airbag housing. Three dedicated take outs and yellow connectors (6) of the PAB jumper wire harness with keyed, color-coded insulators connects the three inflator initiators to the vehicle electrical system through the instrument panel wire harness.

The PAB cannot be repaired, and must be replaced if deployed, ineffective or in any way damaged. The PAB door and retainer are serviced only as a unit with the instrument panel cover. If the PAB is deployed, the PAB mounting bracket and the instrument panel must also be replaced.

OPERATION

The first stage of the multistage PAB is deployed by electrical signals generated by the Occupant Restraint Controller (ORC) through the PAB squib 1 circuit to initiator 1 in the airbag inflator. The second stage is also controlled by the ORC through PAB squib circuit 2 to initiators in the airbag inflator. Initiator 3 is the electronically controlled airbag vent. The first and second stages are deployed immediately upon the ORC detecting suitable impact conditions. The third initiator is deployed shortly after to deflate the airbag quickly. By using two initiators and a vent initiator, the PAB can be deployed at multiple levels of force. The force level is controlled by the ORC to suit the monitored impact conditions by providing one of multiple delay intervals between the electrical signals provided to the three initiators. The longer the delay between these signals, the less forcefully the PAB will deploy.

When the ORC sends the proper electrical signals to each initiator, the electrical energy generates enough heat to initiate a small pyrotechnic charge which, in turn ignites chemical pellets within the inflator. Once ignited, these chemical pellets burn rapidly and produce a large quantity of inert gas. The inflator is sealed to the airbag cushion and a diffuser in the inflator directs all of the inert gas into the airbag cushion, causing the cushion to inflate. As the cushion inflates, the PAB door area of the instrument panel cover will split at predetermined breakout lines, then fold back out of the way. Following an airbag deployment, the airbag cushion quickly deflates by venting the inert gas through a discrete vent hole in each fabric side panel of the airbag cushion.

Typically, all three initiators are used during a PAB deployment event. However, it is possible for only one or two initiators to be used during a deployment due to a Supplemental Restraint System (SRS) fault; therefore, it is necessary to always confirm that all initiators have been used in order to avoid the improper disposal of potentially live pyrotechnic materials. See the Service After A Supplemental Restraint Deployment standard procedure for additional information. ([Refer to Restraints - Standard Procedure](#)).

The inert gas that is produced when the chemicals are burned during a deployment is harmless. However, a small amount of residue from the burned chemicals may cause some temporary discomfort if it contacts the skin, eyes, or breathing passages. If skin or eye irritation is noted, rinse the affected area with plenty of cool, clean water. If breathing passages are irritated, move to another area where there is plenty of clean, fresh air to breathe. If the irritation is not alleviated by these actions, contact a physician.

The ORC monitors the condition of the passenger airbag through circuit resistance. If any fault is detected the ORC will illuminate the airbag indicator in the instrument cluster and store a Diagnostic Trouble Code (DTC). Proper diagnosis of the PAB initiator and squib circuits requires the use of a diagnostic scan tool and may also require the use of the SRS Load Tool special tool along with the appropriate Load Tool Jumpers and Adapters. Refer to the appropriate diagnostic information.