CHILTON LIBRARY

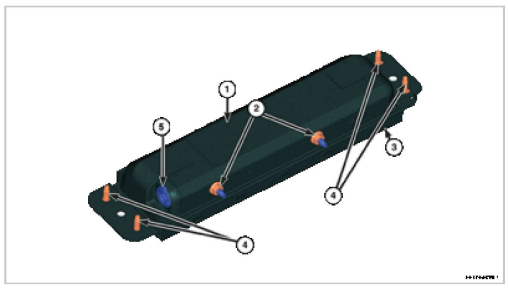
YOUR CURRENT VEHICLE

2018 Chrysler Pacifica

Description & Operation

DESCRIPTION AND OPERATION

DESCRIPTION



Knee AirBags (KAB) are used on both the driver and passenger sides of this vehicle when it is manufactured for domestic markets. Vehicles manufactured for export markets have only a driver side KAB. These airbags are passive, inflatable Supplemental Restraint System (SRS) components. Vehicles with this equipment may be readily identified by the **SRS - AIRBAG** logo located on the instrument panel steering column opening cover for the driver side and on the glove box door for the passenger side. The KAB units are concealed below the lower edge of the instrument panel, just beneath the steering column opening cover on the driver side or just beneath the glove box door on the passenger side.

The stamped metal airbag housing (1) is secured by four studs (4) with nuts to the stamped metal lower instrument panel reinforcement of the instrument panel support structure. A molded plastic protective cover (3) is secured over the folded airbag cushion by several hook formations stamped into the airbag housing that are engaged through window openings in tabs integral to the outer perimeter of the cover.

The airbag housing contains the airbag inflator and a heat shield. The airbag inflator is a single-initiator, non-azide hybrid-type unit that is secured to the housing by two studs (2) with nuts and sealed within the airbag housing. The airbags are connected to the vehicle electrical system through dedicated take outs and connector insulators of the instrument panel wire harness that connect directly to the inflator initiator (5) of each airbag.

The driver and passenger side KAB units are not interchangeable. The inflator initiators are on the opposite, inboard ends of the module housing and the mounting stud locations are offset to prevent each airbag unit

from being installed in the improper location.

The KAB units cannot be repaired, and must be replaced if deployed, ineffective or in any way damaged. If the KAB units are deployed, the steering column opening cover and the glove box must also be replaced.

OPERATION

The KAB are deployed by electrical signals generated by the Occupant Restraint Controller (ORC) to which it is connected through a driver or passenger KAB line 1 (or squib) circuit to the initiator in the airbag inflator. The hybrid-type inflator assembly for each airbag contains a small canister of highly compressed inert gas. When the ORC sends the proper electrical signal to the airbag inflator, the electrical energy creates enough heat to ignite chemical pellets within the inflator.

Once ignited, these chemical pellets burn rapidly and produce the pressure necessary to rupture a containment disk in the inert gas canister. 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 KAB protective cover will split at predetermined tear seam lines concealed on the underside of the cover, then fold open and out of the way.

The cushion protects the lower extremities of the vehicle driver or front seat passenger and helps to keep the seat occupant properly positioned for the Driver AirBag (DAB) or Passenger AirBag (PAB) deployment during a frontal impact collision. Following an airbag deployment, the KAB cushion quickly deflates by venting the inert gas through the loose weave of the fabric used to construct the instrument panel side of the airbag cushion, and the deflated cushion hangs down loosely from the lower instrument panel.

The ORC monitors the condition of the knee airbags 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 KAB initiators 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.