

Airbag (ZAE/BAE)

The airbag is a component part of the passive safety system. Two control unit variants are possible:

1. The "Basic trigger unit" (BAE) is installed in all vehicles apart from US models.
2. The "central trigger unit" (ZAE) is installed only in US models.

Due to the different legislation in the USA concerning compulsory wearing of seat belts, the ZAE contains appropriate functions which are not contained in the BAE.

Airbag

There is only one control unit for the BAE and ZAE. The vehicle-specific, equipment-specific and country-specific variants can be coded. Note that the control unit must be coded specifically to the vehicle after being renewed.

The integrated sensor system in the airbag control unit which produces signals proportional to vehicle deceleration renders the previously known front crash sensors on the inside of the fenders unnecessary.

Generally, two trigger thresholds are stored in the airbag control unit for two different vehicle deceleration values.

The control unit is designed for a maximum of three vehicle collisions. During these three trigger criteria a so-called crash telegram is entered in the control unit which stores (non-volatile) all crash-relevant information for subsequent evaluation. After three entered crashes, a defect code is set which can no longer be deleted, i.e. the failure warning lamp lights permanently and the control unit must be renewed.

By way of a belt buckle contact monitoring facility, the ZAE control unit is capable of detecting a driver or passenger wearing a seat belt. In this way, the trigger threshold for the airbags can be raised to a higher vehicle deceleration value when the passengers are wearing seat belts. Seat belt buckle contact monitoring is based on microswitches in the seat belts.

Note

When the control unit connector is disconnected, the individual ignition circuits are shorted by jumpers in the connector. In addition, the wire for the failure warning lamp is bypassed, i.e. the failure warning lamp lights when the control unit connector is disconnected.

Seat occupancy detection (SBE)

The SBE control unit is required in order to inform the airbag system whether the passenger's seat is occupied or not in vehicles equipped with a passenger's airbag. The system consists of a seat mat (film sensor) and the seat occupancy detection control unit. This control unit transfers the status of the passenger's seat via a serial interface to the airbag control unit. The data are then evaluated in the airbag control unit. Selective triggering of the airbag system, i.e. when the passenger's seat is not occupied, prevents the passenger's belt tensioner and passenger's airbag being triggered.

Important!

Work on the airbag system must only be carried out in ignition lock position 0.