

# BMW Airbag Light On

## Fault Description:

Following problems occurred during testing BMW 7-series (E65) or Z-series (E85/E86).

- 1). Airbag light illuminated but no DTC was read out when entered Airbag System. After selecting Clear DTCs, the warning lamp remained on.
- 2). Airbag light illuminated and DTC existed. But after clearing DTC, warning lamp still stayed on.

## Fault Diagnosis:

BMW AG started the development of active and passive security systems in the beginning of 90s of 20<sup>th</sup> century. BMW Airbag is developed from ZAE, BAE, ZAEII, MRS, MRS2, MRS3, and MRS4 to the brand new 7-series E65 chassis equipped ISIS (Intelligent Safety Integrated System).

ISIS Components:

- SIM: Safety and Information Module
- Satellite Sensor Module
- Sensor
- Airbag
- Belt Systems
- Active Head Rests with Comfort Seat
- Optical Waveguide Byte Flight

Following are brief introductions to those components:

### 1). Byte Flight and SIM

- Byte Flight (BM safety bus system) is in the structure of starlike disposition. Every satellite control module is connected with a starlike coupler through optical cable. The starlike coupler in bus system is Safety and Information Module (SIM) or Safety and Gateway Module (SGM). For car model E65/E66, the starlike coupler is SIM.

### 2). Satellite Control Module

- Every satellite control module assembly contains a transmitter and a receiver as a unit connected to the safety system bus. This unit integrates a transmitter diode and a receiver diode.

### 3). Satellite Structure Components

#### A). Module

- ZGM: Centre Gateway Module
- SIM: Safety and Information Module

#### B). Satellite Sensor

- SASL: A-pillar Satellite, Left
- SASR: A-pillar Satellite, Right
- SBSL: B-pillar Satellite, Left
- SBSR: B-pillar Satellite, Right
- SSFA: Seat Satellite, Driver
- SSBF: Seat Satellite, Passenger
- STVL: Door Satellite, Front Left
- STVR: Door Satellite, Front Right
- SZL: Steering Column Switch
- SSH: Seat Satellite, Rear
- SFZ: Vehicle Centre Satellite

In summary, E65 Airbag related components are as following:

- ZGM: Centre Gateway Module
- SASL: A-pillar Satellite, Left
- SASR: A-pillar Satellite, Right
- SBSL: B-pillar Satellite, Left
- SBSR: B-pillar Satellite, Right
- SFZ: Vehicle Centre Satellite
- SSBF: Seat Satellite, Passenger
- SSFA: Seat Satellite, Driver
- SSH: Seat Satellite, Rear
- STVL: Door Satellite, Front Left
- STVR: Door Satellite, Front Right
- SZL: Steering Column Switch

Usually, E65 is equipped with 8-12 Airbags. If it is confirmed which system is faulty, use LAUNCH diagnostic tool to directly read this system and clear the code. If it's uncertain which system is faulty, it's necessary to read all systems and then clear.

In addition, it is possible there's no DTC in all these systems but Airbag light is on. In this case, carry out Clear DTCs in all these systems, the light will then go out.

This also happens to Z-series E83/E84. Z-series E83/E84 Airbag related components are:

- SBSL: B-pillar Satellite, Left
- SBSR: B-pillar Satellite, Right

- STVL: Door Satellite, Front Left
- STVR: Door Satellite, Front Right

## Summary:

When Airbag light is on, but no DTC can be read out in Airbag system or DTC has been read and cleared but light remains on, perform Read DTCs and Clear DTCs in all systems related with Airbag.

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